

Istanbul New Airport ESIA

Environmental Baseline and Impact Assessment

Geology and Soils

Prepared for:
IGA
Istanbul, Turkey

Prepared by:
ENVIRON
Bath, UK

Date:
May 2015

Project or Issue Number:
UK14-21429

ENVIRON

Contract No:	UK14-21429
Issue:	5
Author (signature):	David Schofield
Project Manager/Director (signature):	Valéry Votrin/Denise Wright
Date:	05 May 2015

This report has been prepared by ENVIRON with all reasonable skill, care and diligence, and taking account of the Services and the Terms agreed between ENVIRON and the Client. This report is confidential to the client, and ENVIRON accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by ENVIRON beforehand. Any such party relies upon the report at their own risk.

ENVIRON disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the Services.

Version Control Record

Issue	Description of Status	Date	Reviewer Initials	Author Initials
1	First Draft	30 June 2014	MR/KH/VV/NS	DS
2	Final Draft	16 December 2014	VV/DW	DS/AG
3	Final	06 February 2015	VV/DW	DS
4	Updated Final	26 March 2015	VV/DW	DS
5	Final Amended to Include New Runway Layouts	05 May 2015	VV/DW	DS

Contents

List of Tables

List of Figures

7.4 Geology and Soils

7.4.1 Introduction

This chapter describes the potential impacts of the INA Project on geology and soils. Discussion on natural hazards is presented in **Chapter 7.9 Natural Hazards**.

Impacts to geology and soils are assessed in relation to the potential to encounter existing soil contamination associated with past and current land use or for new contamination to occur through accidental leaks or spills, which could result in impact on soils and mobilisation of soil contamination which may impact a number of environmental receptors. In addition, the major cut to fill exercise to be undertaken (as detailed in **Chapter 3 Proposed Project and Project Description**) along with subsequent re-profiling will result in change to the soil structure within the Project Area.

Assessment of impacts to water resources including groundwater and surface water quality, levels and aquifer characteristics is presented in **Chapter 7.5 Water Resources**, and referenced below where relevant.

7.4.2 Policy, Regulatory and Administrative Framework

Chapter 2 Policy, Legislative and Regulatory Framework describes the overall policy and legal framework in Turkey. In the absence of relevant national guidance, reference is also made to international standards and guidance. In this chapter information is provided on standards relevant to the protection of geology and soils.

National guidance provides consideration of soil, geology and water resource conditions associated with the Project Area. As stated elsewhere in this ESIA, the most stringent standards have been adopted as the Project Standards.

7.4.2.1 Turkish Legal Requirements

Soils

Turkish Regulation on Soil Pollution Control and Point Source Contaminated Sites (SPPC) (Ref.7.4.1), Official Gazette date: June 8, 2010, No: 27605.

The Regulation on SPPC Sites is the relevant standard for soil and was originally set for implementation on 6 June 2010, with a grace period defined in the Regulation regarding the implementation of the Regulation articles. The most recent amendment dated June 2013 states the Regulation articles will come into force from 8 June 2015.

The regulation requires industrial facilities to have sufficient mitigation measures to prevent contamination of the underlying soils with specific regard to potentially hazardous materials used, stored and produced at the facility. The regulation will enact a 'Polluter Pays' principle, whereby in the event of soil contamination the owner of an industrial facility is required to determine the area of impact, undertake remediation and verify that the works have been adequately undertaken. The regulation promotes a health risk based approach for remediation management.

Once adopted, the regulation on SPPC Sites will provide the framework for prevention and mitigation of soil and will include a methodology of assessment of potential environmental risk. In addition to the above-mentioned aims, the Regulation aims to define the measures for

monitoring and remediation for land identified as a potentially unacceptable risk to identified receptors.

Under the Regulation on SPPC Sites the Ministry of Environment and Urbanization (MoEU) will be responsible for the establishment of a Contaminated Sites Information System (CSIS) for identification of sites which may represent a potential risk of the presence of contaminated soil. Facilities identified by the MoEU will be responsible for ensuring relevant details are provided to the MoEU with regard to the potential presence of contaminated soils and or prevention/mitigation measures adopted. The owner of identified facilities will be required to submit relevant information for the CSIS within three months from the Regulation on SPPC Sites' enforcement date (currently 8 June 2015).

The types of industries and parameters considered to represent a potentially contaminative land use are defined in Annex 2, Table 2 of the Regulation, and the sector specific parameters to be analyzed are defined in Table 2. In addition to these analyses, background measurements are to be carried out by the MoEU for samples collected from uncontaminated sites. The requirements for the sampling of background samples are defined by the MoEU. The values measured for the samples collected within the site are compared with background values.

The framework for development of appropriate screening values for assessment of the potential soil contamination risk will be based on comparison to identified relevant regional background concentrations. The method used to calculate the 'deviation' of a soil sample from background levels is defined in the Regulation on SPPC Sites as:

$$\text{Deviation} = \frac{\text{Maximum Measured Value}\,(\text{MV}_{\text{max}})}{\text{Background Value}\,(\text{BV})}$$

The deviation value is calculated and the action which must be taken is determined in accordance with this value:

- if deviation is less than or equal to 1, no follow-up action is needed;
- if the value is between 1 and 25, further targeted intrusive investigation will be required to assess the potential risks to environmental receptors; and
- if the deviation value is greater than 25 then remedial mitigation will considered to be required.

The regulation on SPPC Sites includes an outline specification for the undertaking of intrusive investigation. The investigation will be required to be undertaken in accordance with a Site Sampling and Analysis Plan, which must be prepared by the investigating party and approved by the Evaluation Committee formed by the Provincial Governorate.

Site Evaluation and Risk Assessment reports will be required to be prepared by accredited organisations and submitted to the Evaluation Committee for review and comment. If the Committee decides that the site is contaminated the owner of the facility is responsible for undertaking necessary investigations and or remediation actions defined by the Committee report.

The regulation on SPPC Sites includes guidance for the Preparation of a Remediation Action Plan and associated Evaluation and Completion Report, with reporting templates included in the annexes of the SPPC. These reports must be prepared by an appropriately accredited party and the Action Plan submitted to Provincial Directorates of MoEU for evaluation.

Remediation, implementation and monitoring actions must be undertaken in accordance with the Provincial Directorates approved Action Plan. The results of remediation actions must be monitored and necessary analyses carried out in accordance with the agreed methodology. The results are provided to the Committee and short-term and long-term monitoring actions are defined by the MoEU. Following completion of the remediation, a Completion Report outlining the post remedial ground conditions must be submitted to the Provincial Directorates for approval. The Provincial Directorates committee may also define a long-term monitoring action plan identifying necessary monitoring activities to be undertaken.

Waste

Turkish waste management procedures relevant to the disposal of contaminated soil and management of excavation waste are provided in four main Regulations (Ref.7.4.2 to Ref.7.4.5):

- Hazardous Waste Control Regulation, Official Gazette No: 25755, dated March 14, 2005.
- Regulation on the Control of Excavation Materials, Construction and Demolition Wastes, Official Gazette No: 25406, dated March 18, 2004.
- Solid Wastes Control Regulation, Official Gazette No: 20814, dated March 14, 1991.
- Regulation Concerning the General Principles of Waste Management, Official Gazette No: 26927, dated July 5, 2008.

According to the regulations, hazardous wastes share the properties of a hazardous material (e.g. combustibility, corrosivity, reactivity, or toxicity), or other physical, chemical, or biological characteristics that may pose a potential risk to human health or the environment if improperly managed. Wastes may also be defined as hazardous by national regulations or international conventions, based on the origin of the waste and its inclusion on hazardous waste lists, or based on its characteristics. The Regulations state that the hazardous wastes should always be segregated from non-hazardous wastes and its management should focus on the prevention of harm to health, safety, and the environment. It is crucial that the potential impacts and risks associated with hazardous wastes should be completely understood, the hazardous wastes are handled, treated and disposed by reputable and legitimate enterprises licensed by the relevant regulatory agencies and they should be stored so as to prevent or control accidental releases to air, soil and water resources. On-site and off-site transportation of wastes should be conducted so as to prevent or minimise spills, releases, and exposures to employees and the public. Turkish waste management regulations are provided in more detail in **Chapter 7.7 Waste Management.**

7.4.2.2 Standards and Guidelines for International Financing

Contaminated Land

This ESIA has also been carried out in accordance with standards and guidelines for international financing. The relevant international guidelines used for this assessment are the IFC General Environmental, Health and Safety (EHS) Guidelines (Ref.7.4.6). Section 1.8 of the IFC General EHS Guidelines specifically addresses contaminated land.

The IFC General EHS Guidelines provide a summary of management approaches for land contamination due to anthropogenic releases of hazardous materials, wastes, or oil, including naturally occurring substances. The guidance states that "*releases of such materials may be the result of historic or current site activities, including, but not limited to, accidents during their handling and storage, or due to their poor management or disposal*".

The IFC General EHS Guidelines state that contamination of land should be avoided by preventing or controlling the release of hazardous materials, hazardous wastes, or oil to the environment. When contamination of land is suspected or confirmed during any project phase, the cause of the uncontrolled release should be identified and corrected to avoid further releases and associated adverse impacts. Contaminated lands should be managed to avoid the risk to human health and ecological receptors. The preferred strategy for land decontamination is to reduce the level of contamination at the site while preventing the human exposure to contamination.

The IFC General EHS Guidelines define the 'Contaminants', 'Receptors', and 'Exposure Pathways' as:

- contaminant(s): presence of hazardous materials, waste, or oil in any environmental media at potentially hazardous concentrations;
- receptor(s): actual or likely contact of humans, wildlife, plants, and other living organisms with the contaminants of concern; and
- exposure pathway(s): a combination of the route of migration of the contaminant from its point of release (e.g., leaching into potable groundwater) and exposure routes (e.g., ingestion, transdermal absorption), which would allow receptor(s) to come into actual contact with contaminants.

The IFC General EHS Guidelines set out an assessment approach that should be applied to establish whether the three risk factors of contaminants, receptors and exposure pathways co-exist, or are likely to co-exist, at the Project Site under current or possible future land use.

This methodology consists of:

1. Risk screening;
2. Interim risk management;
3. Detailed quantitative risk assessment; and
4. Permanent risk reduction measures.

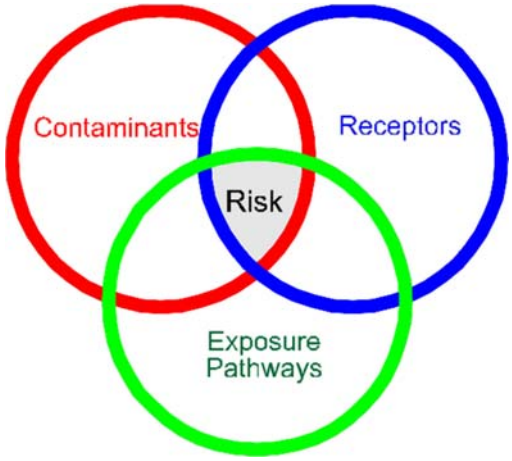
The IFC General EHS Guidelines also provide an assessment methodology to determine whether risk management actions are warranted by establishing whether the three risk factors of 'Contaminants', 'Receptors', and 'Exposure Pathways' co-exist, or are likely to co-exist, at the Project Site under current or possible future land use (Figure 7.4.1):

- identification of the location of suspected highest level of contamination through a combination of visual and historical operational information;
- sampling and testing of the contaminated media (soils or water) according to established technical methods applicable to suspected type of contaminant;
- evaluation of the analytical results against the local and national contaminated sites regulations. In the absence of such regulations or environmental standards, other sources of risk-based standards or guidelines should be consulted to obtain comprehensive criteria for screening soil concentrations of pollutants. The IFC EHS Guidelines recognise the United States Environmental Protection Agency (USEPA) Risk-Based Concentrations (RBCs) (Ref.7.4.7) as suitable criteria to assess 'acceptable' contaminant concentrations for specific land use and contaminant exposure scenarios. The screening criteria were developed to provide an initial screen and are based on a conservative precautionary principle, whereby concentrations below the screening criteria do not warrant further consideration. Likewise, an exceedance of an initial

screening criterion does not infer that an unacceptable risk is present, rather further assessment in the context of the site setting is required. A copy of the latest RBCs (May 2014) are provided as Annex 7.4.C; and

- verification of the potential human and/or ecological receptors and exposure pathways relevant to the site in question.

Figure 7.4.1 Inter-Relationship of Contaminant Risk Factors



The IFC General EHS Guidelines note that the outcome of risk-screening may reveal that there is no overlap between the three risk-factors because the contaminant levels identified are below those considered to pose a risk to human health or the environment. Alternatively, interim or permanent risk reduction measures may need to be taken with, or without, more detailed risk assessment activities.

The IFC general EHS Guidelines provide further guidance on the undertaking of detailed quantitative risk assessment and outlines potential remedial methodologies.

Topsoil

The IFC EHS Guidelines for Mining (Ref. 7.4.16) has been referenced with regard to mitigation measures for the protection of topsoil resources.

7.4.3 Assessment Methodology

7.4.3.1 Scope

The scope of the Geology and Soils assessment for the Project Area was defined through a scoping process which identified potentially sensitive receptors and potentially significant impacts related to the INA Project. Baseline information which informed the scoping process largely drew on information gathered from studies undertaken for the INA Project, including feasibility, engineering and environmental surveys. The ESIA Scoping Report dated May 2014 (Ref.7.4.8) was prepared in order to set objectives, define the scope and establish the strategy to develop the ESIA.

Key steps in the scoping process for the Geology and Soils section of the Scoping Report comprised the following:

- the Project description was reviewed to identify activities with the potential to significantly affect human health, soil and water receptors;
- potential receptors associated with any identified potentially contaminated soils within the Project Area of Influence were identified through a process of secondary data review, stakeholder consultation, third party studies of the Project Area and professional expertise; and
- review of relevant national and international legislative requirements and lender requirements.

The Scoping Report included a requirement to undertake a land condition survey to identify and evaluate the extent and magnitude of environmental liabilities, and to determine whether there are any Recognised Environmental Conditions (REC) and other Activity of Interests (AOIs). A requirement to undertake targeted soil sampling (where access was permissible) to confirm or deny the existence of a release into the environment at an identified REC/AOI at levels above applicable national environmental regulations was also identified. The objective of the sampling and assessment was to characterise the specific nature and extent of any suspected contamination identified during the land condition survey and provide a more accurate assessment of any potential environmental risks and costs associated with the Project Area, including general recommendations to mitigate identified contamination risks.

Therefore, the assessment below has been informed through this process of potential contaminant, exposure pathway and receptor identification.

The minimum study area for conducting an ESIA for a project is defined as the 'Project Area of Influence', which is generally larger than the Project Area in order to address all possible relevant impacts. In this context, the Project Area of Influence' is the geographic area that may experience impacts to the biological, physical or socio-economic environments from expropriation, earthworks, construction and operation of the project components. This area will include the lands permanently and temporarily affected by the project features.

The Project Area and identified Area of Influence with respect to potential contaminant, exposure pathway and receptor identification are described in **Chapter 3 Proposed Project and Project Description in Table 3.2.**

7.4.3.2 Method

The Impact Assessment Methodology is based on the principles of potential contaminant, exposure pathway and receptor identification as outlined within the IFC General EHS Guidelines (Ref.7.4.6). The source in this context has been identified in relation to the planned activity, or due to historical activity. Owing to the complexity of the Project, there are multiple sources. The receptors under consideration relate to soil, groundwater and surface water. Indirect receptors that use soil, groundwater and surface water have also been considered (such as ecological receptors). Pathways that could link the sources and receptors have been identified. Only where the complete linkage of source, pathway and receptor are present can impacts potentially occur.

An overview of the process followed in compiling this ESIA Report and the general methodology adopted in assessing impact significance is presented in **Chapter 6 Impact Assessment Methodology.**

7.4.3.3 Significance Criteria

While there are a number of international, and limited national, soil and water quality standards applicable to the Project, there is relatively little guidance available describing how the significance of potential impacts on identified receptors should be assessed. Based on the general methodology outlined in **Chapter 6 Impact Assessment Methodology**, on professional judgement and experience, and on the applicable Project standards and regulations, a series of impact significance criteria were developed to assess potential impacts on soil, water and sediment. In this regard impacts are first identified and classified as adverse (negative) and beneficial (advantageous/positive). Then, those impacts are predicted either quantitatively or qualitatively or, in certain instances, both.

Quantitative methods predict measurable changes as a result of the INA Project and rely on accurately measuring baseline conditions to make accurate predictions/estimations regarding the potential impacts. Qualitative assessment methods rely on expert judgement and experience.

The following prediction severity (i.e. none/negligible, low, moderate, and high) and likelihood (probable, possible, unlikely, and improbable) criteria explained in **Chapter 6 Impact Assessment Methodology** have been used to evaluate the overall significance of the impacts. For determining the overall significance the matrix given in Table 7.4.1 was used.

Table 7.4.1 Matrix for Evaluating Overall Impact Significance

Likelihood of Impact	**Severity of Impact**			
	Negligible	**Low**	**Moderate**	**High**
Probable	Negligible	Low	Moderate	High
Possible	Negligible	Negligible	Low	Moderate
Unlikely	Negligible	Negligible	Negligible	Low
Improbable	Negligible	Negligible	Negligible	Negligible

While it is important to identify the initial significant impacts associated with the Project the key focus of the impact assessment has been to define the significance of residual impacts following application and/or consideration of mitigation measures. A residual impact is one which continues to be present following the application of avoidance and/or mitigation measures. In this regard, a summary table is provided in the final section of this Chapter indicating the potential significance of impacts in the absence of mitigation to assist in demonstrating the anticipated effectiveness of proposed mitigation measures.

In summary, the combination of the magnitude of impact and receptor sensitivity criteria is assessed in a sensitivity matrix within ESIA **Chapter 6 Impact Assessment Methodology** to generate impact significance categories (High, Moderate, Low or Negligible).

Measures to avoid or reduce any Moderate or High category (significant) impacts are then developed (where such measures are practical) and any residual impacts of the Project are reported.

Severity is dependent upon the magnitude of the impact, for example, in terms of the duration (long, medium, short term), the extent (site, local, regional, national) and reversibility

(reversible, irreversible) as well as on the sensitivity of the receptor (as a resource and/or to the change or impact.

7.4.4 Baseline Information, Background and Sources of Information

7.4.4.1 Sources of information

General

In order to assess potential impacts on soil, groundwater and surface water, secondary (i.e. existing data based on desk-based research) and initial primary data (i.e. obtained from visitation and targeted analytical testing at identified key areas of interest) regarding the relevant baseline characteristics have been identified and assessed for the Project Area. Following this, a gap analysis was undertaken to inform the need for primary data sources to fill the data gaps. Primary data were then collected during field surveys.

Data have been collected and presented at different spatial levels as appropriate according to the nature of the potential impact to be assessed and the baseline indicator in question.

The baseline characterisation considered:

- Soils – This section details the baseline findings relating to soil type and soil chemistry across the Project Area. This provides information on potential contaminant sources. However, wider baseline assessment has been undertaken with regard to the hydrological setting. Detailed discussion is presented in ESIA **Chapter 7.5 Water Resources**, However, where relevant, consideration is also given in this section to groundwater and surface water.
- Groundwater – Aquifer characteristics, groundwater levels and groundwater chemistry.
- Surface Water - The characteristics of watercourses and standing bodies of surface water

Secondary Data (Documentary Sources)

Contextual information from documentary sources has been provided on the Project's setting with respect to current land use, soil, groundwater and geology. Published geological and topographical information were reviewed to characterise the ground conditions and local geomorphological and hydrological setting (ESIA **Chapter 7.5 Water Resources**).

Data Gap Analysis

The documentary data search revealed that there were a number of data gaps. The data gaps were most acute in respect of the following themes:

- soil characteristics and distribution at the Project-scale;
- baseline soil chemistry, including potentially existing contamination; and
- information on the activities, and associated contamination risk, undertaken at industrial sites (including mining and landfilling activities) located within the Project Area.

Consideration of the hydrological setting across the Project Area (such as groundwater levels, flow direction, water abstractions and surface water features) was undertaken as part of survey work documented in ESIA **Chapter 7.5 Water Resources**.

Data/Baseline Surveys

In line with the data gap analysis, whilst sufficient secondary information is available to assess the general Project Area setting, it was considered necessary to undertake a walkover inspection and obtain targeted soil samples (where possible) from the following locations:

- Akpinar Quarry situated in the north eastern portion of the Project Area;
- Quarry locations north of Akpinar, situated in the north eastern portion of the Project Area;
- Akcelik Quarry situated on the northern Project Area boundary with Yenikoy;
- Makyol asphalt production facility (visited, but no sampling) situated adjacent to the southern boundary of the Project Area;
- Tayakadin Demolition Waste Landfill situated in the south western portion of the Project Area;
- İSTAŞ Odayeri Landfill (visited, but no sampling) situated in the south eastern portion of the Project Area;
- Okten Mine situated in the north western portion of the Project Area; and
- Kartal Mine situated in the north western portion of the Project Area.

The general methodology for the targeted soil sampling is presented in Annex 7.4.A, with discussion of the site inspection findings and targeted sampling results presented below. Global positioning system (GPS) coordinates for each sampling location are also provided in Annex 7.4.A.

In the absence of current Turkish national standards for the assessment of potential risks associated with soil contaminants, reference has been, in the first instance, to USEPA soil assessment criteria as recommended within the IFC General EHS Guidelines, 2007. In accordance with the IFC General EHS Guidelines the USEPA Risk Based Concentrations (RBCs) have been utilised as suitable criteria to assess 'acceptable' contaminant concentrations for specific land use and contaminant exposure scenarios. In light of the INA Project and in line with the IFC General EHS Guidelines, the region 3 RBC industrial soil assessment criteria have been utilised.

The findings of the targeted sampling exercise are considered to provide suitable data on background conditions across the Project Area for the purposes of this ESIA. The findings would also facilitate any future contamination assessment (if required) once the Turkish Regulation on Soil Pollution Control and Point Source Contaminated Sites (SPPC) is in force, i.e. by June 2015.

Data Assumptions and Limitations

The purpose of the site inspection walkover was to identify any potentially significant contamination issues at the identified locations. Whilst brief discussions were held with site representatives at each location (where available), the inspections did not constitute full environmental/compliance audits such as detailed within the IFC General EHS Guidelines. Such inspection was not required in order to inform this chapter.

Furthermore, due to ongoing operations at a number of facilities at the time of undertaking the site surveys, the targeted sampling locations were carefully selected to minimise disruption to site activities. However, the available soil analytical data are considered suitable to provide an initial assessment of the baseline conditions within the Project Area to adequately inform this chapter.

Additional targeted investigation of the INA Project shall be carried out (as necessary) to identify the potential risk associated with any specific ground contamination during excavation activities and appropriate mitigation measures shall be enacted as applicable.

The information contained within the Geology and Soils Conditions section below is in turn based, in part, on information gathered from previous assessments undertaken by third party organisations. Reliance is placed on data obtained through these previous assessments undertaken by third party organisations.

7.4.4.2 Findings

Regional Project Area Setting

Detailed discussion on the Project Area location and wider regional setting is provided in ESIA **Chapter 1 Introduction** (Sections 1.2 and 1.3). A summary of the information relevant to the Geology and Soils chapter is included below.

The proposed new airport is located 35 km north-east of the existing Atatürk International Airport and 40-45 km from the centre of the City of Istanbul. The topography of the area is uneven with a terrain elevation difference of several tens of meters from one end to the other. The site topography has mostly been shaped by the mining operations (further discussed below). It is also understood that the mining operations (both quarrying activity and uncontrolled deposition of mine spoil) have resulted in slope failures that shape the existing irregular contours. Topographical maps suggest that the elevations range between -37 m (at northern end, beyond the true coast line) and +164 m (south western hills).

As detailed in **Chapter 3 Proposed Project and Project Description**, the site topography and condition will present particular challenges for site preparation as it will require a very significant volume of earthworks.

Current and Historical Land Use

Only a minor percentage (approximately 2%) of the Site is privately owned. An area of 298 ha is listed as being used for agricultural and stockbreeding purposes (236 ha of pasture land, 60 ha of dry farming and 2 ha of scrub). Topsoil deposits are likely to be present across the agricultural and stockbreeding areas, with only limited topsoil reserves anticipated to be located within areas of dense forestry and negligible amounts of topsoil within areas of landfilling and mining activities. Portions of land within the Project Area are mined for sand, gravel and lignite. Sixteen companies are listed as licensed mines, of which six are currently operational. This represents an area of 1,180 ha. A total of 5,230 ha are identified as forestry and an area of 942 ha includes various land uses, including (i) 610 ha of different sized water bodies (70 in total ranging in size from 0.17 to 100 ha) resulting from previous quarry excavation (open pit mining) areas which were then filled by precipitation; (ii) three landfill sites within the boundary of the Project Area, of which two are operational and licensed by the government to receive construction waste materials; (iii) connecting roads.

To the east of the Project Area land is characterised by quarry and mining activity, forestry and agricultural land; to the south land use is characterised by forestry and areas of agricultural land, to the west by forestry and agricultural land and to the north by a recreational seaside area approximately 5-8 km along the coast.

Mining is known to have operated on site since the first quarter of the 20th century. Although the extracted lignite is of low calorific figures, it is exposed at shallow depths which allows

open pit mining which has a low operational cost. Historical aerial photos and satellite imagery have been used to study these operations.

The earliest available aerial photos date from 1984, which record only minor impact to the landscape with respect to mining activities. By 1993, aerial photos found in HGK (General Command of Mapping of Turkish Armed Forces) Aerial Photo Archives show extensive mining close to the coast line corridor with only a few small mine water bodies besides the larger Kulakçayırı lake which has started to be formed after 1986. Most of the water bodies are understood to have been formed in the following decade as a result of accelerated mining operations. Aerial photos and satellite imagery indicate that the coast line was used for mine spoil disposal at several locations; hence the original coastline has been majorly altered. The available data indicates that the recent coast line is more than 500 m offset from the original position.

The Ihsaniye to Tayakadın Highway (D-010 - two-lane in both directions) crosses the Project Area around Ihsaniye and runs through the southern end of site.

A major quarry, later a landfill site to the south of the Ihsaniye to Tayakadın Highway is also a significant feature of the Project Area. Formerly another mine/quarry water body, Tayakadın Landfill, which was closed down in June 2014, is understood to have been infilled with excavated materials from multiple sources within the wider Istanbul area between 2008 and 2011. Therefore, the nature of these infill deposits is likely to be highly heterogeneous (Ref. 7.4.12).

Geology and Soil Conditions

The EIA Report (Ref. 7.4.9) completed for the Project Area includes discussion of two investigations undertaken at the Project Area.

The first comprised 16 boreholes drilled over nine water bodies at shallow (up to 6.5 m) water depths. The borehole depths were recorded to between 15 m to 18 m below existing ground level (m bgl). Typical stratigraphy was noted to be alluvial deposits at water body bottoms with thicknesses of 2.5 to 6.5 m followed by clayey sand or sandy clays. The boreholes ended in mudstone, claystone and siltstone sequences of the Belgrade Formation.

The second comprised 42 boreholes with depths ranging between 20 m and 40 m located on proposed runway alignments and terminal areas. The findings suggest that the made ground is wide spread and up to 30 m deep and is underlain by natural clayey soils and weak claystone/siltstone sequences. Both reports, although indicating similar stratigraphy, provide an insufficient amount of data in terms of boreholes and test results. Borehole coverage across the site is sparse with spacings greater than 500 m which limits the ability to model the subsoil conditions.

Analytical testing for the potential presence of contamination was not undertaken as part of either report.

Considering the highly disturbed topography and the presence of mine spoil heaps and landslide surfaces, an assessment of the soils present both as an earthworks fill and a formation material will need careful consideration to allow for the presence of unsuitable materials which will either require disposal or treatment prior to use as fill material. A summary of the strata likely to be encountered on or adjacent to the Project Area is presented in Table 7.4.2 below.

Table 7.4.2 Geological Formations In and Around the Site

Type	Formation	Definition	Age
-	Fill	Heterogeneous	-
Sedimentary units, cohesive and granular units	Quaternary units	Alluvial deposits	Quaternary
	Belgrad Fm	Gravel, sand, silt, clay	Pliocene
	Istanbul Fm Kıraç Member	Gravel, coarse sand	Upper Miocene-Pliocene
	Danisment Fm	Claystone, milestone, sandstone, gravelstone, lue-green plastic clay (max 10 m tuff, sand, turf, coal), (southern side of the site)	Late oligocene-Early Miocene
	Danisment Fm – Agaçlı member	Sand, gravel, clay, coal veins, claystone, siltstone, sandstone intercalations (covers the site)	
Weak rock cohesive and granular units	Ceylan formation	Marl, clayey limestone, tuff (lays under Agaçlı units)	Upper Eocene-Oligocene
	Ceylan Fm (Balıkkoyu)	Gravelstone (only at the coast)	
	Ceylan Fm (Yassıören)	Milestone, marl intercalation	
	Ceylan Fm (Kızılcaali	Blue-green tuff	
	Sogucak Fm	Reef limestone	Middle Upper Eocene
	Koyunbaba-_slambeyli Fm	Gravelstone, clayey sandy gravelstone, gravelly Limestone	Middle – Upper Eocene
	Yunuslubayır Fm	Shelled gravelly milestone	Middle – Upper Eocene
	Sarıyer Group Graipçe Fm	Volcanoclastic sedimentary layer	Upper Cretaceous
Rock	Trakya Fm	Greywacke (outside the boundary of the site)	Paleozoic

Source: Ref. 7.4.12

Hydrological and Hydrogeological Setting

The regional hydrological and hydrogeological conditions are detailed in ESIA **Chapter 7.5 Water Resources**. However, a summary pertinent to this chapter is provided below. In addition, reference has been made to Fugro, Hydrological and Hydrogeological Report, Istanbul New Airport, Turkey, August 2014 (Ref. 7.4.13).

A number of water bodies (WBs) associated with past mining activities are present within the northern portion of the Project Area. These WBs are likely to be fed by relatively small individual catchment areas within the Project Area. The southern area catchments have been modelled by Fugro to be larger and associated with precipitation runoff from associated valleys.

One of the major water resources supplying the city of Istanbul is Terkos Lake, which is located 2.5 km to the west of the Project Area and provides 220 million m^3 of water per annum. A small part of Terkos Basin is within the north-west side of the Project Area. The Project Area is not a designated water protection area and does not fall within the Terkos Lake catchment area. However, there are no recorded potable groundwater wells in the Project Area, only 2 existing wells were identified.

There are no continuously flowing rivers in the Project Area. There are some ephemeral river beds that carry runoff following precipitation and during the wet season. There are two creeks (Sogutlugol Deresi and Baliklidere) located to the south of the Project Area flowing in a southerly direction.

Groundwater monitoring undertaken by Fugro between January 2014 and August 2014 identified seasonal reducing groundwater levels from a peak of approximately 57 m above sea level to approximately 50.5 m above sea level. The monitored groundwater level reductions were considered indicative of a very low storage coefficient. The Fugro report states that it can be assumed that the groundwater levels will continue to drop until the end of the hydrological summer. From then on rising groundwater levels can be expected until spring.

Groundwater contours modelled by Fugro follow the local topography, with relatively steep slopes in the groundwater table identified to the base of the valleys. Most of the WBs are traversed by groundwater, suggesting that groundwater flows into the WBs and the lakes likely discharges to the groundwater respectively upstream and downstream of the groundwater flow direction. An exception is the long WB at the east side of the investigation area, at which groundwater levels surrounding the lake were identified to be below the lake level. Therefore, groundwater at this location is likely to receive recharge from the lake. Detailed discussion on the impact to groundwater resources associated with dewatering of the WBs (where necessary) is presented in **Chapter 7.5 Water Resources**.

Site Inspection and Targeted Sampling

A site inspection and targeted sampling exercise was undertaken by qualified personnel at the following locations between 3 and 6 March 2014:

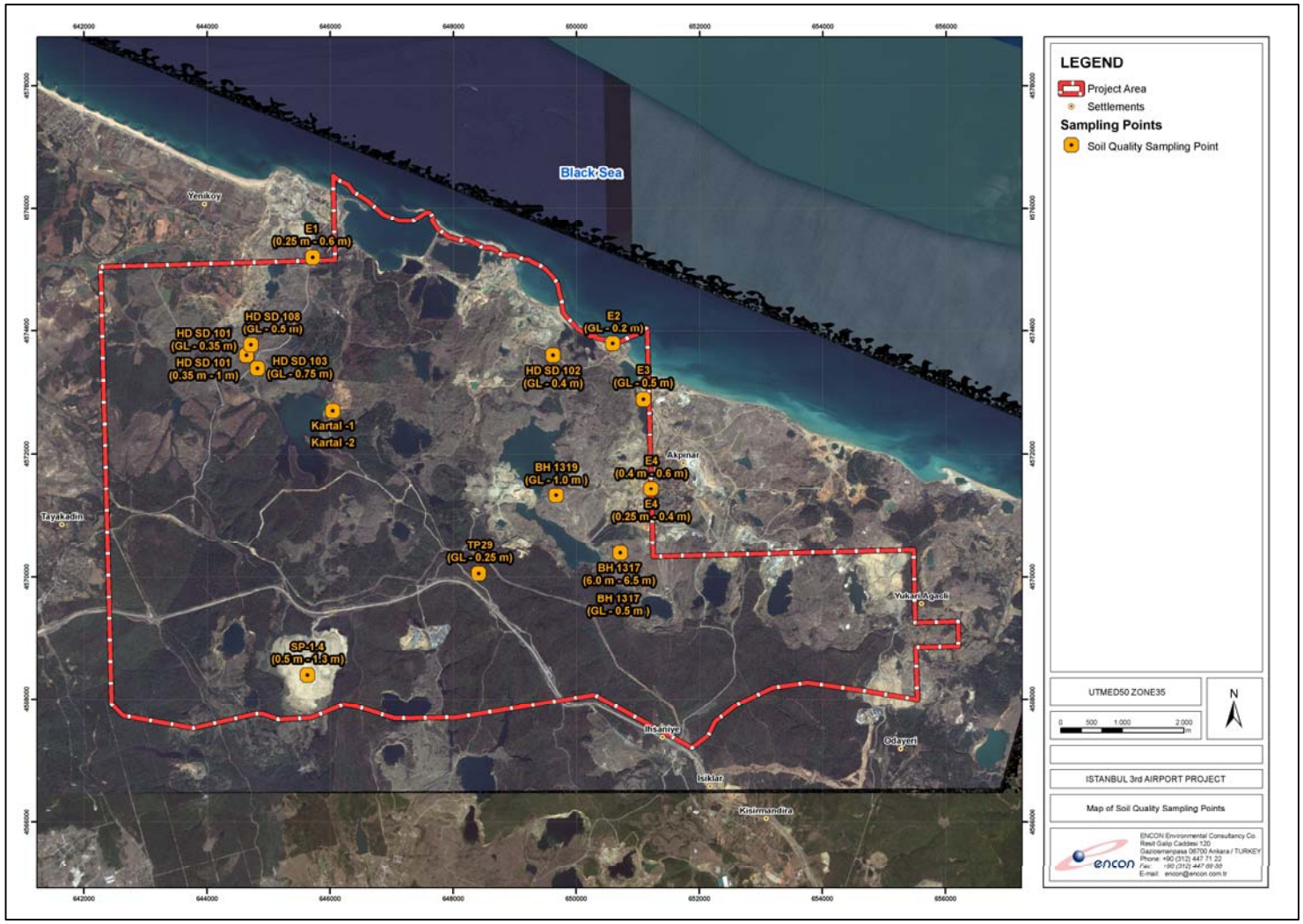
- Akpinar Quarry;
- Akcelik Quarry;
- Makyol asphalt production facility (visitation only; no sampling);
- Tayakadin Demolition Waste Landfill;
- İSTAŞ Odayeri Landfill (visit only; no sampling);
- Okten Mine;

- Kartal Mine; and
- Additional Quarries in the northern portion of the Project Area.

In addition, the Project Area, specifically Akpinar, Akcelik Quarry, and Milten Mine were re-visited on 18 April 2014 in order to complete the collection of the required targeted soil samples.

The location of the sampling sites is provided in Figure 7.4.2 below.

Figure 7.4.2 Locations of Sampling Sites



The purposes of the site inspection visits were to assess for the presence of potentially significant contaminative activities at the selected locations and to facilitate targeted initial soil sampling, where possible. A detailed discussion of the Landscape and Visual Features across the Project Area is presented in ESIA **Chapter 7.12 Landscape and Visual Features**.

A summary of the findings for each location is provided below, the analytical test data are provided as Annex 7.4.B and have been assessed in accordance with the USEPA guidance (Ref. 7.4.7) and included as Annex 7.4.C.

Akpinar Quarry

The site inspection comprised a tour of the facility with site personnel. It is reported that the Akpinar site is approximately 680 ha in area, with a central yard area and quarry workings present across the northern area. The facility is situated close to the Black Sea, with excavation activities reportedly completed to depths of 10 – 20 m below sea level. Two large water bodies, understood to comprise former quarried areas are present across the western area, with forest land beyond. The main operations at the facility involve the excavation of coal and sand, which is subsequently washed with process water from the water bodies to refine the sand. Excavation is reportedly by mechanical means only with no explosives used at the site.

The following potential sources of soil contamination were identified:

- there are reportedly no currently utilised fuel tanks at the site; however, three former underground fuel storage tanks (USTs), each 40,000 litres in capacity, were reportedly previously utilised at the facility. No records were available for inspection relating to tank integrity testing / decommissioning of the USTs;
- large scale use of mechanical excavators was observed at the site, hence a potential exists for localised soil impact (fuel leaks / spills and vehicular maintenance); and
- small scale burial of domestic waste generated at the facility is reportedly undertaken at the facility.

A single sample (E2 from ground level to 0.20 m below ground level (bgl)) was obtained from the site, with no visual, olfactory or field testing evidence of impact recorded.

A discussion on the analytical data undertaken as part of the target sampling exercise is provided below.

Akcelik Quarry

The Akcelik facility was relatively consistent in layout and operations to Akpinar Quarry (described above), with a centralised yard area, sand extraction and filtration area and coal quarrying activities extending across the wider area. A series of access roads dissect the site between each work area and a number of manmade water bodies (from quarrying activities) are present in the western/north western area.

Again, excavation is reportedly by mechanical means only with no explosives used at the site, with the following potential sources of soil contamination identified:

- three approximately 24,000-litre capacity above ground fuel tanks (ASTs) were observed within the yard area. Further inspection of the ASTs was not possible to confirm the extent of any potential staining/leakage and it was not possible to confirm the actual contents of the ASTs;
- a 30,000 m^3 capacity liquid nitrogen tank was present within the sand filtration area; and

- large scale use of mechanical excavators (fuel leaks/spills and vehicular maintenance).

A single sample (E4 from 0.40 m to 0.60 m bgl) was obtained from the site, with no visual, olfactory or field testing evidence of impact recorded. In addition, during the site inspection of the wider area, the site team visited another investigation team undertaking works on behalf of a third party geotechnical investigation to support the INA Project. At the time of the visit, drilling works for geotechnical investigation boreholes BH1226, BH1317 and BH1319 were observed. Whilst the locations had already been drilled to significant depth at the time of the visit, soil samples were obtained for subsequent chemical testing (BH1319 from ground level to 1.0 m bgl, BH1317 from ground level to 0.50 m bgl and BH1317 6.0 m bgl to 6.5 m bgl), with no visual, olfactory or field testing evidence of impact recorded.

A discussion on the analytical data undertaken as part of the target sampling exercise is provided below.

Makyol Asphalt Production Facility

At the time of the site visit the facility was noted to be active, with significant vehicular movement into and out of the facility. The site was terraced from north to south, with a water body present within the southern boundary area. The eastern portion of the facility was noted to comprise the asphalt and concrete production area, with the western portion of the facility appeared to be utilised for quarrying activities.

The production areas were largely surfaced with asphalt/concrete hard standing with areas of loose gravel surfacing also identified. The following potential sources of soil contamination were identified:

- concrete bunded aboveground storage tank (AST) farm in the northern area, near the site entrance; two x 30,000 litre capacity diesel ASTs, one x 40,000 -litre capacity diesel AST and 5,000 litre capacity ASTs holding ad blu (a urea based diesel additive). The area appeared well maintained with evidence of occasional staining, however the tank filling points were located outside of the AST bund area;
- loose gravel surfaced equipment and vehicular plant storage areas with localised areas of fluid (possible fuel/oil/lubricant) ponding and wider areas of general staining across the central and southern area of the production area;
- vehicle wash down area, with runoff directly entering the water body in the southern portion of the site;
- above ground waste oil tank sited on an area of loose gravel surface adjacent to a surface water run off channel leading to the water body, with evidence of localised significant leakage;
- evidence of oily residue runoff from the wider site area entering the water body;
- numerous 205 litre waste and full oil drums stored on loose gravel surfaced areas with associated localised staining evident; and
- two biological treatment ASTs; no evidence of significant staining / leakage identified.

No soil sampling was undertaken at the Makyol site.

Tayakadin Demolition Waste Landfill

At the time of the site inspection the facility was active[1], with ongoing deposition of excavation wastes (e.g. soils) observed. Discussion was held with an on-site representative. It is understood that the landfill has previously accepted municipal waste until circa 2007, with construction waste accepted from circa 2009. The operator of the site reported that it currently only accepted excavation wastes associated with road construction activities. The site inspection team were informed that the site does not accept hazardous or chemical waste. Large areas of the landfill have been reportedly restored with forest and grassland observed across reported previously active landfilled areas.

The following potential sources of soil contamination were identified:

- detailed records of the types of waste deposited were not available for review and given the reported former deposition of municipal wastes potentially biodegradable materials may be present. Furthermore, construction wastes may have included asbestos containing materials; and
- no tanks/areas of fuel/chemical storage were identified, however given the presence of large scale plant the presence of localised staining associated with leaks/spills and/ or maintenance activities cannot be ruled out.

At the time of the site inspection, an investigation team undertaking works on behalf of a third party geotechnical investigation to support the INA Project were present at the Tayakadin Landfill. The site inspection team observed drilling works and obtained a sample from geotechnical investigation borehole reference SP1.4 (0.50 m to 1.3 m bgl), with no visual, olfactory or field testing evidence of impact recorded.

İSTAÇ Ağaçlı Demolition Waste Landfill

At the time of the site inspection the facility was active, with ongoing deposition of excavation wastes (e.g. soils) observed. Discussion was held with on-site representatives. It is understood that the landfill previously comprised a coal and sand extraction quarry until circa 2011, at which time it was utilised for deposition of construction waste until circa December 2012. At the time of the site inspection the facility reportedly only accepts excavation wastes associated with road construction activities. The site inspection team were informed that the site does not accept hazardous or chemical waste. Prior to deposition of wastes, the site was also understood to have formed a water body in the south eastern area.

The following potential sources of soil contamination were identified:

- an above ground diesel storage tank of approximately 10,000 litre capacity was identified at the site. The AST was sited on concrete hard standing with localised staining identified;
- numerous fragments of cement bound sheeting were visually identified near the surface of the landfilling areas; and
- no further areas of fuel chemical storage were identified, however given the presence of large scale plant the presence of localised staining associated with leaks/spills and/ or maintenance activities cannot be entirely ruled out.

[1] The facility was closed down in June 2014 before the INA Ground Breaking Ceremony held on 7 July 2014.

- No soil sampling was undertaken at the İSTAÇ Landfill site.

Okten Mine

No ongoing operations were noted at the time of the site inspection. The topography of the site was noted to have been shaped by previous mining/quarrying activities with many vegetated spoil heaps identified. A number of partial built/former buildings were also recorded with localised demolition materials (concrete brick and wood etc), as well as several vehicle tracks across the former quarrying areas.

It was not possible to hold discussions with former workers regarding historic operations at the Okten Mine site. However, no obvious evidence of contamination, such as areas of staining, hazardous materials or former fuel/chemical storage tanks was identified.

The following samples were obtained from across the site (further detailed in Annex 7.4.A) in order to provide general baseline information:

- HD (SD)1 from ground level to 0.35 m bgl;
- HD (SD)1 from 0.35 m to 1.0 m bgl;
- HD (SD)2 from ground level to 0.40 m bgl;
- HD (SD)3 from ground level to 0.75 m bgl; and
- HD (SD)8 from ground level to 0.50 m bgl).

No visual, olfactory or field testing evidence of impact was recorded within any of the soils encountered during the sampling process.

A discussion on the analytical data undertaken as part of the target sampling exercise is provided below.

Kartal Mine

The site is understood to have been quarried since circa 1980, though much of the former quarrying area has since become highly vegetated. A water body is present to the western quarry site boundary, reportedly associated with previous mining activities. A small works yard for the processing and bagging of excavated coal was present in the southern area, with the majority of current quarrying activity undertaken in the northern area of the site. A main looped track transects the site. Consistent with the further quarrying sites visited, excavation is reportedly by mechanical means only with no explosives used at the site.

The following potential sources of soil contamination were identified:

- a brick lined above ground diesel storage tank covered with concrete and loose soil (approximately 15,000 litres in capacity) and associated pump were identified.. The filling pump was not sited within secondary containment and areas of localised staining were evident immediately adjacent to the tank and filler pump area. A sample of the stained soils along with a further sample of the underlying soil was obtained for analysis, with discussion presented below.
- no further areas of fuel/chemical storage were identified. However, given the presence of large scale plant the presence of localised staining associated with leaks/spills and or maintenance activities cannot be entirely ruled out.

Northern Area Quarries

Operations across these sites were noted to be relatively consistent to those observed at Akpinar. A detailed site inspection was not undertaken and discussions were not held with site representatives. However, potential contaminative activities were considered to be restricted to the operation of large scale plant (i.e. spills/leaks) excavating coal and sand deposits. No evidence of significant fuel/chemical waste was identified, though it is anticipated that small volumes are retained at the sites.

A sample was taken within close proximity of the quarry sites and a second sample within areas of grassed soft landscaping:

- E1 (north west, Milten Mining) from ground level to 0.2 m bgl; and
- E3 (north east) from ground level to 0.50 m bgl.

No visual, olfactory or field testing evidence of impact was recorded within any of the soils encountered during the sampling process. However, a small surface stockpile (<10 m^2) of cement bound sheeting was observed approximately 200 m from sampling point E3.

A discussion on the analytical data undertaken as part of the target sampling exercise is provided below.

Additional Sampling Locations

At the time of the site inspections for the targeted sites, the site inspection team also visited a geotechnical investigation team undertaking works on behalf of a third party to support the INA Project at locations within the general surrounding area. As part of the visits, the site inspection team observed the excavation of trial pit TP29, located approximately 850 m north of the Makyol site, within an area of vegetated and tree lined scrubland. The excavated soils consisted of grass over natural organic sandy clay (topsoil) over brown mottled sandy clays to the full depth of the trial pit (approximately 3.5 m bgl). No visual, olfactory or field testing evidence of impact was recorded within any of the soils observed at TP29. A sample (TP29 from ground level to 0.25 m bgl) was obtained.

A discussion on the analytical data undertaken as part of the target sampling exercise is provided below.

Assessment of Analytical Soil Testing

In general, potential contaminants were recorded at a concentration below the international screening standards adopted for the assessment (Ref. 7.4.7) however, some exceedances were recorded. The results of the analytical tests are provided in Table 7.4.3 with further discussion presented below.

Table 7.4.3 Soil Analytical Test Results Screening

PARAMETER	Units	Screening Criterion*	SP-1,4 (0,5 m-1,3 m	HD SD 101(GL-0,35)	HD SD 101 (0,35, 1 m)	BH 1317(6,0-6,5 m)	HD SD102(GL-0,4 m)	BH 1319 (GL-1,0 m)	BH 1317 (GL-0,5 m)	HD SD 103(GL-0,75 m)	HD SD108(GL-0,5 m)	E3(GL-0,5 m)	Kartal -1	TP29(GL-0,25)	Kartal-2	E1-0,25m 0,6 m	E4 0,4 m-0,6 m	E4 0,25-0,4 m	E2 GL 0,2 m
Arsenic	mg/kg	**3.00E+00**	1.34	8.953	12.018	9.315	6.678	3.66	11.835	14.208	1.041	7.115	3.4	10.095	3.673	19.285	9.473	4.051	13.064
Copper	mg/kg	**4.70E+04**	18.14	28.65	42.10	28.90	14.34	26.03	26.60	25.68	20.90	17.08	4.03	12.43	3.04	56.68	32.84	16.91	23.12
Boron	mg/kg	**2.30E+05**	39.28	29.93	36.18	43.33	35.15	46.35	57.63	26.65	31.23	69.95	11.89	52.35	11.61	85.9	73.43	91.45	139.6
Mercury	mg/kg	**4.00E+01**	0.459	0.098	1.729	0.888	0.823	<0,2	2.515	0.827	0.942	0.228	0.650	0.201	1.985	0.440	0.146	0.327	0.063
Zinc	mg/kg	**3.50E+05**	66.63	49.73	62.38	62.28	42.00	54.45	69.20	42.58	53.73	46.60	36.63	41.98	27.38	114.80	37.12	75.55	54.89
Cadmium	mg/kg	**9.80E+02**	0.597	0.626	0.681	0.443	0.376	0.465	0.523	0.524	0.266	0.355	0.386	0.301	0.268	<0,0008	<0,0008	<0,0008	<0,0008
Chromium, Cr^{+6}	mg/kg	**6.30E+00**	<2	14.55	<2	<2	<2	<2	9.089	<2	<2	<2	<2	<2	<2	7.16	<2	<2	9.36
Total Chromium	mg/kg	**1.80E+06**	24.44	19.77	23.81	30.53	19.46	32.95	24.99	18.64	23.51	21.01	6.68	26.28	7.98	47.24	29.74	30.76	21.86
Total Cyanide	mg/kg	**1.30E+02**	0.725	0.725	1.175	0.375	0.475	0.425	0.375	0.300	0.200	0.250	0.325	1.125	0.700	0.600	0.300	0.100	0.200
Lead	mg/kg	**8.00E+02**	17.28	33.25	24.21	23.89	17.84	21.91	19.41	24.01	16.85	21.62	7.265	39.65	5.48	17.97	9.87	8.34	13.45
Nickel	mg/kg	**1.20E+04**	49.83	29.40	49.80	51.48	31.20	75.28	28.90	26.75	50.93	20.17	5.59	19.09	2.33	140.5	28.7	25.89	8.56
Selenium	mg/kg	**5.80E+03**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

PARAMETER	Units	Screening Criterion*	SP-1,4 (0,5 m-1,3 m	HD SD 101(GL-0,35)	HD SD 101 (0,35, 1 m)	BH 1317(6,0-6,5 m)	HD SD102(GL-0,4 m)	BH 1319 (GL-1,0 m)	BH 1317 (GL-0,5 m)	HD SD 103(GL-0,75 m)	HD SD108(GL-0,5 m)	E3(GL-0,5 m)	Kartal -1	TP29(GL-0,25)	Kartal-2	E1-0,25m 0,6 m	E4 0,4 m-0,6 m	E4 0,25-0,4 m	E2 GL 0,2 m
Beryllium	mg/kg	**2.30E+03**	0.382	1.061	1.141	0.682	0.449	0.575	0.690	0.824	0.562	0.524	0.171	0.957	0.166	0.246	0.122	0.087	0.236
TOC	mg/kg	No applicable value	11940	-	-	8628	3968	-	-	-	6599	11165	-	18135	1372	49000	24000	16000	46000
Total PAH	mg/kg	No applicable total value	<2	<2		<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Monohydric Phenols	mg/kg	**2.50E+05**	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)	mg/kg	**4.40E+02**	<55	-	<55	<55	101	-	-	-	<55	<55	6730	<55	<55	<55	<55	269	<55
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)	mg/kg	**4.20E+02**	<55	-	<55	<55	<55	-	-	-	<55	<55	1390	<55	<55	<55	<55	<55	<55

PARAMETER	Units	Screening Criterion*	SP-1,4 (0,5 m-1,3 m	HD SD 101(GL-0,35)	HD SD 101 (0,35, 1 m)	BH 1317(6,0-6,5 m)	HD SD102(GL-0,4 m)	BH 1319 (GL-1,0 m)	BH 1317 (GL-0,5 m)	HD SD 103(GL-0,75 m)	HD SD108(GL-0,5 m)	E3(GL-0,5 m)	Kartal -1	TP29(GL-0,25)	Kartal-2	E1-0,25m 0,6 m	E4 0,4 m-0,6 m	E4 0,25-0,4 m	E2 GL 0,2 m
Total Petroleum Hydrocarbons (C-5-C40)	mg/kg	No applicable value	98	-	<55	<55	121	-	-	-	<55	<55	8130	<55	<55	<55	<55	326	<55

Notes:

Highlighted values exceed applied Screening Criterion

* United States Environmental Protection Agency published Risk Based Screening Levels, May 2014 – Industrial Land Usage

Arsenic was recorded above the adopted screening criterion of 3 mg/kg in fifteen of the seventeen samples analysed, at concentrations ranging between 3.4 mg/kg and 19.3 mg/kg. The soil samples obtained as part of the targeted sampling all comprised natural materials with no obvious evidence of impact associated with 'elevated' heavy metal concentrations (such as ash). Therefore, in the context of the Project Area setting and investigation findings, the recorded arsenic concentrations are considered typical of regional background levels and not associated with a potentially significant contaminative source.

Hexavalent Chromium was identified at concentrations above the adopted screening criterion (6.3mg/kg) within four samples of natural soils, obtained from separate locations (Akpinar Quarry, Akcelik Quarry, Okten Mine and Milten Mine) at concentrations ranging between 7.2 mg/kg and 14.55 mg/kg. Again, in light of the observations during the site investigation and in the context of the regional Project Area setting, the recorded concentrations are considered representative of more typical background levels. Scientific papers were also reviewed that identify more elevated natural occurring arsenic concentrations (mined formation had arsenic levels reaching to levels as high as 660mg/kg) with Turkish geological formations (Ref. 7.4.14 and 7.4.15).

As detailed in paragraph 7.4.2.2, a reported exceedance of an adopted initial screening criterion does not immediately constitute an unacceptable risk, although this should trigger further consideration in the context of the assessment area. Furthermore, while the screening criteria adopted for the assessment are considered to provide a useful initial screening tool, they were developed in accordance with international standards (in the absence of Turkish guidance) and hence are underpinned by a number of regional geological characteristics and assumptions not necessarily applicable to the Project Area. For comparison, the recorded arsenic and hexavalent chromium concentrations were all below screening criteria developed in accordance with the United Kingdom and European Union environmental directives.

Petroleum Hydrocarbons consistent with the site investigation observations, petroleum hydrocarbon impacted soils were recorded within a shallow band of soils (ground level to 0.10 m bgl – 8130mg/kg) immediately to the front of the above ground fuel tank at the Kartal site. Significantly reduced petroleum hydrocarbon concentrations (<55mg/kg) were identified immediately underlying the impacted soils, confirming observations that these soils were isolated in extent.

No further potential areas of impact were identified as part of the limited scope targeted analytical testing, though the potential for the presence of impacted soils within the Project Area cannot be ruled out (particularly at industrial facilities such as Makyol)

Further consideration of the potential impacts associated with the ground conditions identified as part of the site inspection and targeted sampling exercise is provided in the following section.

7.4.5 Potential Impacts

7.4.5.1 Receptors

Owing to the complexity of the Project, there are multiple potential sources of contaminants, pathways and interconnected potential receptors. The receptors under consideration relate to human health, groundwater and surface water (cross referenced with ESIA **Chapter 7.5 Water Resources**) and ecology (cross referenced to ESIA **Chapter 7.8 Ecology**). Indirect receptors that use soil, groundwater and surface water have also been considered. Pathways that could

link the sources and receptors have been identified. Only where the complete linkage of source, pathway and receptor are present can impacts occur.

The general methodology adopted in assessing impact significance is presented in ESIA **Chapter 6 Impact Assessment Methodology**.

In the absence of published quantitative criteria relating to contamination for use in this ESIA, Table 7.4.4 has been developed, to enable the consistent and transparent assessment of likely impacts on sensitive receptors associated with the INA Project.

Table 7.4.4 Criteria for Assessing Sensitivity of Receptor

Sensitivity of Receptor	Criteria
High	• Land to be in use for residential purposes including the growing of food (e.g. vegetables for human consumption). • Construction workers (relevant in the context of a human receptor during the development process). • Aquifers which may be used for public water supply. • Surface watercourse located on or adjacent to the Project Area. • Areas located in or directly within the immediate catchment area of an ecologically sensitive area.
Medium	• Land to be in use for residential purposes without growing of food (e.g. vegetables for human consumption). • Aquifers which are not used for public water supply but may be of strategic regional importance. • Receiving water systems, not used for public water supply but that may support aquatic life (excluding protected species). • Livestock / third party property / utility supplies • Surface watercourse located less than 250 m from Site (however not located on or adjacent to the Project Area). • Not located in an ecologically sensitive area however located within influencing distance.
Low	• Land to be in use for commercial/industrial purposes. • Unproductive strata. Groundwater not used for public water supply and unlikely to be of strategic regional importance. • Surface watercourse located more than 250 m from the Site. • Not located in an ecologically sensitive area or within influencing distance.

Human Health

The following potential human health receptors were assessed:

- potential residential area present within the Project Area (high sensitivity);
- further residential areas within the immediate off-site surrounds of the Project Area and current industrial/commercial site workers (e.g. associated with landfilling and quarrying activities (medium sensitivity); and
- residential and off-site commercial/industrial land users within wider surrounding area (low sensitivity).

Receptors associated with soil impacts cannot be considered in isolation as they are interdependent; for example:

- groundwater and surface water may experience secondary impacts associated with primary impacts to soils;
- surface waters may experience secondary impacts associated with primary impacts to groundwater; and
- soil and groundwater may experience secondary impacts associated with primary impacts to surface water.

Humans may experience secondary impacts associated with primary impacts to groundwater or surface water that subsequently affect abstractions.

Water Resources

Potential impact to water resources is discussed in **Chapter 7.5**. However, the following water resource receptors have been identified with respect to potential impact by contaminated soils (if present) from current and historical activities, during development and on an operational basis:

- Black Sea as the receiving environment;
- Regional groundwater aquifer systems (due to possible water abstraction during construction and operation phase of the Project and potential groundwater contamination if best practices are not implemented);
- Local and regional communities (due to increased water use); and
- Local flora and fauna due to dewatering of WBs.

There are no nationally protected designated sites located within the Project Area. However, a number of internationally recognised areas and nationally protected designated sites occur in the vicinity of the Project Area. Detailed information on these areas and on risks to potential ecological receptors associated with the Project Area are considered in ESIA **Chapter 7.8 Ecology**.

Property

- livestock (medium sensitivity); and
- third party land/utilities (medium sensitivity).

Other

Other receptors include ecological receptors such as local flora and fauna and supporting habitats. Further reference should be made to **Chapter 7.8 Ecology**.

New Receptors

The INA Project will include six runways, passenger terminals and satellites (international and domestic); Air Traffic Control (ATC) Towers; Automated Passenger Mover (APM) Station; a cargo terminal; maintenance; cargo apron; hangars; and ancillary buildings; general aviation; a VIP terminal; a fuel farm; fuel delivery jetty; fire services; a metro link; airport service roads and airport connector roads.

New receptors associated with the INA Project include:

- Human Health (during development phase works) – construction workers (high sensitivity in accordance with Table 7.4.3);

- Human Health (following development) – future airport users and commercial site users (low sensitivity in accordance with Table 7.4.3); and
- Built Environment (following development) – Future buildings associated with the INA Project would be at potential risk to aggressive ground conditions (such as impact on building foundations) and migration of gases/vapours (low sensitivity in accordance with Table 7.4.3).

7.4.5.2 Earthworks and Construction

A major earthworks programme, including a large scale cut to fill operation, is required to facilitate the INA Project development. A full description of earthworks can be found in **Chapter 3 Proposed Project and Project Description**.

The following volumes of cut and fill will be required throughout the Project to establish the required platform levels (Table 7.4.5):

Table 7.4.5 Estimated Earthworks Volumes

	Cut (10^6 m^3)	Fill (10^6 m^3)	Net (10^6 m^3)	Total
Phase 1	650	320	330	970
Phase 2	28	34	-6	62
Phase 3	53	18	35	71
Phase 4 (final)	15	24	-9	39
Total	746	396	350	1,142

Source: IGA, 2015.

It is planned that fill material will be sourced from the areas of the Project Area where cutting is required to remove obstacles and achieve the average 92 m platform level. It is expected that the earthworks for the Phase 1 development will last for an estimated 20 month period in order to meet project delivery timescales.

During the earthworks and construction phase there will be physical disturbance of soils that could promote the movement of soil contaminants. These could potentially pass to receptors along the following pathways:

- dust and vapour inhalation;
- erosion and transport of soils by surface runoff;
- ingestion, dermal contact and inhalation of contaminants in soil and sediment by construction workers; and
- interaction with additional receptors, for example:
  - runoff into surface waterbodies;
  - direct release of contaminants to soil and surface water;
  - leaching of contaminants from soils into groundwater and subsequent migration; and
- alteration of groundwater levels.

The potential impacts associated with the soils underlying the Project Area will be significantly influenced by the earthworks programme. For example, the Tayakadin landfill site is located in areas understood to be reduced as part of the cut and fill works, which will require the removal of wastes materials deposited at each facility. This could potentially promote the

transport of contaminants to receptors along the pathways described above. In contrast, ground levels across Akpinar Quarry are to be raised and therefore do not require disturbance of soils as part of the cut and fill works.

The construction phase works will also include four strategically located 'construction camps' for the storage and maintenance of vehicle/plant and equipment warehousing and maintenance and fuel store/dispensing facilities, including a 1,000 tonne diesel fuel storage facility to support vehicle refuelling. The main construction camp will also provide accommodation and welfare facilities for construction workers and will be powered by combined liquid natural gas (LNG) generators for heating and power provision, and with potable water from water body dewatering and municipal supplies as appropriate.

In consideration of the INA Project programme, the following potential adverse impacts could occur in the absence of mitigation during the earthworks and construction works:

- potentially elevated levels of contaminants that exceed adopted international published standards are known to occur in the soil within the Project Area, albeit at comparatively low concentrations. In addition, a number of potentially contaminative operations (quarries, asphalt production facility and landfills) that could give rise to soil pollution were also identified across the Project Area. The contaminants locally present in the soil may be harmful to human health under certain exposure scenarios. In addition to the known areas of contamination, the possibility exists that the Project may encounter currently unidentified, localised pockets of soil contamination potentially including asbestos containing materials, which may be disturbed by the earthworks. These may relate to past land use or uncontrolled waste disposal. The likelihood of encountering unidentified contamination is moderately high given the current land uses and size of the Project Area;
- contaminated dust emissions (particularly associated with construction vehicle movement) and hazardous gas emissions generated could present a potential health risk to construction workers, off-site residents, commercial users and members of the public;
- land gas and/or residual volatile contaminants (if present) could pose a risk to construction workers within confined spaces (such as excavations for installation of new drainage/buried utility service lines);
- potential contaminants include fuels, lubricants, cement, concrete, grout and slurry additives and metals. Contamination of the soil may result through accidental leaks or spills during construction (e.g. during refuelling or waste handling). Depending on the size and nature of the spillage, and the physical properties of the soil (including soil porosity, soil potential for pollutant sorption, and soil saturation), this could lead to contaminant migration and impacts at some distance from the Project Area;
- accidental damage to existing utilities could occur during site clearance and earthworks (such as the power transmission line that crosses the Project Area). This may result in contamination of the soil;
- temporary alterations to ground conditions during the construction period may also occur as a result of the clearance of land for the access roads, temporary construction areas and general vehicle movements;
- the removal of vegetation will expose bare soils (including topsoil) to erosion and/or compaction by the movement of heavy machinery and vehicles. The released soil particles may enter surface watercourses and result in general migration as a result of erosional processes (particularly where soil stockpiles are present);

- earthworks and stockpiling of soils can lead to the mixing of different soil types, and also the changing of the soil structure. Such mixing can influence soil type and structure, which may influence ecosystems or agricultural usage. Similarly, mixing of excavated soil types can result in the contamination of previously clean soils by contaminated soils and this practice is forbidden according to Article 6 c) of the SPPC Regulation;
- in the event that soils excavated as part of the cut and fill works are unsuitable to be re-used as part of the Project or surplus to requirements, removal of excess materials may be required. The handling of waste/surplus materials is discussed in ESIA **Chapter 7.7 Waste Management**; and
- water resources could be affected during earthworks and construction (including demolition of existing structures) by accidental spillage of oil and diesel through infiltration of polluted runoff through soil. In addition, inefficient management of stockpiled soils could lead to direct and indirect pollution impacts from silt-laden runoff.

In light of the above, in the absence of mitigation, land contamination encountered during the earthworks and construction phase development has a probable likelihood of causing negative, short to long term reversible impacts of a local to regional extent upon sensitive receptors. These impacts would be of moderate severity and of overall moderate significance.

With respect to the contamination of soil resources, in the absence of mitigation there would be a probable likelihood of potential negative, short to long term reversible impacts of a local to regional extent upon high sensitivity receptors during the earthworks and construction phase. These impacts would be of moderate severity and of overall moderate significance.

Regarding soil disturbance and loss of topsoil resource across the Project Area, in the absence of mitigation there would be a certain likelihood of negative, short term and local reversible impacts upon low sensitivity receptors during the earthworks and construction phase. These impacts would be of moderate severity and of overall moderate significance.

7.4.5.3 Airport Operation

In the absence of mitigation the following potential direct and indirect adverse impacts could occur following the completion of the INA Development:

- future users of INA may come into contact with residual contaminants in areas of INA not covered with hardstanding (e.g. areas of soft landscaping);
- future maintenance workers may come into direct contact with potentially contaminated soils (such as localised impacted soils across the Project Area) and to a lesser extent groundwater (depending on excavation depths and post development groundwater levels);
- land gas and/or residual volatile contaminants (if present) could pose a risk to future users of INA buildings, e.g. via ingress through service cavities and accumulation within confined spaces;
- existing soils may not provide a suitable horticultural growth medium to support future planting within areas of soft landscaping; and
- detailed consideration of potential impacts to water resources is presented in ESIA **Chapter 7.5 Water Resources**.

In addition, in the absence of appropriate management plans, the following potential adverse impacts could be introduced during INA operations:

- uncontrolled release of fuels (including aviation fuel) liquids/chemicals stored at the airport;
- potential release of contaminants to underlying ground as a result of aircraft / support vehicle accidents and maintenance activities; and
- inappropriate storage of hazardous materials (discussed in ESIA **Chapter 7.7 Waste Management**).

From the above, it is predicted that in the absence of mitigation, there is a probable likelihood of negative contamination impact upon the built environment (future INA infrastructure). The duration of impact would be short to long term, of a regional extent, reversible and on low to moderate sensitivity receptors. Impacts are likely to be of moderate severity and overall of moderate significance.

With respect to the contamination of soil resources during airport operation, it is predicted that in the absence of mitigation there would be a possible likelihood of negative short to long term reversible impacts of a regional extent upon low to moderate sensitivity receptors. These would be of moderate to high severity and of moderate to high significance.

7.4.6 Mitigation and Residual Impacts

General

Mitigation comprising both design and management measures shall be implemented to minimise potential environmental risks associated with the soils underlying the Project Area:

- mitigation measures that are inherent in the design of the Project that will address potential impact following construction of the INA Project (mitigation by design);
- construction mitigation measures to address potential impact during redevelopment works; and
- operational mitigation measures to address potential impact introduced by the INA Project.

Mitigation by Design

The INA will be designed in accordance with GIIP. In the first instance, as part of the overall detailed structural design of the INA Project, there is an ongoing detailed geotechnical intrusive investigation of the Project Area in order to provide more detailed information on the ground conditions (including any potential ground instability). The findings of the geotechnical investigation shall be used to inform the INA design process.

The INA Project will significantly increase the hardstanding coverage of the Project Area. This in turn will decrease the potential pathways for residual contaminants (where present) within near surface soils (post cut and fill works) to impact upon future on-site users. There will also be a requirement to ensure soils to provide a suitable growth medium for future planting within areas of soft landscaping.

Consideration of the design of building (e.g. building concrete specification) and utility supply (e.g. potable water pipes) materials shall also give due regard to the identified industrial usage across the Project Area.

Mitigation by Management Measures

The adaptation of appropriate mitigation measures shall be delivered through a number of management plans to be developed for the INA Project, including:

- Environment and Social Management Plan (ESMP);
- Health and Safety Management Plan;
- Waste Management Plan;
- Pollution Prevention Plan;
- Health and Safety Management Plan;
- Environmental Management System (EMS); and
- Emergency Response Plan.

7.4.6.1 Earthworks and Construction Phase

As identified above, management and control measures integral to INA Project during the construction stage will be included within three main management plans:

- ESMP;
- Health and Safety Management Plan; and
- Waste Management Plan.

The management plans shall outline the methodology and techniques to avoid, minimise and (where this is not possible) mitigate the magnitude of potential environmental impacts and thereby the likelihood of significant impacts.

Mitigation measures to address identified soil contamination will include:

- land contamination may be encountered within the Project Area as part of the earthworks and construction activities. Such contamination may be related to unknown historical releases of hazardous materials (including asbestos containing materials) or oil, or due to the presence of abandoned infrastructure formerly used to store or handle these materials. Actions necessary to manage the risk from contaminated land will depend on factors such as the level and location of contamination in consideration of the cut and fill works, the type and risks of the contaminated media, and the specific intended land use within the impact portion of the Project Area. Assessment of the potential risk posed to the environment should be undertaken in accordance with GIIP, such as presented in the IFC Guidelines, dated 2007, including:
  - managing contaminated media with the objective of protecting the safety and health of occupants of the site, the surrounding community, and the environment post construction or post decommissioning;
  - understanding the historical use of the land with regard to the potential presence of hazardous materials or oil prior to initiation of construction or decommissioning activities;
  - preparing plans and procedures to respond to the discovery of contaminated media to minimise or reduce the risk to health, safety, and the environment; and
  - preparation of a management plan to manage obsolete, abandoned, hazardous materials or oil consistent with the approach presented in Section 1.2.2 above.
- to reduce the potential impact from spills and leaks GIIP control measures will be adopted by responsible parties (e.g. contractors) and these will be defined within an Emergency Response Plan identifying the actions to address spill prevention;
- during the earthworks and construction phase development, it will be necessary to store a number of potentially contaminative liquids and chemicals including diesel on-site. However, implementation of construction work would be guided by the appropriate

management plans so that no additional contaminant source or pathway is created and hence no significant impact can occur. To avoid the accidental leakage of fuel, oils and/or lubricants, all plant should be maintained to a safe and efficient working condition at all times and any oils or fuels should be contained in accordance with GIIP. As a minimum all liquids and solids of a potentially hazardous nature (e.g. diesel fuel, oils, degreasers etc) will be stored with appropriate secondary containment. In accordance with IFC General EHS Guidelines, appropriate secondary containment structures must be capable of containing the larger of 110% of the largest tank or 25% of the combined tank volumes in areas with above-ground tanks with a total storage volume equal or greater than 1,000 litres and will be made of impervious, chemically resistant material;

- a dedicated area for the refuelling of plant and vehicles shall be established and the fuelling area shall be kept clean at all times. No refuelling shall be undertaken outside of the established refuelling areas. Any spillages or leaks of fuel will be cleaned up immediately by the contractor and contingency arrangements for dealing with spillages shall be available at all times, including absorbency granules and dedicated spill response kit;
- the disposal of materials (if necessary) will comply with all applicable waste management regulations (**Chapter 7.7 Waste Management**);
- any soils imported for placement within the Project Area will be verified in accordance with GIIP as suitable for the intended use;
- the EPC contractor will ensure that site personnel are trained to be familiar with the current legislation and to comply with the requirements of the relevant management plans. In particular, Project staff will be made aware of:
  - the waste management requirements to address handling, transportation and storage of waste; and
  - the emergency preparedness and response measures.
- A Resource Management Plan, Soil Management Plan and Waste Management Plan should be maintained throughout the earthworks and construction phase to track the source, treatment (if applicable) and final re-deposition or disposal of soils as part of the INA Project;
- the potential short term risk for earthworks and construction workers shall be adequately assessed, to manage the risk of workers coming into contact with contaminated soils. The risks shall be mitigated through the:
  - use of appropriate, safe working practices;
  - provision of health and safety training;
  - installation of guidance notes and signs;
  - preparation of a contingency plan in case of accidents; and
  - appropriate use of suitable personal protective equipment (PPE).
- the risk of inhalation of contaminated dust by off-site commercial users, members of the public and construction workers during the earthworks and construction phase (if present) will be mitigated with the appropriate use of safe working practices;
- procedures will be put in place to deal with emergencies and incidents. Environmental incidents can be defined as unexpected events which lead to, or could in different circumstances have led to, adverse impacts on people, property or on environmental resources (e.g. off-site receptors); and

- finalised suitable foundation options will be assessed during the detailed design stage for the INA Project to mitigate creation of contamination pathways between the ground strata, thus allowing contaminant migration.

In addition, as outlined in IFC Guidance (Ref: 7.4.16), mitigation measures to protect soil resources, such as topsoil, will include:

- where topsoil is pre-stripped, it will be stored for future site rehabilitation activities. Topsoil management shall include maintenance of soil integrity in readiness for future use. Storage areas shall be temporarily protected or vegetated to prevent erosion; and
- soil conservation measures (e.g. segregation, proper placement and stockpiling of clean soils and overburden material for existing site remediation) will be implemented. Key factors when confirming the measures include placement, location, design, duration, coverage, reuse, and handling procedures.

With the implementation of the above mitigation measures, it is predicted that the negative impacts from land contamination encountered during the earthworks and construction phase, and the impacts from contamination of soil resources, will have a **Negligible** significance. The adverse impacts from soil disturbance and loss of topsoil resource across the Project Area would be still of **Low** significance following the adoption of mitigation measures.

7.4.6.2 Airport Operation

There will be a number of ongoing operational mitigation measures required in consideration of the INA. The required measures will be documented within the Health and Safety Management Plan, Environmental Management Plan and the Emergency Response Plan. The measures will give due regard to:

- appropriate measures for delivery and storage containment of fuels (including aviation fuel) and refuelling of aircraft and support vehicles, such as in accordance with appropriate industry guidance (Ref. 7.4.10);
- adoption of GIIP for storage and application of further liquids and chemicals (e.g. maintenance oils and greases);
- appropriate maintenance of site infrastructure, including fuel delivery lines and pumps and interceptors; and
- appropriate management of INA generated wastes.

With the adoption of these mitigation measures, the negative contamination impact upon future INA infrastructure would be of **Negligible** significance.

Contamination of soil resources during operation is predicted to be of **Low** significance after implementation of mitigation measures.

7.4.7 Summary of Impacts

Table 7.4.6 provides a summary of the impacts and mitigation measures associated with impacted soils during the earthworks, construction and operation of INA.

Table 7.4.6 Summary of Impacts

Topic	(Receptor/ Beneficiary	Phase	Impact Categorisation	Potential Significance Prior to Mitigation	Design, Enhancement or Mitigation Measures	Management Plan	Residual Significance
Land contamination encountered during the earthworks and construction phase development	Existing construction worker accommodation area, existing settlements on the Project Area boundary (further environmental receptors such as water resources and surrounding ecology are discussed in the relevant chapters).	Construction	**Type:** Negative **Duration:** Short to long Term **Extent:** Local / regional **Reversibility:** Reversible **Sensitivity:** High sensitivity	**Likelihood:** Probable **Severity:** moderate **Significance**: moderate	• Manage contaminated media with the objective of protecting the safety and health of occupants of the site, the surrounding community, and the environment post construction. • Prepare plans and procedures to respond to the discovery of contaminated media to minimise or reduce the risk to health, safety, and the environment. • Preparation of a management plan to manage obsolete, abandoned, hazardous materials/chemicals/oils.	ESMP Construction Health and Safety Management Plan Construction Waste Management Plan Emergency Response Plan	**Negligible (Adverse)**
Contamination of soil resources	As above	Construction	**Type:** Negative **Duration:** Short to long Term **Extent:** Local / regional **Reversibility:**	**Likelihood:** Probable **Severity:** moderate **Significance**: moderate	• Reuse/importation of appropriate soils as part of earthworks cut and fill works. • Appropriate storage of bulk fuels and chemicals. • Dedicated refuelling areas. • Regular inspections of containment structures.	As above	**Negligible (Adverse)**

Topic	(Receptor/ Beneficiary	Phase	Impact Categorisation	Potential Significance Prior to Mitigation	Design, Enhancement or Mitigation Measures	Management Plan	Residual Significance
			Reversible **Sensitivity:** High sensitivity		• Regular maintenance and inspection of construction equipment and vehicles. • Appropriate training for project staff. • Provision of spill kits in appropriate locations including hazardous substance storage areas. • Use of appropriate personal protective equipment.		
Soil disturbance, loss of topsoil resource across the Project Area	Soil resources	Construction	**Type:** Negative **Duration:** Short Term **Extent:** Local **Reversibility:** Reversible **Sensitivity:** Low sensitivity	**Likelihood**: Certain **Severity**: Moderate Adverse **Significance:** Moderate Adverse	• Measures to be confirmed as part of a Materials Management Plan. Recommended actions include: • mapping of topsoil and planning which soils are to be stripped and preserved for future restoration; • careful removal of topsoil and stockpiling topsoil in dedicated storage areas in advance of the construction; • stabilisation of stockpiles to minimise erosion and • restore any damaged areas as quickly as feasible to minimise erosion.	Materials Management Plan	**Minor (Adverse)**

Topic	(Receptor/ Beneficiary	Phase	Impact Categorisation	Potential Significance Prior to Mitigation	Design, Enhancement or Mitigation Measures	Management Plan	Residual Significance
Contamination Impact upon future INA Infrastructure	Built Environment	Design	**Type:** Negative **Duration:** Short to Long Term **Extent:** Regional **Reversibility:** Reversible **Sensitivity:** Low to moderate sensitivity	**Likelihood**: Probable **Severity**: Moderate Adverse **Significance:** Moderate Adverse	Consideration on the design of building (e.g. building concrete specification, foundation design) and utility supply (e.g. potable water pipes) materials shall also give due regard to the identified industrial usage across the Project Area.	Further assessment as part of ongoing third party geotechnical investigation to support the INA Project	**Negligible (Adverse)**
Contamination of soil resources	Soil resources	Operational	**Duration:** Short to Long Term **Extent:** Regional **Reversibility:** Reversible **Sensitivity:** Low to moderate sensitivity	**Likelihood**: Possible **Severity**: Moderate to High Adverse **Significance:** Moderate to High Adverse	• Appropriate measures for delivery and storage containment of fuels (including aviation fuel) and refuelling of aircraft and support vehicles, such as in accordance with in accordance with industry guidance. • Adoption of GIIP for storage and application of further liquids and chemicals (e.g. maintenance oils and greases). • Appropriate maintenance of site infrastructure, including	Health and Safety Management Plan ESMP Emergency Response Plan	**Minor (Adverse)**

Topic	(Receptor/ Beneficiary	Phase	Impact Categorisation	Potential Significance Prior to Mitigation	Design, Enhancement or Mitigation Measures	Management Plan	Residual Significance
					fuel delivery lines and pumps and interceptors. and • Appropriate management of INA generated wastes.		

7.4.8 Conclusions

A major earthworks programme, including a large scale cut to fill operation, is required to facilitate the INA Project development and will cause the physical disturbance of soils on-site that could promote the movement of soil contaminants, while the operation of the airport poses potential environmental risks associated with the soils underlying the Project Area.

With the implementation of the mitigation measures outlined in section 7.4.6, it is predicted that the negative impacts from land contamination encountered during the earthworks and construction phases, and the impacts from contamination of soil resources, will have a **Negligible** impact significance. The adverse impacts from soil disturbance and loss of topsoil resource across the Project Area would still be of **Low** impact significance following the adoption of the proposed mitigation measures. Therefore, all residual impacts on geology and soils are expected to have a **Negligible** to **Low** impact significance within a regional and local context.

References

Ref. 7.4.1	Turkish Regulation on Soil Pollution Control and Point Source Contaminated Sites (SPPC), Official Gazette No: 27605, dated: June 8, 2010
Ref. 7.4.2	Hazardous Waste Control Regulation, Official Gazette No: 25755, dated March 14, 2005
Ref. 7.4.3	Regulation on the Control of Excavation Materials, Construction and Demolition Wastes, Official Gazette No: 25406, dated March 18, 2004
Ref. 7.4.4	Solid Wastes Control Regulation, Official Gazette No: 20814, dated March 14, 1991
Ref. 7.4.5	Regulation Concerning the General Principles of Waste Management, Official Gazette No: 26927, dated July 5, 2008
Ref. 7.4.6	Environmental, Health and Safety (EHS) Guidelines, General EHS Guidelines: ENVIRONMENTAL; Waste Management, IFC, 30 April 2007
Ref. 7.4.7	United States Environmental Protection Agency (USEPA) Region 9, Superfund Concentrations (RBCs), May 2014
Ref. 7.4.8	ESIA Scoping Report, ENVIRON UK Limited, March 2014
Ref. 7.4.9	Istanbul Region 3. Airport Final Environmental Impact Assessment Report, May 2013
Ref. 7.4.10	Joint Inspection Group Guidelines for Aviation Fuel Quality Control and Operating Procedures, latest edition, February 2012
Ref. 7.4.11	Istanbul New Airport Master Plan, Ove Arup and Partners, December 2013
Ref. 7.4.12	Ove Arup and Partners Tender Submission Report, May 2013
Ref. 7.4.13	Fugro Hydrological and Hydrogeological Report, Istanbul New Airport, Turkey, August 2014
Ref. 7.4.14	Çolak M., Gemici Ü. and Tarcan G. 2003. The Effects of Colemanite Deposits on the Arsenic Concentrations of Soil and Ground Water in Igdeköy-Emet, Kütahya, Turkey; *Journal of Water, Air, and Soil Pollution*, Vol. 149, Issue 1-4, pp. 127-143
Ref. 7.4.15	Gunduz O., Simsek C. and Hasozbek A. 2010. Arsenic Pollution in the Groundwater of Simav Plain, Turkey: Its Impact on Water Quality and Human Health. *Journal of Water, Air, and Soil Pollution*, Vol. 205, Issue 1-4, pp. 43-62
Ref. 7.4.16	Environmental, Health and Safety Guidelines for Mining, IFC, December 2007

Annex 7.4.A: Baseline Survey Methodology

Supporting Information on the Site Inspection Sampling Exercise

General

The site investigation works followed all regional and national site investigation and health and safety guidance where applicable. In addition all site investigation works were undertaken in accordance with the good practice measures outlined below.

Intrusive Site Investigation Requirements

As part of a third party geotechnical investigation to support the INA Project a range of mechanically excavated boreholes were advanced across the site to varying depths utilising drilling techniques. Locations were identified at Okten Mining Site (HD(SD)101, HD(SD)102, HD(SD)103 & HD(SD)108), at Tayakadin Municipality Landfill (SP1.4), Akcelik Quarry (BH1317 & BH1319) and across the wider Project Area (TP29). In addition, manual field equipment (hand auger) was utilised to obtain targeted samples from specific points of interest (e.g. areas of superficial surface staining) identified during site attendance and that were not targeted as part of the third party investigation. The sampling locations included Kartal Mine (Kartal-1 & Kartal-2), Milten Mine (E1), Akcelik Quarry (E4), and further quarries across the northern Project Area (E3) and Akpinar Quarry (E2).

All excavation locations were accurately surveyed and annotated to a current site layout plan. Groundwater was not encountered at any sampling location during the site inspection and sampling exercise.

The approximate sampling location coordinates are presented in Table 7.4.A.1.

Table 7.4.A.1 Sampling Drilling Locations

	WGS1984_UTM_Zone_35N	
Name	**POINT_X**	**POINT_Y**
HD(SD)101	644641	4573601
HD(SD)102	649619	4573601
HD(SD)103	644819	4573390
HD(SD)108	644714	4573770
SP1.4	645631	4568395
BH1317	650712	4570389
BH1319	649671	4571326
TP29	648411	5470052
Kartal-1 (at 0.? m bgl*)	646041	4572706
Kartal-2 (at 0.? m bgl*)	646041	4572706
E4	651208	4571432
E3	651088	4572895

	WGS1984_UTM_Zone_35N	
Name	**POINT_X**	**POINT_Y**
E2	650589	4573793
E1	645715	4575199
*m bgl - metres below current ground level		

Where possible the exploratory locations were surveyed to global coordinates, and where possible, also surveyed relative to sea level.

All groundwater strikes encountered during the investigation were recorded. All site works were undertaken by a competent site investigation specialist.

Decontamination

For best practice all equipment to be reused at different sampling locations was cleaned after use at each sampling location. Sampling equipment was also cleaned in between the collection of samples to prevent cross contamination. Washing of site equipment should be undertaken away from any sampling locations.

Soil Sampling

At all excavation locations, soil samples were examined by visual and olfactory methods for the presence of volatile organic/hydrocarbon contamination.

Samples were 'screened' every 1 m using a calibrated photo-ionisation detector (PID) on-site to screen soil samples for volatile organic compounds (i.e. soil samples to be placed in bags and then agitated, the photo-ionisation detector is then to be placed into the bag to detect for the presence of volatile organic compounds in the headspace).

A description of all materials encountered at each exploratory hole was recorded within written excavation field notes. The field notes also recorded the following:

- Date the exploratory hole was advanced;
- Method used to excavate the exploratory hole;
- Results of any on-site testing (visual and olfactory assessment);
- The final depth the exploratory hole; and
- Information on the depth to water strikes if encountered.

The specific number of samples per location and sampling depth was decided based on the field observation findings, with the consideration also given to the requirement for further targeted analytical testing. Whilst samples may not have been taken from all strata recorded at every location, representative samples of all common strata materials encountered during the site inspection was obtained for chemical testing.

Selected soil samples were submitted for laboratory analysis for a range of contaminants (see further details below). Retained samples were placed in containers appropriate to the type of analysis being undertaken (strictly in accordance with protocols determined by the specific laboratory to be used - preferably at low temperature to avoid loss of volatile compounds). The analytical testing was undertaken by Encon Çevre Danışmanlık Limited at their TURKAK (Turkish Accreditation Department) accredited laboratory facilities.

Site Specific Analytical Strategy

All samples were collected by competent site investigation specialists and appropriately packaged for transportation to the selected laboratory facility.

The general analytical suite is listed in Table 7.4.A.2, with samples analysed dependent upon the identified characteristics (e.g. odours, PID results, visual evidence of impact).

Table 7.4.A.2 Analytical Testing Suite

Determinant	Preferred Method (alternative methods can be used if justified)
Arsenic, cadmium, chromium total & hexavalent, lead, mercury, selenium, copper, nickel, zinc, vanadium, beryllium, water soluble boron	ICPMSS / ICPOES
Total organic carbon	IHM carbonate removal
Speciated total petroleum hydrocarbons	TPH CWG by GC-FID
Polycyclic aromatic hydrocarbons	US EPA 16 by GC-MS
Total Cyanide	IHM acid distillation
Monohydric Phenols	IHM distillation

Annex 7.4.B: Analytical Soils Data

TÜRKAK

TURKISH ACCREDITATION AGENCY

COPY OF THE ACCREDITATION CERTIFICATE

As a Testing Laboratory,

ENCON
Çevre Danışmanlık Limited Şirketi
Reşit Galip Caddesi No:120 Gaziosmanpaşa
06700 ANKARA / TURKEY

is accredited in accordance with TS EN ISO/IEC 17025:2012 standard within the scope given in Annex following the assessment conducted by **TURKAK**.

Accreditation Number	**: AB-0168-T**
Accreditation Date	**: 28 January 2009**
Revision Date / Number	**: 24 May 2013 / 05**

This certificate shall remain in force until **23 May 2017**, subject to continuing compliance with the standard **TS EN ISO/IEC 17025:2012**, related regulations and requirements.

TÜRK AKREDİTASYON KURUMU
TÜRKAK
1999

Dr. H. İbrahim ÇETİN
Deputy Secretary General

+90 312 419 32 00 - www.turkak.org.tr

Annex of the certificate (Page 1/9)

Accreditation Scope

TÜRKAK Test TS EN ISO/IEC 17025 AB-0168-T	**ENCON** **Çevre Danışmanlık Limited Şirketi** **Accreditation Nr: AB-0168-T** **Revision Nr: 05 Date: 24 May 2013**
	As a Testing Laboratory
Address: Reşit Galip Caddesi No:120 Gaziosmanpaşa 06700 ANKARA / TÜRKİYE	**Phone** : 0 312 447 71 22 **Fax** : 0 312 447 69 88 **E-Mail** : encon@encon.com.tr **Website** : www.encon.com.tr

Tested Materials / Products	**Name of Test**	**Testing Method (National, International standards, in house methods)**
Soil, Sludge and Sediment Analyses	pH Electrometric Method	TS 8332 ISO 10390
	Sample Preparation for Metal Analyses	SM 3030-D, E, F, G, H, K EPA 3051-A
	Analyses of the Copper, Zinc, Chromium, Nickel, Potassium, Manganese, Cobalt, Cadmium, Lead with Atomic Absorption Spectrophotometer (AAS)-Air Acetylene Flame Method	SM 3111-B
	Analyses of Aluminium, Barium, Molybdenum with Atomic Absorption Spectrophotometer (AAS)-Nitrous Oxide Acetylene Flame Method	SM 3111-D
	Analyses of Arsenic, Selenium with Atomic Absorption Spectrophotometer (AAS) Hydride Method	SM 3114-B
	Analyses of Mercury with Atomic Absorption Spectrophotometer (AAS) Cold Vapor Method	SM 3112-B
	Analyses of Organic Nitrogen, Kjeldahl Nitrogen and Total Nitrogen	ISO 11261, TS 8337
	Analyses of Total Phosphorous Ascorbic Acid Method	ISO 11263, TS 8338
	Analyses of Organic Matter Walkley-Black Method	TS 8336
	Analyses of Total Dissolved Solids (180^0C)	SM-2540-C
	Analyses of Total Solids and Humidity (105^0C) with Gravimetric Method	SM-2540-G
	Analyses of Ignition Loss (550^0C) with Gravimetric Method	SM-2540-G

TÜRK AKREDİTASYON KURUMU
TÜRKAK
1999

Annex of the certificate (Page 2/9)

Accreditation Scope

TÜRKAK Test TS EN ISO/IEC 17025 AB-0168-T	**ENCON** **Çevre Danışmanlık Limited Şirketi** **Accreditation Nr: AB-0168-T** **Revision Nr: 05 Date: 24 May 2013**

Tested Materials / Products	**Name of Test**	**Testing Method (National, International standards, in house methods)**
(Soil, Sludge and Sediment Analyses, continued)	Analyses of Conductivity Electrometric Method	TS ISO 11265
	Analyses of Cyanide	EPA 9013
	Analyses of Metal with ICP-OES (Sb, As, Cu, Ba, B, Hg, Zn, Ag, Cd, Sn, Co, Total Cr, Pb, Mo, Ni, Se)	EPA 200.7
	Analyses of Oil and Grease in Soil	EPA 9071-B
Waste (Eluate) Analyses	Method for Eluate Preparation	TS EN 12457-4
	Analyses of Metal with ICP-OES (Cu,Hg, Zn, Cd, Total Cr, Pb, Ni, Ba, Mo, As, Se, Sb)	EPA 200.7
	Analyses of Chloride	SM 4500-Cl-B
	Analyses of Fluoride	SM 4500-F-D
	Analyses of Sulphate	SM 4500-SO4_E
	Analyses of Phenol index	SM 5530-B-C
	Analyses of Total Dissolved Solids (180^0C) with Gravimetric Method	SM 2540-C
	Analyses of Ignition Loss (550^0C) with Gravimetric Method	SM 2540-G
	Analyses of pH with Electrochemical method	SM 4500 H^+-B
	Analyses of Conductivity with Laboratory Method	SM 2510-B
Sea Water Analyses	Analyses of pH Electrometric Method	SM 4500-H^+ B
	Analyses of Conductivity Electrometric Method	SM 2510-B
	Analyses of Salinity Electrometric method	SM 2510-2520-B
	Analyses of Temperature Laboratory Method	SM 2550-B
	Analyses of Colour Visual Comparison Method	SM 2120-B

TÜRK AKREDİTASYON KURUMU
TÜRKAK
1999

Accreditation Scope

TÜRKAK Test TS EN ISO/IEC 17025 AB-0168-T	**ENCON** **Çevre Danışmanlık Limited Şirketi** **Accreditation Nr: AB-0168-T** **Revision Nr: 05 Date: 24 May 2013**

Tested Materials / Products	**Name of Test**	**Testing Method (National, International standards, in house methods)**
(Sea Water Analyses, continued)	Analyses of Turbidity Nephelometric Method	SM 2130- B
	Analyses of Dissolved Oxygen and Oxygen Saturation	SM 4500-O-G
	Analyses of Suspended Solids Gravimetric Method	SM 2540- D
	Analyses of Ammonia, Ammonium Nitrogen Distillation and Titration Method	SM 4500-NH_3 B SM 4500-NH_3 C
	Analyses of Degradable Organic Pollutants with 5 Day BOD Method	SM 5210 A & B
	Floating Matter with Visual Method	Laboratory Specific Method ENC.LABTL.YM.120
	Analyses of Oil and Grease Partition Gravimetric Method	SM 5520 A & B
	Analyses of Surface Active Matter (MBAS)	SM 5540-C
	Analyses of Total Phosphorus and Ortophosphate with Ascorbic Acid Method	SM 4500-P-B & E
	Analyses of Nitrate Nitrogen with Colorimetric Brucine Method	EPA 352.1
	Analyses of Nitrite Colorimetric Method	SM 4500-NO_2- B
	Total Inorganic Nitrogen	EPA 352.1 SM 4500-NO_2- B SM 4500-NH_3 B & C
	Analyses of Light Transmittance (Secchi Disk)	EPA 841.B-97-003
	Analyses of Kjeldahl Nitrogen Macro-Kjeldahl Method	SM 4500-N_{org} A ve B
	Analyses of Cr+6	SM 3500 Cr_B
	Analyses of Total Phenol	SM 5530- A,B & C
	Analyses of Total Coliform	SM 9222-A & B
	Analyses of Fecal Coliform	SM 9222-A & D

TÜRK AKREDİTASYON KURUMU TÜRKAK 1999

Annex of the certificate (Page 4/9)

Accreditation Scope

TÜRKAK Test TS EN ISO/IEC 17025 AB-0168-T	**ENCON** **Çevre Danışmanlık Limited Şirketi** **Accreditation Nr: AB-0168-T** **Revision Nr: 05 Date: 24 May 2013**

Tested Materials / Products	**Name of Test**	**Testing Method (National, International standards, in house methods)**
(Sea Water Analyses, continued)	Sample Preparation for Metal Analyses	SM 3030-D,E,F,G,H,K
	Analyses of Metal with ICP-OES (As, Cd, Pb, Hg, Cu, Cr, Ni, Zn)	EPA 200.7
	Analyses of Total Cyanide	SM 4500 CN_ A,C &E
	Analyses of Total Nitrogen with Calculation	SM 4500 N_{org}-B SM 4500 NO_2-B EPA Method 352.1
Water and Waste Water Analyses (Excluding coverage of the Regulation Concerning Drinking and Potable Water Intended for Human Consumption, Republic of Turkey, Ministry of Health)	Analyses of Aluminium, Barium, Molybdenum with Atomic Absorption Spectrophotometer (AAS) Method	SM 3111-D
	Analyses of Arsenic and Selenium with Hydride Atomic Absorption Spectrophotometer (AAS) Method	SM 3114-B
	Analyses of Mercury with Cold Vapor Atomic Absorption Spectrophotometer (AAS) Method	SM 3112-B
	Analyses of Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Sodium, Silver, Tin, Zinc with Atomic Absorption Spectrophotometer (AAS) Method	SM 3111-B
	Sample Preparation for Metal Analyses	SM 3030-D, E, F, G, H, K
	Analyses of Metal with ICP-OES (Al, Sb, As, Cu, Ba, B, Hg, Zn, Fe, Ag, Cd, Ca, Co, Cr, Pb, Mg, Mn, Mo, Ni, K, Se, Na, Sn)	EPA 200.7

TÜRK AKREDİTASYON KURUMU TÜRKAK 1999

Annex of the certificate (Page 5/9)

Accreditation Scope

TÜRKAK Test TS EN ISO/IEC 17025 AB-0168-T	**ENCON** **Çevre Danışmanlık Limited Şirketi** **Accreditation Nr: AB-0168-T** **Revision Nr: 05 Date: 24 May 2013**

Tested Materials / Products	**Name of Test**	**Testing Method (National, International standards, in house methods)**
(Water and Waste Water Analyses (Excluding coverage of the Regulation Concerning Drinking and Potable Water Intended for Human Consumption, Republic of Turkey, Ministry of Health), continued)	Analyses of Anion (Fluoride, Chloride, Sulphate, Nitrite, Nitrate) with IC.	SM 4110_B
	Analyses of Total Alkalinity, Carbonate, Bi-carbonate and Hydroxide Alkalinity with Titration Method and pH	SM 2320-B SM 4500-H^+ B
	Analyses of Alkalinity Forms and Free CO2 with Titration Method and Calculation	SM 4500-CO_2-C & D
	Analyses of Acidity with Titration Method	SM 2310-B
	Analyses of Hardness with Calculation and EDTA Method	SM 2340-C & B
	Analyses of Calcium and Calcium Hardness with Titration Method EDTA	SM 3500 Ca-B
	Analyses of Magnesium	SM 3500 Mg-B
	Analyses of Chloride with Argentometric Method	SM 4500-Cl^- B
	Analyses of pH with Electrometric Method	SM 4500-H^+ B
	Analyses of Conductivity with Electrometric Method	SM 2510-B
	Analyses of Temperature with Laboratory Method	SM 2550-A & B
	Analyses of Salinity with Electrical Conductivity Method	SM 2520-B
	Analyses of Turbidity with Nephelometric Method	SM 2130-B
	Analyses of Colour	SM 2120-B SM 2120-C

TÜRK AKREDİTASYON KURUMU TÜRKAK 1999

Annex of the certificate (Page 6/9)

Accreditation Scope

TÜRKAK Test TS EN ISO/IEC 17025 AB-0168-T	**ENCON** **Çevre Danışmanlık Limited Şirketi** **Accreditation Nr: AB-0168-T** **Revision Nr: 05 Date: 24 May 2013**

Tested Materials / Products	**Name of Test**	**Testing Method (National, International standards, in house methods)**
(Water and Waste Water Analyses (Excluding coverage of the Regulation Concerning Drinking and Potable Water Intended for Human Consumption, Republic of Turkey, Ministry of Health), continued)	Analyses of Dissolved Oxygen and Oxygen Saturation	SM 4500-O B SM 4500-O C SM 4500-O G
	Analyses of Suspended Solids with Gravimetric Method	SM 2540-D
	Analyses of Total Solid with Gravimetric Method	SM-2540-B
	Analyses of Settleable Solids with Gravimetric Method	SM 2540-F
	Analyses of Dissolved Solids with Gravimetric Method	SM 2540-C
	Analyses of Volatile Solids with Gravimetric Method	SM 2540-E
	Analyses of Biochemical Oxygen Demand with 5 Day Test	SM 5210 A & B
	Analyses of Chemical Oxygen Demand with Open Reflux Method	SM 5220 A & B
	Analyses of Oil and Grease with Partition Gravimetric Method	SM 5520 A & B
	Analyses of Nitrate Nitrogen with Colorimetric Brucine Method	EPA Method 352.1
	Analyses of Nitrite with Colorimetric Method	SM 4500-NO_2- A & B
	Analyses of Kjeldahl Nitrogen with Macro Kjeldahl Method	SM 4500-N_{org} A & B
	Analyses of Organic Nitrogen with Calculation Method	SM 4500-N_{org} A & B SM 4500-NH_3 B & C
	Analyses of Ammonia /Ammonia Nitrogen, Ammonium/Ammonium Nitrogen with Distillation and Titration Method	SM 4500-NH_3 B SM 4500-NH_3 C

TÜRK AKREDİTASYON KURUMU TÜRKAK 1999

Accreditation Scope

TÜRKAK Test TS EN ISO/IEC 17025 AB-0168-T	**ENCON** **Çevre Danışmanlık Limited Şirketi** **Accreditation Nr: AB-0168-T** **Revision Nr: 05 Date: 24 May 2013**

Tested Materials / Products	**Name of Test**	**Testing Method (National, International standards, in house methods)**
(Water and Waste Water Analyses (Excluding coverage of the Regulation Concerning Drinking and Potable Water Intended for Human Consumption, Republic of Turkey, Ministry of Health), continued)	Total Nitrogen with Calculation Method	EPA Method 352.1 SM 4500-NO_2- B SM 4500-N_{org} B
	Analyses of Phosphorus (total, hydrolyzed and o-phosphate), Organic Phosphorus with Sample Preparation and Ascorbic Acid Method	SM 4500-P B & E
	Analyses of Fluoride with Distillation and SPADNS Method	SM 4500 F^- B & D
	Analyses of Total and Free Cyanide with Distillation and Colorimetric Method	SM 4500 CN^- A &C & E
	Analyses of Phenol with Sample Preparation and Chloroform Extraction Method	SM 5530 A & B & C
	Analyses of Surface Active Matter (MBAS)	SM 5540-C
	Analyses of Chromium (+6) with Colorimetric Method	SM 3500-Cr B
	Analyses of Boron with Colorimetric Method	SM 4500-B-B
	Analyses of Chloramines, Total and Free Chlorine with DPD Colorimetric Method	SM 4500-Cl G
	Analyses of Chlorine	SM 2350-B
	Analyses of Sulphate with Turbidimetric Method	SM 4500-SO_4^{-2} A & E
	Analyses of Sulfite with Iodometric Method	SM 4500- SO_3^{-2} A & B
	Analyses of Sulfide with Titrimetric Method	SM 4500- S^{-2} A & F
	Sodium Adsorption Rate (SAR) with Calculation Method	SM 3500-Ca B SM 3500-Mg B SM 3111-B

TÜRK AKREDİTASYON KURUMU TÜRKAK 1999

Annex of the certificate (Page 8/9)

Accreditation Scope

TÜRKAK Test TS EN ISO/IEC 17025 AB-0168-T	**ENCON** **Çevre Danışmanlık Limited Şirketi** **Accreditation Nr: AB-0168-T** **Revision Nr: 05 Date: 24 May 2013**

Tested Materials / Products	**Name of Test**	**Testing Method (National, International standards, in house methods)**
(Water and Waste Water Analyses (Excluding coverage of the Regulation Concerning Drinking and Potable Water Intended for Human Consumption, Republic of Turkey, Ministry of Health), continued)	Variable Sodium Percentage with Calculation Method(%Na)	SM 3500-Ca B SM 3500-Mg B SM 3111-B
	Residual Sodium Carbonate (RSC) with Calculation Method	SM 3500-Ca B SM 3500-Mg B SM 2320-B
	Analyses of Fecal Coliform with Membrane Filtration Method	SM 9222 A & D
	Analyses of Total Coliform with Membrane Filtration Method	SM 9222 A & B
	Analyses of Odor	SM 2150_B
	Analyses of Light transmittance (Secchi Disk)	EPA 841.B-97-003
Sampling	Protection ,Storage and Transportation of Water Samples	TS ISO 5667-3
	Sampling from Wastewaters	TS ISO 5667-10
	Sampling from Rivers and Streams	TS ISO 5667-6
	Sampling from Sea Water	TS ISO 5667-9
	Sampling from Lake and Pond	TS 6291
	Sampling from Ground Water, Guide	TS ISO 5667-11
	Sampling from Deep Sediments	TS ISO 5667-12
	Sampling for Microbiological Analyses	TS EN ISO 19458
	Sampling from Surface of Soil, Transportation and Protection Rules	TS 9923
	Guide for Sludge Sampling	TS EN ISO 5667-13
	Rules for Sampling from Solid Wastes	TS 12090

TÜRK AKREDİTASYON KURUMU TÜRKAK 1999

Annex of the certificate (Page 9/9)

Accreditation Scope

TÜRKAK Test TS EN ISO/IEC 17025 AB-0168-T	**ENCON** **Çevre Danışmanlık Limited Şirketi** **Accreditation Nr: AB-0168-T** **Revision Nr: 05 Date: 24 May 2013**

Tested Materials / Products	**Name of Test**	**Testing Method (National, International standards, in house methods)**
Ambient Air Quality	Analyses of Particulate Matter (PM 10) with Gravimetric Method	EPA 40 CFR Part 50

End of Scope

TÜRK AKREDİTASYON KURUMU TÜRKAK * 1999 *

Dr. H. İbrahim ÇETİN
Deputy Secretary General

TÜRKAK

Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0750
06.06.2014

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	06.06.2014/LR14.0750	**NUMUNE KAYIT NO**	NUM14.0521
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / E2 GL 0,2 m
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** □ **Anlık X**	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	19.04.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	21.04.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** □ **Kapalı** □ **Açık X**	**ANALİZLERİN YAPILDIĞI TARİH**	21.04.2014/05.06.2014
Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.			

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	13064	EPA-2007
Bakır	mg/kg	23,12	EPA-2007
Bor	mg/kg	139,6	EPA-2007
Civa	µg/kg	62,80	EPA-2007
Çinko	mg/kg	54,89	EPA-2007
Kadmiyum	mg/kg	<0,0008	EPA-2007
KromCr^{+6}*	mg/kg	9,36	EPA 3060 A,EPA 7196 A
Krom	mg/kg	21,86	EPA-2007
Toplam Siyanür	mg/kg	0,20	EPA 9013
Kurşun	mg/kg	13,45	EPA-2007
Nikel	mg/kg	8,56	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,236	EPA-2007
Toplam Organik Karbon**	mg/kg	46000	EN 13137
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)
İMZA :
Tarih : 16.06.2014

ONAYLAYAN : (Laboratuvar Müdürü)
ADI / SOYADI : Hüseyin ŞEKİN (Çevre Müh.)
İMZA /KAŞE : encon ÇEVRE DANIŞMANLIK LTD.ŞTİ. Reşit Galip Cad.No:120 06700 G.O.P/ANK. Tel:(0312) 447 71 22 Fax:(0312) 447 69 88 Cumhuriyet V.D. 331 005 3199 Tic.Sicil No:10797 Mersis No:3543-8467-1804-8422 www.encon.com.tr
Tarih : 20 Haziran 2014

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 Faks: 0 312 447 69 88 www.encon.com.tr

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **11650** Tarih: 13/06/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : E2 (GL - 0,2 m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 1200 g
Numuneye Uygulanan İşlemler : -
Taşıma Sıcaklığı : Ortam sıcaklığı koşulları
Numunenin Lab.a Geliş Tarihi : 07/05/2014 11:30
Analiz Başlama Tarihi : 07/05/2014 16:25
Analiz Bitiş Tarihi : 06/06/2014 14:04

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Toplam Organik Karbon	%	4.6	EN 13137	✓	1, 2
Toplam Organik Karbon	mg/kg	46000			
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	2
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	1	CZ_SOP_D06_03_160		3, 4
Petroleum Hydrocarbons			CZ_SOP_D06_03_152		3, 4
Aliphatic Fractions of Petroleum Hydrocarbons	-				
C5 - C6 Aliphatic Fraction	mg/kg	< 1.0			
C6 - C8 Aliphatic Fraction	mg/kg	< 2.0			
C8 - C10 Aliphatic Fraction	mg/kg	< 2.0			
C10 - C12 Aliphatic Fraction	mg/kg	< 5.0			
C12 - C16 Aliphatic Fraction	mg/kg	< 10			
C16 - C21 Aliphatic Fraction	mg/kg	< 10			

Ömer Vasfi BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
13/06/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **11650** Tarih: 13/06/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C21 - C35 Aliphatic Fraction	mg/kg	< 20		
C35 - C40 Aliphatic Fraction	mg/kg	< 5.0		
C5 - C40 Aliphatic Fraction	mg/kg	< 55		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	< 2.0		
C7 - C8 Aromatic Fraction	mg/kg	< 1.0		
C8 - C10 Aromatic Fraction	mg/kg	< 2.0		
C10 - C12 Aromatic Fraction	mg/kg	< 5.0		
C12 - C16 Aromatic Fraction	mg/kg	< 10		
C16 - C21 Aromatic Fraction	mg/kg	< 10		
C21 - C35 Aromatic Fraction	mg/kg	< 20		
C35 - C40 Aromatic Fraction	mg/kg	< 5.0		
C5 - C40 Aromatic Fraction	mg/kg	< 55		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	< 1.0		
C6 - C8 Fraction	mg/kg	< 2.0		
C8 - C10 Fraction	mg/kg	< 2.0		
C10 - C12 Fraction	mg/kg	< 5.0		
C12 - C16 Fraction	mg/kg	< 10		
C16 - C21 Fraction	mg/kg	< 10		
C21 - C35 Fraction	mg/kg	< 20		
C35 - C40 Fraction	mg/kg	< 5.0		
C5 - C40 Fraction	mg/kg	< 55		

Metot EN : European Standard; ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) TOK sonucu örneğin orijinal (nemli) hali için verilmiştir.
2) ISO 18512 standardına göre koruma yapılmadığından müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
3) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
4) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
13/06/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK

Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0749
06.06.2014

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	06.06.2014/LR14.0749	**NUMUNE KAYIT NO**	NUM14.0520
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / E4 0,25-0,4 m
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** □ **Anlık X**	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	19.04.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	21.04.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** □ **Kapalı** □ **Açık X**	**ANALİZLERİN YAPILDIĞI TARİH**	21.04.2014/05.06.2014
Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.			

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	4051	EPA-2007
Bakır	mg/kg	16,91	EPA-2007
Bor	mg/kg	91,45	EPA-2007
Civa	µg/kg	326,8	EPA-2007
Çinko	mg/kg	75,55	EPA-2007
Kadmiyum	mg/kg	<0,0008	EPA-2007
$KromCr^{+6}$*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	30,76	EPA-2007
Toplam Siyanür	mg/kg	0,10	EPA 9013
Kurşun	mg/kg	8,34	EPA-2007
Nikel	mg/kg	25,89	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,087	EPA-2007
Toplam Organik Karbon**	mg/kg	16000	EN 13137
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	269	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	326	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)	**ONAYLAYAN : (Laboratuvar Müdürü)**
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)	**ADI / SOYADI :** Hüseyin TEKİN (Çevre Müh.)
İMZA :	**İMZA /KAŞE :** encon ÇEVRE DANIŞMANLIK LTD. ŞTİ. Reşit Galip Cad No:120 06700 G.O P/AN Tel:(0312) 447 7 Fax:(0312) 447 69 Cumhuriyet V.D. 324 Tic.Sicil No:102979 Mersis No:3543-8401-1149-0422 www.encon.com.tr 20 Haziran 2014
Tarih : 16.06.2014	**Tarih :**

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 Faks: 0 312 447 69 88 www.encon.com.tr

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **11648** Tarih: 13/06/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : E4 (0,25 m - 0,4 m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 500 g
Numuneye Uygulanan İşlemler : -
Taşıma Sıcaklığı : Ortam sıcaklığı koşulları
Numunenin Lab.a Geliş Tarihi : 07/05/2014 11:30
Analiz Başlama Tarihi : 07/05/2014 16:25
Analiz Bitiş Tarihi : 06/06/2014 14:03

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Toplam Organik Karbon	%	1.6	EN 13137	✓	1, 2
Toplam Organik Karbon	mg/kg	16000			
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	2
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		3, 4
Petroleum Hydrocarbons			CZ_SOP_D06_03_152		3, 4
Aliphatic Fractions of Petroleum Hydrocarbons	-				
C5 - C6 Aliphatic Fraction	mg/kg	< 1.0			
C6 - C8 Aliphatic Fraction	mg/kg	< 2.0			
C8 - C10 Aliphatic Fraction	mg/kg	< 2.0			
C10 - C12 Aliphatic Fraction	mg/kg	< 5.0			
C12 - C16 Aliphatic Fraction	mg/kg	< 10			
C16 - C21 Aliphatic Fraction	mg/kg	< 10			

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
13/06/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **11648** Tarih: 13/06/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C21 - C35 Aliphatic Fraction	mg/kg	233		
C35 - C40 Aliphatic Fraction	mg/kg	36.4		
C5 - C40 Aliphatic Fraction	mg/kg	269		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	< 2.0		
C7 - C8 Aromatic Fraction	mg/kg	< 1.0		
C8 - C10 Aromatic Fraction	mg/kg	< 2.0		
C10 - C12 Aromatic Fraction	mg/kg	< 5.0		
C12 - C16 Aromatic Fraction	mg/kg	< 10		
C16 - C21 Aromatic Fraction	mg/kg	< 10		
C21 - C35 Aromatic Fraction	mg/kg	41		
C35 - C40 Aromatic Fraction	mg/kg	< 5.0		
C5 - C40 Aromatic Fraction	mg/kg	< 55		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	< 1.0		
C6 - C8 Fraction	mg/kg	< 2.0		
C8 - C10 Fraction	mg/kg	< 2.0		
C10 - C12 Fraction	mg/kg	< 5.0		
C12 - C16 Fraction	mg/kg	< 10		
C16 - C21 Fraction	mg/kg	11		
C21 - C35 Fraction	mg/kg	274		
C35 - C40 Fraction	mg/kg	41.2		
C5 - C40 Fraction	mg/kg	326		

Metot EN : European Standard; ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) TOK sonucu örneğin orijinal (nemli) hali için verilmiştir.
2) ISO 18512 standardına göre koruma yapılmadığından müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
3) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
4) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
13/06/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK

Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0748
06.06.2014

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	06.06.2014/LR14.0748	**NUMUNE KAYIT NO**	NUM14.0519
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / E4 0,4 m-0,6 m
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** □ **Anlık X**	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	19.04.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	21.04.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** □ **Kapalı** □ **Açık X**	**ANALİZLERİN YAPILDIĞI TARİH**	21.04.2014/05.06.2014
Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.			

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	9473	EPA-2007
Bakır	mg/kg	32,84	EPA-2007
Bor	mg/kg	73,43	EPA-2007
Civa	µg/kg	145,9	EPA-2007
Çinko	mg/kg	37,12	EPA-2007
Kadmiyum	mg/kg	<0,0008	EPA-2007
KromCr^{+6}*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	29,74	EPA-2007
Toplam Siyanür	mg/kg	0,30	EPA 9013
Kurşun	mg/kg	9,87	EPA-2007
Nikel	mg/kg	28,70	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,122	EPA-2007
Toplam Organik Karbon**	mg/kg	24000	EN 13137
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)
İMZA :
Tarih : 16.06.2014

ONAYLAYAN : (Laboratuvar Müdürü)
ADI / SOYADI : Hüseyin [illegible] (Çevre Müh.)
İMZA /KAŞE :
ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Reşit Galip Cad. No:120 06700 G.O.P/ANK.
Tel:(0312) 447 71 22 Fax (0312) 447 69 88
Cumhuriyet V.D. 720 007 3189 Tic.Sicil No:102679
Mersis No:3847-[illegible]-1818-8422 www.encon.com.tr
20 Haziran 2014
Tarih :

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 **Faks: 0 312 447 69 88** **www.encon.com.tr**

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **11647** Tarih: 13/06/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : E4 (0,4 m - 0,6 m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 455 g
Numuneye Uygulanan İşlemler : -
Taşıma Sıcaklığı : Ortam sıcaklığı koşulları
Numunenin Lab.a Geliş Tarihi : 07/05/2014 11:30
Analiz Başlama Tarihi : 07/05/2014 16:25
Analiz Bitiş Tarihi : 06/06/2014 14:03

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Toplam Organik Karbon	%	2.4	EN 13137	✓	1, 2
Toplam Organik Karbon	mg/kg	24000			
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	2
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		3, 4
Petroleum Hydrocarbons			CZ_SOP_D06_03_152		3, 4
Aliphatic Fractions of Petroleum Hydrocarbons	-				
C5 - C6 Aliphatic Fraction	mg/kg	< 1.0			
C6 - C8 Aliphatic Fraction	mg/kg	< 2.0			
C8 - C10 Aliphatic Fraction	mg/kg	< 2.0			
C10 - C12 Aliphatic Fraction	mg/kg	< 5.0			
C12 - C16 Aliphatic Fraction	mg/kg	< 10			
C16 - C21 Aliphatic Fraction	mg/kg	< 10			

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
13/06/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **11647** Tarih: 13/06/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C21 - C35 Aliphatic Fraction	mg/kg	36		
C35 - C40 Aliphatic Fraction	mg/kg	5.7		
C5 - C40 Aliphatic Fraction	mg/kg	< 55		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	< 2.0		
C7 - C8 Aromatic Fraction	mg/kg	< 1.0		
C8 - C10 Aromatic Fraction	mg/kg	< 2.0		
C10 - C12 Aromatic Fraction	mg/kg	< 5.0		
C12 - C16 Aromatic Fraction	mg/kg	< 10		
C16 - C21 Aromatic Fraction	mg/kg	< 10		
C21 - C35 Aromatic Fraction	mg/kg	< 20		
C35 - C40 Aromatic Fraction	mg/kg	< 5.0		
C5 - C40 Aromatic Fraction	mg/kg	< 55		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	< 1.0		
C6 - C8 Fraction	mg/kg	< 2.0		
C8 - C10 Fraction	mg/kg	< 2.0		
C10 - C12 Fraction	mg/kg	< 5.0		
C12 - C16 Fraction	mg/kg	< 10		
C16 - C21 Fraction	mg/kg	< 10		
C21 - C35 Fraction	mg/kg	42		
C35 - C40 Fraction	mg/kg	7.0		
C5 - C40 Fraction	mg/kg	< 55		

Metot EN : European Standard; ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) TOK sonucu ömeğin orijinal (nemli) hali için verilmiştir.
2) ISO 18512 standardına göre koruma yapılmadığından müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
3) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
4) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
13/06/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0168-T

encon

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

AB-0168-T
LR.14.0747
06.06.2014

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	06.06.2014/LR14.0747	**NUMUNE KAYIT NO**	NUM14.0518
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / E1-0,25m 0,6 m
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	Kompozit □ Anlık X	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	19.04.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	21.04.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	Yağışlı □ Kapalı □ Açık X	**ANALİZLERİN YAPILDIĞI TARİH**	21.04.2014/05.06.2014

Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	19285	EPA-2007
Bakır	mg/kg	56,68	EPA-2007
Bor	mg/kg	85,9	EPA-2007
Civa	µg/kg	439,9	EPA-2007
Çinko	mg/kg	114,8	EPA-2007
Kadmiyum	mg/kg	<0,0008	EPA-2007
KromCr^{+6}*	mg/kg	7,16	EPA 3060 A,EPA 7196 A
Krom	mg/kg	47,24	EPA-2007
Toplam Siyanür	mg/kg	0,60	EPA 9013
Kurşun	mg/kg	17,97	EPA-2007
Nikel	mg/kg	140,5	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,246	EPA-2007
Toplam Organik Karbon**	mg/kg	49000	EN 13137
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)	**ONAYLAYAN : (Laboratuvar Müdürü)**
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)	**ADI / SOYADI :** Hüseyin TEKİN (Çevre Müh.)
İMZA :	**İMZA /KAŞE:** encon ÇEVRE DANIŞMANLIK LTD.ŞTİ. Reşit Galip Cad. No:120 06700 G.O.P/ANK. Tel:(0312) 447 71 22 Fax:(0312) 447 69 88 Cumhuriyet V.D. 334 005 2089 Tic.Sicil No: Mersis No:3543-... www.encon.com.tr
Tarih : 16.06.2014	**Tarih :** 20 Haziran 2014

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.

- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 Faks: 0 312 447 69 88 www.encon.com.tr

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **11649** Tarih: 13/06/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : E1 (0,25 m - 0,6 m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 600 g
Numuneye Uygulanan İşlemler : -
Taşıma Sıcaklığı : Ortam sıcaklığı koşulları
Numunenin Lab.a Geliş Tarihi : 07/05/2014 11:30
Analiz Başlama Tarihi : 07/05/2014 16:25
Analiz Bitiş Tarihi : 06/06/2014 14:04

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Toplam Organik Karbon	%	4.9	EN 13137	✓	1, 2
Toplam Organik Karbon	mg/kg	49000			
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	2
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.1			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		3, 4
Petroleum Hydrocarbons			CZ_SOP_D06_03_152		3, 4
Aliphatic Fractions of Petroleum Hydrocarbons	-				
C5 - C6 Aliphatic Fraction	mg/kg	< 1.0			
C6 - C8 Aliphatic Fraction	mg/kg	< 2.0			
C8 - C10 Aliphatic Fraction	mg/kg	< 2.0			
C10 - C12 Aliphatic Fraction	mg/kg	< 5.0			
C12 - C16 Aliphatic Fraction	mg/kg	< 10			
C16 - C21 Aliphatic Fraction	mg/kg	< 10			

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
13/06/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **11649** Tarih: 13/06/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C21 - C35 Aliphatic Fraction	mg/kg	< 20		
C35 - C40 Aliphatic Fraction	mg/kg	< 5.0		
C5 - C40 Aliphatic Fraction	mg/kg	< 55		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	< 2.0		
C7 - C8 Aromatic Fraction	mg/kg	< 1.0		
C8 - C10 Aromatic Fraction	mg/kg	< 2.0		
C10 - C12 Aromatic Fraction	mg/kg	< 5.0		
C12 - C16 Aromatic Fraction	mg/kg	< 10		
C16 - C21 Aromatic Fraction	mg/kg	< 10		
C21 - C35 Aromatic Fraction	mg/kg	< 20		
C35 - C40 Aromatic Fraction	mg/kg	< 5.0		
C5 - C40 Aromatic Fraction	mg/kg	< 55		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	< 1.0		
C6 - C8 Fraction	mg/kg	< 2.0		
C8 - C10 Fraction	mg/kg	< 2.0		
C10 - C12 Fraction	mg/kg	< 5.0		
C12 - C16 Fraction	mg/kg	< 10		
C16 - C21 Fraction	mg/kg	< 10		
C21 - C35 Fraction	mg/kg	< 20		
C35 - C40 Fraction	mg/kg	< 5.0		
C5 - C40 Fraction	mg/kg	< 55		

Metot EN : European Standard; ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) TOK sonucu örneğin orijinal (nemli) hali için verilmiştir.
2) ISO 18512 standardına göre koruma yapılmadığından müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
3) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
4) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
13/06/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK

Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0421
16.04.2014

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0421	**NUMUNE KAYIT NO**	NUM14.0311
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / SP-1,4 (0,5 m-1,3 m
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** □ **Anlık** X	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	03.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	05.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** □ **Kapalı** □ **Açık** X	**ANALİZLERİN YAPILDIĞI TARİH**	05.03.2014/03.04.2014
Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.			

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	1340	EPA-2007
Bakır	mg/kg	18,14	EPA-2007
Bor	mg/kg	39,28	EPA-2007
Civa	µg/kg	459	EPA-2007
Çinko	mg/kg	66,63	EPA-2007
Kadmiyum	mg/kg	0,597	EPA-2007
$KromCr^{+6}$*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	24,44	EPA-2007
Toplam Siyanür	mg/kg	0,725	EPA 9013
Kurşun	mg/kg	17,28	EPA-2007
Nikel	mg/kg	49,83	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,382	EPA-2007
Toplam Organik Karbon**	mg/kg	11940	EN 13137
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	98	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)
İMZA :
Tarih : 21.04.2014

ONAYLAYAN : (Laboratuvar Müdürü)
ADI / SOYADI : Hüseyin TEKİN (Çevre Müh.)
İMZA /KAŞE : encon ÇEVRE DANIŞMANLIK LTD.ŞTİ. Reşit Galip Cad.No 120 06700 G.O.P/ANK. Tel.(0312) 447 71 22 Fax.(0312) 447 69 88 Cumhuriyet V.D. 334 006 3145 Tic.Sicil No 102979 Mersis No:3543-8457-1867-8422 www.encon.com.tr
Tarih : 22.04.2014

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 Faks: 0 312 447 69 88 www.encon.com.tr

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : 06522 Tarih: 17/04/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : SP 1.4
Numunenin Alındığı Yer : SP 1.4 (0,5 - 1,3m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 810 g
Numuneye Uygulanan İşlemler : Soğukta koruma
Taşıma Sıcaklığı : 4±1 °C
Numunenin Lab.a Geliş Tarihi : 18/03/2014 12:00
Analiz Başlama Tarihi : 19/03/2014 14:54
Analiz Bitiş Tarihi : 03/04/2014 14:10

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Toplam Organik Karbon	%	1.2	EN 13137	✓	1
Toplam Organik Karbon	mg/kg	11940			
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	2
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		3, 4
Petroleum Hydrocarbons			CZ_SOP_D06_03_152		3, 4
Aliphatic Fractions of Petroleum Hydrocarbons	-				
C5 - C6 Aliphatic Fraction	mg/kg	<1.0			
C6 - C8 Aliphatic Fraction	mg/kg	<2.0			
C8 - C10 Aliphatic Fraction	mg/kg	<2.0			
C10 - C12 Aliphatic Fraction	mg/kg	<5.0			
C12 - C16 Aliphatic Fraction	mg/kg	<10			

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06522** Tarih: 17/04/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C16 - C21 Aliphatic Fraction	mg/kg	<10		
C21 - C35 Aliphatic Fraction	mg/kg	30		
C35 - C40 Aliphatic Fraction	mg/kg	22.4		
C5 - C40 Aliphatic Fraction	mg/kg	<55		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	<2.0		
C7 - C8 Aromatic Fraction	mg/kg	<1.0		
C8 - C10 Aromatic Fraction	mg/kg	<2.0		
C10 - C12 Aromatic Fraction	mg/kg	<5.0		
C12 - C16 Aromatic Fraction	mg/kg	<10		
C16 - C21 Aromatic Fraction	mg/kg	<10		
C21 - C35 Aromatic Fraction	mg/kg	<20		
C35 - C40 Aromatic Fraction	mg/kg	26.4		
C5 - C40 Aromatic Fraction	mg/kg	<55		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	<1.0		
C6 - C8 Fraction	mg/kg	<2.0		
C8 - C10 Fraction	mg/kg	<2.0		
C10 - C12 Fraction	mg/kg	<5.0		
C12 - C16 Fraction	mg/kg	<10		
C16 - C21 Fraction	mg/kg	<10		
C21 - C35 Fraction	mg/kg	49		
C35 - C40 Fraction	mg/kg	48.8		
C5 - C40 Fraction	mg/kg	98		

Metot EN : European Standard; ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) TOK sonucu örneğin orijinal (nemli) hali için verilmiştir.
2) ISO 18512 standardına göre koruma yapılmadığından ve maksimum bekletme süresi bilinmediğinden müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
3) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
4) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Onaylı
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0422
16.04.2014

encon

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0422	**NUMUNE KAYIT NO**	NUM14.0312
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / HD SD 101(GL-0,35)
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** □ **Anlık X**	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	04.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	06.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** □ **Kapalı** □ **Açık** X	**ANALİZLERİN YAPILDIĞI TARİH**	06.03.2014/03.04.2014

Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	8953	EPA-2007
Bakır	mg/kg	28,65	EPA-2007
Bor	mg/kg	29,93	EPA-2007
Civa	µg/kg	98,4	EPA-2007
Çinko	mg/kg	49,73	EPA-2007
Kadmiyum	mg/kg	0,626	EPA-2007
KromCr^{+6}*	mg/kg	14,55	EPA 3060 A,EPA 7196 A
Krom	mg/kg	19,77	EPA-2007
Toplam Siyanur	mg/kg	0,725	EPA 9013
Kurşun	mg/kg	33,25	EPA-2007
Nikel	mg/kg	29,40	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	1,061	EPA-2007
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)

KONTROL EDEN : (Laboratuvar Sorumlusu)	**ONAYLAYAN : (Laboratuvar Müdürü)**
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)	**ADI / SOYADI :** Hüseyin TEKİN (Çevre Müh.)
İMZA :	**İMZA /KAŞE :** encon ÇEVRE DANIŞMANLIK LTD. ŞTİ. Reşit Galip Cad. No:120 06700 G.O.P/ANK. Tel:(0312) 447 71 22 Fax:(0312) 447 69 88 Cumhuriyet V.D. 334 006 3949 Tic. Sicil No:102979 Mersis No:3343-8467-4918-0432 www.enson.com.tr 22.04.2014
Tarih : 21.04.2014	**Tarih :**

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 Faks: 0 312 447 69 88 www.encon.com.tr

Döküman Adı : LABORATUVAR SONUÇ RAPORU FORMU
Dökuman Kodu : ENC – LABFR –RAP– 67 - A
Revizyon : 14 *Tarih :* 26.03.2013

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06534** Tarih: 03/04/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : HD SD 101
Numunenin Alındığı Yer : HD SD 101 (GL - 035m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 410 g
Numuneye Uygulanan İşlemler : Soğukta koruma
Taşıma Sıcaklığı : 4±1 °C
Numunenin Lab.a Geliş Tarihi : 18/03/2014 12:00
Analiz Başlama Tarihi : 19/03/2014 16:35
Analiz Bitiş Tarihi : 03/04/2014 14:20

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	1
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		2, 3

Metot ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) ISO 18512 standardına göre koruma yapılmadığından ve maksimum bekletme süresi bilinmediğinden müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
2) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
3) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
03/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

TÜRKAK Test TS EN ISO/IEC 17025 AB-0168-T

AB-0168-T
LR.14.0423
16.04.2014

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0423	**NUMUNE KAYIT NO**	NUM14.0313
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / HD SD 101 (0,35, 1 m)
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** □ **Anlık X**	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	04.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	06.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** □ **Kapalı** □ **Açık** X	**ANALİZLERİN YAPILDIĞI TARİH**	06.03.2014/03.04.2014

Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	12018	EPA-2007
Bakır	mg/kg	42,1	EPA-2007
Bor	mg/kg	36,18	EPA-2007
Civa	µg/kg	1729	EPA-2007
Çinko	mg/kg	62,38	EPA-2007
Kadmiyum	mg/kg	0,681	EPA-2007
KromCr^{+6}*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	23,81	EPA-2007
Toplam Siyanur	mg/kg	1,175	EPA 9013
Kurşun	mg/kg	24,21	EPA-2007
Nikel	mg/kg	49,8	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	1,141	EPA-2007
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)	**ONAYLAYAN : (Laboratuvar Müdürü)**
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)	**ADI / SOYADI :** Hüseyin TEKİN (Çevre Müh.)
İMZA :	**İMZA /KAŞE :** ÇEVRE DANIŞMANLIK LTD. ŞTİ. Reşit Galip Cad No:120 06700 G.O.P/ANK. Tel:(0312) 447 71 22 Fax (0312) 447 69 88 Cumhuriyet V.D. 334 ... Tic.Sicil No:102979 Mersis No 3343-8457-... www.encon.com.tr
Tarih : 21.04.2014	**Tarih :** 22.04.2014

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz Sayfa **1/1**

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 **Faks: 0 312 447 69 88** **www.encon.com.tr**

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : 06528	Tarih: 17/04/2014
Firma	: ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres	: REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi	: Toprak
Numunenin Tanımı	: HD SD 101
Numunenin Alındığı Yer	: HD SD 101 (035 - 1m)
Numunenin Geliş Şekli	: Kargo
Numunenin Kabı ve Miktarı	: Poly ambalaj / 470 g
Numuneye Uygulanan İşlemler	: Soğukta koruma
Taşıma Sıcaklığı	: 4±1 °C
Numunenin Lab.a Geliş Tarihi	: 18/03/2014 12:00
Analiz Başlama Tarihi	: 20/03/2014 16:30
Analiz Bitiş Tarihi	: 03/04/2014 14:17

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160	1, 2
Petroleum Hydrocarbons			CZ_SOP_D06_03_152	1, 2
Aliphatic Fractions of Petroleum Hydrocarbons	-			
C5 - C6 Aliphatic Fraction	mg/kg	<1.0		
C6 - C8 Aliphatic Fraction	mg/kg	<2.0		
C8 - C10 Aliphatic Fraction	mg/kg	<2.0		
C10 - C12 Aliphatic Fraction	mg/kg	<5.0		
C12 - C16 Aliphatic Fraction	mg/kg	<10		
C16 - C21 Aliphatic Fraction	mg/kg	<10		
C21 - C35 Aliphatic Fraction	mg/kg	<20		
C35 - C40 Aliphatic Fraction	mg/kg	<5.0		
C5 - C40 Aliphatic Fraction	mg/kg	<55		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	<2.0		
C7 - C8 Aromatic Fraction	mg/kg	<1.0		
C8 - C10 Aromatic Fraction	mg/kg	<2.0		
C10 - C12 Aromatic Fraction	mg/kg	<5.0		
C12 - C16 Aromatic Fraction	mg/kg	<10		
C16 - C21 Aromatic Fraction	mg/kg	<10		
C21 - C35 Aromatic Fraction	mg/kg	<20		
C35 - C40 Aromatic Fraction	mg/kg	<5.0		
C5 - C40 Aromatic Fraction	mg/kg	<55		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	<1.0		
C6 - C8 Fraction	mg/kg	<2.0		
C8 - C10 Fraction	mg/kg	<2.0		
C10 - C12 Fraction	mg/kg	<5.0		
C12 - C16 Fraction	mg/kg	<10		

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik/Onay
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06528** Tarih: 17/04/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C16 - C21 Fraction	mg/kg	<10		
C21 - C35 Fraction	mg/kg	<20		
C35 - C40 Fraction	mg/kg	<5.0		
C5 - C40 Fraction	mg/kg	<55		

Metot CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

Bilgi 1) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
2) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0424
16.04.2014

encon

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0424	**NUMUNE KAYIT NO**	NUM14.0314
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / BH 1317(6,0-6,5 m)
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** □ **Anlık X**	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	04.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	06.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** □ **Kapalı** □ **Açık** X	**ANALİZLERİN YAPILDIĞI TARİH**	06.03.2014/03.04.2014
Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.			

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	9315	EPA-2007
Bakır	mg/kg	28,9	EPA-2007
Bor	mg/kg	43,33	EPA-2007
Civa	µg/kg	888	EPA-2007
Çinko	mg/kg	62,28	EPA-2007
Kadmiyum	mg/kg	0,443	EPA-2007
KromCr^{+6}*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	30,53	EPA-2007
Toplam Siyanur	mg/kg	0,375	EPA 9013
Kurşun	mg/kg	23,89	EPA-2007
Nikel	mg/kg	51,48	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,682	EPA-2007
Toplam Organik Karbon **	mg/kg	8628	EN 13137
PAH**	mg/kg	<1	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)
İMZA :
Tarih : 21.04.2014

ONAYLAYAN : (Laboratuvar Müdürü)
ADI / SOYADI : Hüseyin TEKİN (Çevre Müh.)
İMZA /KAŞE :
ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Reşit Galip Cad.No:120 06700 G.O.P/ANK.
Tel:(0312) 447 71 22 Fax:(0312) 447 69 88
Cumhuriyet V.D. 230 004 7189 Tic.Sicil No:102979
Mersis No:0443-0107-1100-0022 www.encon.com.tr
Tarih : 22.04.2014

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 Faks: 0 312 447 69 88 www.encon.com.tr

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : 06530	Tarih: 03/04/2014
Firma	: ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres	: REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi	: Toprak
Numunenin Tanımı	: BH1317
Numunenin Alındığı Yer	: BH1317 (GL - 05m)
Numunenin Geliş Şekli	: Kargo
Numunenin Kabı ve Miktarı	: Poly ambalaj / 510 g
Numuneye Uygulanan İşlemler	: Soğukta koruma
Taşıma Sıcaklığı	: 4±1 °C
Numunenin Lab.a Geliş Tarihi	: 18/03/2014 12:00
Analiz Başlama Tarihi	: 19/03/2014 16:34
Analiz Bitiş Tarihi	: 03/04/2014 14:18

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	1
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		2, 3

Metot ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) ISO 18512 standardına göre koruma yapılmadığından ve maksimum bekletme süresi bilinmediğinden müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
2) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
3) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
03/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0425
16.04.2014

encon

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0425	**NUMUNE KAYIT NO**	NUM14.0315
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / HD SD102(GL-0,4 m)
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** □ **Anlık X**	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	04.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	06.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** □ **Kapalı** □ **Açık** X	**ANALİZLERİN YAPILDIĞI TARİH**	06.03.2014/03.04.2014
Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.			

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	6678	EPA-2007
Bakır	mg/kg	14,34	EPA-2007
Bor	mg/kg	35,15	EPA-2007
Civa	µg/kg	823	EPA-2007
Çinko	mg/kg	42,0	EPA-2007
Kadmiyum	mg/kg	0,376	EPA-2007
KromCr^{+6}*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	19,46	EPA-2007
Toplam Siyanur	mg/kg	0,475	EPA 9013
Kurşun	mg/kg	17,84	EPA-2007
Nikel	mg/kg	31,2	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,449	EPA-2007
Toplam Organik Karbon **	mg/kg	3968	EN 13137
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	101	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	121	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)	**ONAYLAYAN : (Laboratuvar Müdürü)**
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)	**ADI / SOYADI :** Hüseyin TEKİN (Çevre Müh.)
İMZA :	**İMZA /KAŞE :** ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ. Reşit Galip Cad.No:120 06700 G.O.PANK. Tel (0312) 447 71 22 Fax (0312) 447 69 88 Cumhuriyet V.D. 364 006 3189 Tic.Sicil No 102979 Mersis No:3543-8467-0013-8422 www.encon.com.tr
Tarih : 21.04.2014	**Tarih :** 22.04.2014

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz Sayfa 1/1

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 Faks: 0 312 447 69 88 www.encon.com.tr

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06531** Tarih: 17/04/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : HD SD 102
Numunenin Alındığı Yer : HD SD 102 (GL - 0,4m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 700 g
Numuneye Uygulanan İşlemler : Soğukta koruma
Taşıma Sıcaklığı : 4±1 °C
Numunenin Lab.a Geliş Tarihi : 18/03/2014 12:00
Analiz Başlama Tarihi : 19/03/2014 14:54
Analiz Bitiş Tarihi : 03/04/2014 14:52

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Toplam Organik Karbon	%	0.4	EN 13137	✓	1
Toplam Organik Karbon	mg/kg	3968			
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	2
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		3, 4
Petroleum Hydrocarbons			CZ_SOP_D06_03_152		3, 4
Aliphatic Fractions of Petroleum Hydrocarbons	-				
C5 - C6 Aliphatic Fraction	mg/kg	<1.0			
C6 - C8 Aliphatic Fraction	mg/kg	2.1			
C8 - C10 Aliphatic Fraction	mg/kg	<2.0			
C10 - C12 Aliphatic Fraction	mg/kg	<5.0			
C12 - C16 Aliphatic Fraction	mg/kg	<10			

Ömer Asım BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TEST RAPORU

Rapor No. : 06531 Tarih: 17/04/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C16 - C21 Aliphatic Fraction	mg/kg	<10		
C21 - C35 Aliphatic Fraction	mg/kg	97		
C35 - C40 Aliphatic Fraction	mg/kg	<5.0		
C5 - C40 Aliphatic Fraction	mg/kg	101		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	<2.0		
C7 - C8 Aromatic Fraction	mg/kg	<1.0		
C8 - C10 Aromatic Fraction	mg/kg	<2.0		
C10 - C12 Aromatic Fraction	mg/kg	<5.0		
C12 - C16 Aromatic Fraction	mg/kg	<10		
C16 - C21 Aromatic Fraction	mg/kg	<10		
C21 - C35 Aromatic Fraction	mg/kg	<20		
C35 - C40 Aromatic Fraction	mg/kg	<5.0		
C5 - C40 Aromatic Fraction	mg/kg	<55		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	<1.0		
C6 - C8 Fraction	mg/kg	2.1		
C8 - C10 Fraction	mg/kg	<2.0		
C10 - C12 Fraction	mg/kg	<5.0		
C12 - C16 Fraction	mg/kg	<10		
C16 - C21 Fraction	mg/kg	<10		
C21 - C35 Fraction	mg/kg	113		
C35 - C40 Fraction	mg/kg	5.2		
C5 - C40 Fraction	mg/kg	121		

Metot EN : European Standard; ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) TOK sonucu örneğin orijinal (nemli) hali için verilmiştir.
2) ISO 18512 standardına göre koruma yapılmadığından ve maksimum bekletme süresi bilinmediğinden müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
3) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
4) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olundu
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0426
16.04.2014

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0426	**NUMUNE KAYIT NO**	NUM14.0316
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / BH 1319 (GL-1,0 m)
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** □ **Anlık** X	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	04.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	06.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** □ **Kapalı** □ **Açık** X	**ANALİZLERİN YAPILDIĞI TARİH**	06.03.2014/03.04.2014
Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.			

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	3660	EPA-2007
Bakır	mg/kg	26,03	EPA-2007
Bor	mg/kg	46,35	EPA-2007
Civa	µg/kg	<0,2	EPA-2007
Çinko	mg/kg	54,45	EPA-2007
Kadmiyum	mg/kg	0,465	EPA-2007
$KromCr^{+6}$*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	32,95	EPA-2007
Toplam Siyanur	mg/kg	0,425	EPA 9013
Kurşun	mg/kg	21,91	EPA-2007
Nikel	mg/kg	75,28	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,575	EPA-2007
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160

KONTROL EDEN : (Laboratuvar Sorumlusu)
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)
İMZA :
Tarih : 21.04.2014

ONAYLAYAN : (Laboratuvar Müdürü)
ADI / SOYADI : Hüseyin TEKİN (Çevre Müh.)
İMZA /KAŞE :
encon
ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Reşit Galip Cad.No:120 06700 G.O.P/ANK
Tel:(0312) 447 71 22 Fax (0312) 447 69 88
Cumhuriyet V.D. 334 006 7169 Tic.Sicil No 192979
Mersis No:3540-8447-0334-8482 www.encon.com.tr
Tarih : 22.04.2014

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 Faks: 0 312 447 69 88 www.encon.com.tr

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06529** Tarih: 03/04/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : BH 1319
Numunenin Alındığı Yer : BH 1319 (GL - 1,0m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 1310 g
Numuneye Uygulanan İşlemler : Soğukta koruma
Taşıma Sıcaklığı : 4±1 °C
Numunenin Lab.a Geliş Tarihi : 18/03/2014 12:00
Analiz Başlama Tarihi : 19/03/2014 16:33
Analiz Bitiş Tarihi : 03/04/2014 14:18

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	1
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		2, 3

Metot ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) ISO 18512 standardına göre koruma yapılmadığından ve maksimum bekletme süresi bilinmediğinden müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
2) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
3) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
03/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0427
16.04.2014

encon

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0427	**NUMUNE KAYIT NO**	NUM14.0317
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / BH 1317 (GL-0,5 m)
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** ☐ **Anlık X**	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	04.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	06.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** ☐ **Kapalı** ☐ **Açık** X	**ANALİZLERİN YAPILDIĞI TARİH**	06.03.2014/03.04.2014

Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	11835	EPA-2007
Bakır	mg/kg	26,60	EPA-2007
Bor	mg/kg	57,63	EPA-2007
Civa	µg/kg	2515	EPA-2007
Çinko	mg/kg	69,2	EPA-2007
Kadmiyum	mg/kg	0,523	EPA-2007
KromCr^{+6}*	mg/kg	9,089	EPA 3060 A,EPA 7196 A
Krom	mg/kg	24,99	EPA-2007
Toplam Siyanur	mg/kg	0,375	EPA 9013
Kurşun	mg/kg	19,41	EPA-2007
Nikel	mg/kg	28,9	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,690	EPA-2007
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160

KONTROL EDEN : (Laboratuvar Sorumlusu)	**ONAYLAYAN : (Laboratuvar Müdürü)**
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)	**ADI / SOYADI :** Hüseyin TEKİN (Çevre Müh.)
İMZA :	**İMZA /KAŞE :** ÇEVRE DANIŞMANLIK LTD.ŞTİ. Reşit Galip Cad No:120 06700 G.O.P/ANK. Tel (0312) 447 71 22 Fax (0312) 447 69 88 Cumhuriyet V.D. 334 006 3189 Tic.Sicil No:102979 Mersis No 35... www.encon.com.tr
Tarih : 21.04.2014	**Tarih :** 22.04.2014

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz Sayfa **1/1**

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 **Faks: 0 312 447 69 88** **www.encon.com.tr**

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06523** Tarih: 17/04/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : BH1317
Numunenin Alındığı Yer : BH1317 (6.0 - 6,5m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 760 g
Numuneye Uygulanan İşlemler : Soğukta koruma
Taşıma Sıcaklığı : 4±1 °C
Numunenin Lab.a Geliş Tarihi : 18/03/2014 12:00
Analiz Başlama Tarihi : 19/03/2014 14:54
Analiz Bitiş Tarihi : 03/04/2014 14:13

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Toplam Organik Karbon	%	0.86	EN 13137	✓	1
Toplam Organik Karbon	mg/kg	8628			
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	2
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		3, 4
Petroleum Hydrocarbons			CZ_SOP_D06_03_152		3, 4
Aliphatic Fractions of Petroleum Hydrocarbons	-				
C5 - C6 Aliphatic Fraction	mg/kg	<1.0			
C6 - C8 Aliphatic Fraction	mg/kg	<2.0			
C8 - C10 Aliphatic Fraction	mg/kg	<2.0			
C10 - C12 Aliphatic Fraction	mg/kg	<5.0			
C12 - C16 Aliphatic Fraction	mg/kg	<10			

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06523** Tarih: 17/04/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C16 - C21 Aliphatic Fraction	mg/kg	<10		
C21 - C35 Aliphatic Fraction	mg/kg	<20		
C35 - C40 Aliphatic Fraction	mg/kg	<5.0		
C5 - C40 Aliphatic Fraction	mg/kg	<55		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	<2.0		
C7 - C8 Aromatic Fraction	mg/kg	<1.0		
C8 - C10 Aromatic Fraction	mg/kg	<2.0		
C10 - C12 Aromatic Fraction	mg/kg	<5.0		
C12 - C16 Aromatic Fraction	mg/kg	<10		
C16 - C21 Aromatic Fraction	mg/kg	<10		
C21 - C35 Aromatic Fraction	mg/kg	<20		
C35 - C40 Aromatic Fraction	mg/kg	<5.0		
C5 - C40 Aromatic Fraction	mg/kg	<55		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	<1.0		
C6 - C8 Fraction	mg/kg	<2.0		
C8 - C10 Fraction	mg/kg	<2.0		
C10 - C12 Fraction	mg/kg	<5.0		
C12 - C16 Fraction	mg/kg	<10		
C16 - C21 Fraction	mg/kg	<10		
C21 - C35 Fraction	mg/kg	<20		
C35 - C40 Fraction	mg/kg	<5.0		
C5 - C40 Fraction	mg/kg	<55		

Metot EN : European Standard; ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) TOK sonucu örneğin orijinal (nemli) hali için verilmiştir.
2) ISO 18512 standardına göre koruma yapılmadığından ve maksimum bekletme süresi bilinmediğinden müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
3) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
4) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0428
16.04.2014

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0428	**NUMUNE KAYIT NO**	NUM14.0318
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / HD SD 103(GL-0,75 m)
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** ☐ **Anlık X**	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	05.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	07.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** ☐ **Kapalı** ☐ **Açık** X	**ANALİZLERİN YAPILDIĞI TARİH**	07.03.2014/03.04.2014

Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	14208	EPA-2007
Bakır	mg/kg	25,68	EPA-2007
Bor	mg/kg	26,65	EPA-2007
Civa	µg/kg	827	EPA-2007
Çinko	mg/kg	42,58	EPA-2007
Kadmiyum	mg/kg	0,524	EPA-2007
KromCr^{+6}*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	18,64	EPA-2007
Toplam Siyanur	mg/kg	0,3	EPA 9013
Kurşun	mg/kg	24,01	EPA-2007
Nikel	mg/kg	26,75	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,824	EPA-2007
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160

KONTROL EDEN : (Laboratuvar Sorumlusu)	**ONAYLAYAN : (Laboratuvar Müdürü)**
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)	**ADI / SOYADI :** Hüseyin TEKİN (Çevre Müh.)
İMZA :	**İMZA /KAŞE :** ENCON ÇEVRE DANIŞMANLIK LTD ŞTİ. Reşit Galip Cad. No 120 06700 G.O.P/ANK. Tel:(0312) 447 71 22 Fax:(0312) 447 69 88 Cumhuriyet V.D. 334 005 8789 Tic.Sicil No.102979 Mersis No:3543-8... www.encon.com.tr
Tarih : 21.04.2014	**Tarih :** 22.04.2014

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz Sayfa **1/1**

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 **Faks: 0 312 447 69 88** www.encon.com.tr

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06525**	Tarih: 03/04/2014
Firma	: ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres	: REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi	: Toprak
Numunenin Tanımı	: HD SD 103
Numunenin Alındığı Yer	: HD SD 103 (GL - 0,75m)
Numunenin Geliş Şekli	: Kargo
Numunenin Kabı ve Miktarı	: Poly ambalaj / 510 g
Numuneye Uygulanan İşlemler	: Soğukta koruma
Taşıma Sıcaklığı	: 4±1 °C
Numunenin Lab.a Geliş Tarihi	: 18/03/2014 12:00
Analiz Başlama Tarihi	: 19/03/2014 16:34
Analiz Bitiş Tarihi	: 03/04/2014 14:47

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	1
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		2, 3

Metot ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) ISO 18512 standardına göre koruma yapılmadığından ve maksimum bekletme süresi bilinmediğinden müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
2) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
3) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
03/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0429
16.04.2014

encon

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0429	**NUMUNE KAYIT NO**	NUM14.0319
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / HD SD108(GL-0,5 m)
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** □ **Anlık** X	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	05.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	07.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** □ **Kapalı** □ **Açık** X	**ANALİZLERİN YAPILDIĞI TARİH**	07.03.2014/03.04.2014

Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	1041	EPA-2007
Bakır	mg/kg	20,90	EPA-2007
Bor	mg/kg	31,23	EPA-2007
Civa	µg/kg	942	EPA-2007
Çinko	mg/kg	53,73	EPA-2007
Kadmiyum	mg/kg	0,266	EPA-2007
$KromCr^{+6}$*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	23,51	EPA-2007
Toplam Siyanur	mg/kg	0,20	EPA 9013
Kurşun	mg/kg	16,85	EPA-2007
Nikel	mg/kg	50,93	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,562	EPA-2007
Toplam Organik Karbon **	mg/kg	6599	EN 13137
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)
İMZA :
Tarih : 21.04.2014

ONAYLAYAN : (Laboratuvar Müdürü)
ADI / SOYADI : Hüseyin TEKİN (Çevre Müh.)
İMZA /KAŞE :
encon 22.04.2014
ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Reşit Galip Cad.No:120 06700 G.O.P/ANK.
Tel:(0312) 447 71 22 Fax:(0312) 447 69 88
Cumhuriyet V.D. 3541 008 3189 Tic.Sicil No:102979
Mersis No:3541-0083-1890-8422 www.encon.com.tr
Tarih :

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 Faks: 0 312 447 69 88 www.encon.com.tr

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06524** Tarih: 17/04/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : HD SD 108
Numunenin Alındığı Yer : HD SD 108 (GL - 0,5m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 650 g
Numuneye Uygulanan İşlemler : Soğukta koruma
Taşıma Sıcaklığı : 4±1 °C
Numunenin Lab.a Geliş Tarihi : 18/03/2014 12:00
Analiz Başlama Tarihi : 19/03/2014 14:54
Analiz Bitiş Tarihi : 03/04/2014 14:48

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Toplam Organik Karbon	%	0.66	EN 13137	✓	1
Toplam Organik Karbon	mg/kg	6599			
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	2
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		3, 4
Petroleum Hydrocarbons			CZ_SOP_D06_03_152		3, 4
Aliphatic Fractions of Petroleum Hydrocarbons	-				
C5 - C6 Aliphatic Fraction	mg/kg	<1.0			
C6 - C8 Aliphatic Fraction	mg/kg	<2.0			
C8 - C10 Aliphatic Fraction	mg/kg	<2.0			
C10 - C12 Aliphatic Fraction	mg/kg	<5.0			
C12 - C16 Aliphatic Fraction	mg/kg	<10			

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Onur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06524** Tarih: 17/04/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C16 - C21 Aliphatic Fraction	mg/kg	<10		
C21 - C35 Aliphatic Fraction	mg/kg	<20		
C35 - C40 Aliphatic Fraction	mg/kg	<5.0		
C5 - C40 Aliphatic Fraction	mg/kg	<55		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	<2.0		
C7 - C8 Aromatic Fraction	mg/kg	<1.0		
C8 - C10 Aromatic Fraction	mg/kg	<2.0		
C10 - C12 Aromatic Fraction	mg/kg	<5.0		
C12 - C16 Aromatic Fraction	mg/kg	<10		
C16 - C21 Aromatic Fraction	mg/kg	<10		
C21 - C35 Aromatic Fraction	mg/kg	<20		
C35 - C40 Aromatic Fraction	mg/kg	<5.0		
C5 - C40 Aromatic Fraction	mg/kg	<55		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	<1.0		
C6 - C8 Fraction	mg/kg	<2.0		
C8 - C10 Fraction	mg/kg	<2.0		
C10 - C12 Fraction	mg/kg	<5.0		
C12 - C16 Fraction	mg/kg	<10		
C16 - C21 Fraction	mg/kg	<10		
C21 - C35 Fraction	mg/kg	<20		
C35 - C40 Fraction	mg/kg	<5.0		
C5 - C40 Fraction	mg/kg	<55		

Metot EN : European Standard; ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) TOK sonucu örneğin orijinal (nemli) hali için verilmiştir.
2) ISO 18512 standardına göre koruma yapılmadığından ve maksimum bekletme süresi bilinmediğinden müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
3) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
4) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olundu
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0430
16.04.2014

encon

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0430	**NUMUNE KAYIT NO**	NUM14.0320
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / E3(GL-0,5 m)
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** □ **Anlık X**	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	05.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	07.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** □ **Kapalı** □ **Açık** X	**ANALİZLERİN YAPILDIĞI TARİH**	07.03.2014/03.04.2014

Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	7115	EPA-2007
Bakır	mg/kg	17,08	EPA-2007
Bor	mg/kg	69,95	EPA-2007
Civa	µg/kg	228	EPA-2007
Çinko	mg/kg	46,60	EPA-2007
Kadmiyum	mg/kg	0,355	EPA-2007
KromCr^{+6}*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	21,01	EPA-2007
Toplam Siyanur	mg/kg	0,25	EPA 9013
Kurşun	mg/kg	21,62	EPA-2007
Nikel	mg/kg	20,17	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,524	EPA-2007
Toplam Organik Karbon **	mg/kg	11165	EN 13137
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)	**ONAYLAYAN : (Laboratuvar Müdürü)**
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)	**ADI / SOYADI :** Hüseyin TEKİN (Çevre Müh.)
İMZA :	**İMZA /KAŞE :** encon ÇEVRE DANIŞMANLIK LTD.ŞTİ. Reşit Galip Cad No:120 06700 G.O.P./ANK. Tel:(0312) 447 71 22 Fax (0312) 447 69 88 Cumhuriyet V.D 334 006 3189 Tic.Sicil No 102979 Mersis No:3543-0063-1891-8432 www.encon.com.tr 22.04.2014
Tarih : 21.04.2014	**Tarih :**

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz Sayfa **1/1**

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 **Faks: 0 312 447 69 88** **www.encon.com.tr**

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : 06526 Tarih: 17/04/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : E3
Numunenin Alındığı Yer : E3 (GL - 0,5m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 840 g
Numuneye Uygulanan İşlemler : Soğukta koruma
Taşıma Sıcaklığı : 4±1 °C
Numunenin Lab.a Geliş Tarihi : 18/03/2014 12:00
Analiz Başlama Tarihi : 19/03/2014 14:54
Analiz Bitiş Tarihi : 03/04/2014 14:19

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Toplam Organik Karbon	%	1.12	EN 13137	✓	1
Toplam Organik Karbon	mg/kg	11165			
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	2
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		3, 4
Petroleum Hydrocarbons			CZ_SOP_D06_03_152		3, 4
Aliphatic Fractions of Petroleum Hydrocarbons	-				
C5 - C6 Aliphatic Fraction	mg/kg	<1.0			
C6 - C8 Aliphatic Fraction	mg/kg	<2.0			
C8 - C10 Aliphatic Fraction	mg/kg	<2.0			
C10 - C12 Aliphatic Fraction	mg/kg	<5.0			
C12 - C16 Aliphatic Fraction	mg/kg	<10			

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TEST RAPORU

Rapor No. : 06526 Tarih: 17/04/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C16 - C21 Aliphatic Fraction	mg/kg	<10		
C21 - C35 Aliphatic Fraction	mg/kg	<20		
C35 - C40 Aliphatic Fraction	mg/kg	<5.0		
C5 - C40 Aliphatic Fraction	mg/kg	<55		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	<2.0		
C7 - C8 Aromatic Fraction	mg/kg	<1.0		
C8 - C10 Aromatic Fraction	mg/kg	<2.0		
C10 - C12 Aromatic Fraction	mg/kg	<5.0		
C12 - C16 Aromatic Fraction	mg/kg	<10		
C16 - C21 Aromatic Fraction	mg/kg	<10		
C21 - C35 Aromatic Fraction	mg/kg	<20		
C35 - C40 Aromatic Fraction	mg/kg	<5.0		
C5 - C40 Aromatic Fraction	mg/kg	<55		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	<1.0		
C6 - C8 Fraction	mg/kg	<2.0		
C8 - C10 Fraction	mg/kg	<2.0		
C10 - C12 Fraction	mg/kg	<5.0		
C12 - C16 Fraction	mg/kg	<10		
C16 - C21 Fraction	mg/kg	<10		
C21 - C35 Fraction	mg/kg	<20		
C35 - C40 Fraction	mg/kg	<5.0		
C5 - C40 Fraction	mg/kg	<55		

Metot EN : European Standard; ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) TOK sonucu örneğin orijinal (nemli) hali için verilmiştir.
2) ISO 18512 standardına göre koruma yapılmadığından ve maksimum bekletme süresi bilinmediğinden müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
3) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
4) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

encon

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0431
16.04.2014

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0431	NUMUNE KAYIT NO	NUM14.0321
NUMUNE ALINAN YER	İSTANBUL	NUMUNE TÜRÜ	Toprak / Kartal -1
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	Kompozit □ Anlık X	NUMUNEYİ ALAN	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	NUMUNE ALMA TARİHİ	06.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	NUMUNE KABUL TARİHİ	07.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	Yağışlı □ Kapalı □ Açık X	ANALİZLERİN YAPILDIĞI TARİH	07.03.2014/03.04.2014

Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	3400	EPA-2007
Bakır	mg/kg	4,03	EPA-2007
Bor	mg/kg	11,89	EPA-2007
Civa	µg/kg	650	EPA-2007
Çinko	mg/kg	36,63	EPA-2007
Kadmiyum	mg/kg	0,386	EPA-2007
KromCr^{+6}*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	6,68	EPA-2007
Toplam Siyanur	mg/kg	0,325	EPA 9013
Kurşun	mg/kg	7,265	EPA-2007
Nikel	mg/kg	5,59	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,171	EPA-2007
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	6730	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	1390	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	8130	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)	**ONAYLAYAN : (Laboratuvar Müdürü)**
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)	**ADI / SOYADI :** Hüseyin TEKİN (Çevre Müh.)
İMZA :	**İMZA /KAŞE :** ÇEVRE DANIŞMANLIK LTD. ŞTİ. Reşit Galip Cad. No:120 06700 G.O.P/ANK. Tel (0312) 447 71 22 Fax (0312) 447 69 88 Cumhuriyet V.D. 334 005 0189 Tic.Sicil No: 102979 Mersis No: ... www.encon.com.tr
Tarih : 21.04.2014	**Tarih :** 22.04.2014

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz Sayfa 1/1

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 Faks: 0 312 447 69 88 www.encon.com.tr

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : 06532 Tarih: 17/04/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : Kartal 1
Numunenin Alındığı Yer : Kartal 1
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 1040 g
Numuneye Uygulanan İşlemler : Soğukta koruma
Taşıma Sıcaklığı : 4±1 °C
Numunenin Lab.a Geliş Tarihi : 18/03/2014 12:00
Analiz Başlama Tarihi : 19/03/2014 16:34
Analiz Bitiş Tarihi : 03/04/2014 14:17

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	1
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		2, 3
Petroleum Hydrocarbons			CZ_SOP_D06_03_152		2, 3
Aliphatic Fractions of Petroleum Hydrocarbons	-				
C5 - C6 Aliphatic Fraction	mg/kg	<1.0			
C6 - C8 Aliphatic Fraction	mg/kg	<2.0			
C8 - C10 Aliphatic Fraction	mg/kg	15.3			
C10 - C12 Aliphatic Fraction	mg/kg	157			
C12 - C16 Aliphatic Fraction	mg/kg	1640			
C16 - C21 Aliphatic Fraction	mg/kg	3400			
C21 - C35 Aliphatic Fraction	mg/kg	1520			

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06532** Tarih: 17/04/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C35 - C40 Aliphatic Fraction	mg/kg	<5.0		
C5 - C40 Aliphatic Fraction	mg/kg	6730		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	<2.0		
C7 - C8 Aromatic Fraction	mg/kg	<1.0		
C8 - C10 Aromatic Fraction	mg/kg	<2.0		
C10 - C12 Aromatic Fraction	mg/kg	14.7		
C12 - C16 Aromatic Fraction	mg/kg	368		
C16 - C21 Aromatic Fraction	mg/kg	757		
C21 - C35 Aromatic Fraction	mg/kg	254		
C35 - C40 Aromatic Fraction	mg/kg	<5.0		
C5 - C40 Aromatic Fraction	mg/kg	1390		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	<1.0		
C6 - C8 Fraction	mg/kg	<2.0		
C8 - C10 Fraction	mg/kg	15.7		
C10 - C12 Fraction	mg/kg	172		
C12 - C16 Fraction	mg/kg	2000		
C16 - C21 Fraction	mg/kg	4160		
C21 - C35 Fraction	mg/kg	1780		
C35 - C40 Fraction	mg/kg	<5.0		
C5 - C40 Fraction	mg/kg	8130		

Metot ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) ISO 18512 standardına göre koruma yapılmadığından ve maksimum bekletme süresi bilinmediğinden müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
2) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
3) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Onur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TÜRKAK

Test
TS EN ISO/IEC 17025
AB-0168-T

AB-0168-T
LR.14.0432
16.04.2014

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0432	**NUMUNE KAYIT NO**	NUM14.0322
NUMUNE ALINAN YER	İSTANBUL	**NUMUNE TÜRÜ**	Toprak / TP29(GL-0,25)
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	**Kompozit** □ **Anlık** X	**NUMUNEYİ ALAN**	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	**NUMUNE ALMA TARİHİ**	06.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	**NUMUNE KABUL TARİHİ**	07.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	**Yağışlı** □ **Kapalı** □ **Açık** X	**ANALİZLERİN YAPILDIĞI TARİH**	07.03.2014/03.04.2014
Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.			

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	10095	EPA-2007
Bakır	mg/kg	12,43	EPA-2007
Bor	mg/kg	52,35	EPA-2007
Civa	µg/kg	201	EPA-2007
Çinko	mg/kg	41,98	EPA-2007
Kadmiyum	mg/kg	0,301	EPA-2007
KromCr^{+6}*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	26,28	EPA-2007
Toplam Siyanur	mg/kg	1,125	EPA 9013
Kurşun	mg/kg	39,65	EPA-2007
Nikel	mg/kg	19,09	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,957	EPA-2007
Toplam Organik Karbon **	mg/kg	18135	EN 13137
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)	**ONAYLAYAN : (Laboratuvar Müdürü)**
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)	**ADI / SOYADI :** Hüseyin TEKİN (Çevre Müh.)
İMZA :	**İMZA /KAŞE :** encon ÇEVRE DANIŞMANLIK LTD.ŞTİ. Reşit Galip Cad. No:120 06700 G.O.P/ANK Tel:(0312) 447 71 22 Fax (0312) 447 69 88 Cumhuriyet V.D. 376 006 3188 Tic.Sicil No:102879 Mersis No:3543-0376-7188-0422 www.encon.com.tr
Tarih : 21.04.2014	**Tarih :** 22.04.2014

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz Sayfa **1/1**

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 Faks: 0 312 447 69 88 www.encon.com.tr

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06527** Tarih: 17/04/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : TP 29
Numunenin Alındığı Yer : TP 29 (GL - 0,25m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 670 g
Numuneye Uygulanan İşlemler : Soğukta koruma
Taşıma Sıcaklığı : 4±1 °C
Numunenin Lab.a Geliş Tarihi : 18/03/2014 12:00
Analiz Başlama Tarihi : 19/03/2014 14:54
Analiz Bitiş Tarihi : 03/04/2014 14:13

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Toplam Organik Karbon	%	1.81	EN 13137	✓	1
Toplam Organik Karbon	mg/kg	18135			
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	2
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		3, 4
Petroleum Hydrocarbons			CZ_SOP_D06_03_152		3, 4
Aliphatic Fractions of Petroleum Hydrocarbons	-				
C5 - C6 Aliphatic Fraction	mg/kg	<1.0			
C6 - C8 Aliphatic Fraction	mg/kg	<2.0			
C8 - C10 Aliphatic Fraction	mg/kg	<2.0			
C10 - C12 Aliphatic Fraction	mg/kg	<5.0			
C12 - C16 Aliphatic Fraction	mg/kg	<10			

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TEST RAPORU

Rapor No. : **06527** Tarih: 17/04/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C16 - C21 Aliphatic Fraction	mg/kg	<10		
C21 - C35 Aliphatic Fraction	mg/kg	<20		
C35 - C40 Aliphatic Fraction	mg/kg	<5.0		
C5 - C40 Aliphatic Fraction	mg/kg	<55		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	<2.0		
C7 - C8 Aromatic Fraction	mg/kg	<1.0		
C8 - C10 Aromatic Fraction	mg/kg	<2.0		
C10 - C12 Aromatic Fraction	mg/kg	<5.0		
C12 - C16 Aromatic Fraction	mg/kg	<10		
C16 - C21 Aromatic Fraction	mg/kg	<10		
C21 - C35 Aromatic Fraction	mg/kg	<20		
C35 - C40 Aromatic Fraction	mg/kg	<5.0		
C5 - C40 Aromatic Fraction	mg/kg	<55		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	<1.0		
C6 - C8 Fraction	mg/kg	<2.0		
C8 - C10 Fraction	mg/kg	<2.0		
C10 - C12 Fraction	mg/kg	<5.0		
C12 - C16 Fraction	mg/kg	<10		
C16 - C21 Fraction	mg/kg	<10		
C21 - C35 Fraction	mg/kg	<20		
C35 - C40 Fraction	mg/kg	<5.0		
C5 - C40 Fraction	mg/kg	<55		

Metot EN : European Standard; ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) TOK sonucu örneğin orijinal (nemli) hali için verilmiştir.
2) ISO 18512 standardına göre koruma yapılmadığından ve maksimum bekletme süresi bilinmediğinden müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
3) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
4) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

ENCON ÇEVRE DANIŞMANLIK LTD. ŞTİ.

ÇEVRE LABORATUVARI ANALİZ RAPORU

TÜRKAK Test TS EN ISO/IEC 17025 AB-0168-T

AB-0168-T
LR.14.0433
16.04.2014

MÜŞTERİ ADI	İGA HAVALİMANLARI İŞLETMESİ		
MÜŞTERİ ADRESİ	Göktürk Merkez Mah. İstanbul Cad. Kayın Sk. No:1/B Kat:4-11		
RAPOR TARİH/ NUMARASI	16.04.2014/LR14.0433	NUMUNE KAYIT NO	NUM14.0323
NUMUNE ALINAN YER	İSTANBUL	NUMUNE TÜRÜ	Toprak / Kartal-2
NUMUNE ALMA ŞEKLİ/YÖNTEMİ	Kompozit □ Anlık X	NUMUNEYİ ALAN	Uğur ŞAHİN
NUMUNEYE UYGULANAN İŞLEMLER	....	NUMUNE ALMA TARİHİ	06.03.2014
NUMUNENİN GELİŞ ŞEKLİ (Mühürlü, Kap Türü, Miktarı vb.)	Plastik poşet,1 kg	NUMUNE KABUL TARİHİ	07.03.2014
NUMUNE ALIMINDA ÇEVRE ŞARTLARI	Yağışlı □ Kapalı □ Açık X	ANALİZLERİN YAPILDIĞI TARİH	07.03.2014/03.04.2014

Toprak numunesi ENCON Personeli Tarafından, ENC-LABPR-NUM-13 No'lu Numune Alma Prosedürüne göre alınmıştır.

PARAMETRE	BİRİM	ÖLÇÜM/ ANALİZ SONUCU	KULLANILAN METOT
Arsenik	µg/kg	3673	EPA-2007
Bakır	mg/kg	3,04	EPA-2007
Bor	mg/kg	11,61	EPA-2007
Civa	µg/kg	1985	EPA-2007
Çinko	mg/kg	27,38	EPA-2007
Kadmiyum	mg/kg	0,268	EPA-2007
KromCr^{+6}*	mg/kg	<2	EPA 3060 A,EPA 7196 A
Krom	mg/kg	7,98	EPA-2007
Toplam Siyanur	mg/kg	0,70	EPA 9013
Kurşun	mg/kg	5,48	EPA-2007
Nikel	mg/kg	2,33	EPA-2007
Vanadyum*	mg/kg	Tespit Edilemedi	EPA-2007
Selenyum	µg/kg	<1	EPA-2007
Berilyum*	mg/kg	0,166	EPA-2007
Toplam Organik Karbon **	mg/kg	1372	EN 13137
PAH**	mg/kg	<2	ISO 13877 (HPLC-UV)
Monohidrik Fenoller**	mg/kg	<1	CZ-SOP-D06-03-160
Aliphatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Aromatic Fractions of Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152
Total Petroleum Hydrocarbons (C-5-C40)**	mg/kg	<55	CZ-SOP-D06-03-152

KONTROL EDEN : (Laboratuvar Sorumlusu)
ADI / SOYADI : Hakan YILMAZ (Çevre Müh.)
İMZA :
Tarih : 21.04.2014

ONAYLAYAN : (Laboratuvar Müdürü)
ADI / SOYADI : Hüseyin TEKİN (Çevre Müh.) 22.04.2014
İMZA /KAŞE :
encon ÇEVRE DANIŞMANLIK LTD.ŞTİ. Reşit Galip Cad.No:120 06700 G.O.P/ANK. Tel:(0312) 447 71 22 Fax:(0312) 447 69 88 Cumhuriyet V.D. 334 ... Tic.Sicil No:102979 Mersis No:3343-... www.encon.com.tr
Tarih :

Açıklamalar : Müşteri talebi üzerine özel istek numunesi olarak çalışılmıştır. Bu rapor çevre mevzuatına ilişkin resmi işlemlerde kullanılamaz Sayfa 1/1

-İmzasız ve Kaşesiz Analiz Raporları geçersizdir
-Rapordaki analiz sonuçları analizi yapılan numuneyi temsil eder.
-Bu rapor ve sonuçları ENCON Çevre Danışmanlık Ltd. Şti'nin izni olmadan ticari ve reklam amaçlı tamamen veya kısmen çoğaltılamaz veya yayınlanamaz.
- (*) işaretli parametreler akredite olmayan parametrelerdir.
- (ç) işaretli parametreler Çevre ve Şehircilik Bakanlığı Yeterlik Belgesi kapsamı dışındadır.
-** işaretli parametreler ISO 17025 Akreditasyonuna sahip Çevre Endüstriyel Analiz Laboratuvar Hizm.Tic.Aş. tarafından yapılmıştır.

Adres: Reşit Galip Caddesi No: 120 Gaziosmanpaşa/ANKARA
Tel: 0 312 447 71 22 **Faks: 0 312 447 69 88** www.encon.com.tr

ÇEVRE
ENDÜSTRİYEL ANALİZ
LABORATUVARI
ÇEVRE ENDÜSTRİYEL ANALİZ LABORATUVAR HİZM. TİC. A.Ş.

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0363-T

TEST RAPORU

Rapor No. : **06533** Tarih: 17/04/2014

Firma : ENCON ÇEVRE DANIŞMANLIK LTD.ŞTİ.
Adres : REŞİT CAD.NO : 120 GAZİOSMANPAŞA ANKARA
Numunenin Cinsi : Toprak
Numunenin Tanımı : Kartal 2
Numunenin Alındığı Yer : Kartal 2 (0,35m)
Numunenin Geliş Şekli : Kargo
Numunenin Kabı ve Miktarı : Poly ambalaj / 1320 g
Numuneye Uygulanan İşlemler : Soğukta koruma
Taşıma Sıcaklığı : 4±1 °C
Numunenin Lab.a Geliş Tarihi : 18/03/2014 12:00
Analiz Başlama Tarihi : 19/03/2014 14:54
Analiz Bitiş Tarihi : 03/04/2014 16:47

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot		Bilgi
Toplam Organik Karbon	%	0.14	EN 13137	✓	1
Toplam Organik Karbon	mg/kg	1372			
Poly Aromatic Hydrocarbons			ISO 13877 (HPLC-UV)	✓	2
Acenaphthene	mg/kg	<1			
Acenaphthylene	mg/kg	<0.2			
Anthracene	mg/kg	<0.05			
Benzo (a) anthracene	mg/kg	<0.05			
Benzo (b) fluoranthene	mg/kg	<0.05			
Benzo (k) fluoranthene	mg/kg	<0.05			
Benzo (g,h,i) perylene	mg/kg	<0.1			
Benzo (a) pyrene	mg/kg	<0.05			
Chrysene	mg/kg	<0.05			
Dibenzo (a,h) anthracene	mg/kg	<0.1			
Fluoranthene	mg/kg	<0.1			
Fluorene	mg/kg	<0.1			
Indeno (1,2,3-c,d) pyrene	mg/kg	<0.05			
Naphthalene	mg/kg	<0.1			
Phenanthrene	mg/kg	<0.05			
Pyrene	mg/kg	<0.1			
Poly Aromatic Hydrocarbons (Toplam)	mg/kg	<2			
Monohidrik Fenoller	mg/kg	<1	CZ_SOP_D06_03_160		3, 4
Petroleum Hydrocarbons			CZ_SOP_D06_03_152		3, 4
Aliphatic Fractions of Petroleum Hydrocarbons	-				
C5 - C6 Aliphatic Fraction	mg/kg	<1.0			
C6 - C8 Aliphatic Fraction	mg/kg	<2.0			
C8 - C10 Aliphatic Fraction	mg/kg	<2.0			
C10 - C12 Aliphatic Fraction	mg/kg	<5.0			
C12 - C16 Aliphatic Fraction	mg/kg	<10			

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

TEST RAPORU

Rapor No. : **06533** Tarih: 17/04/2014

Laboratuvarımıza kargo ile gönderilen numunede yapılan test sonuçları:

Test	Birim	Bulgu	Metot	Bilgi
C16 - C21 Aliphatic Fraction	mg/kg	14		
C21 - C35 Aliphatic Fraction	mg/kg	<20		
C35 - C40 Aliphatic Fraction	mg/kg	<5.0		
C5 - C40 Aliphatic Fraction	mg/kg	<55		
Aromatic Fractions of Petroleum Hydrocarbons	-			
C5 - C7 Aromatic Fraction	mg/kg	<2.0		
C7 - C8 Aromatic Fraction	mg/kg	<1.0		
C8 - C10 Aromatic Fraction	mg/kg	<2.0		
C10 - C12 Aromatic Fraction	mg/kg	<5.0		
C12 - C16 Aromatic Fraction	mg/kg	<10		
C16 - C21 Aromatic Fraction	mg/kg	<10		
C21 - C35 Aromatic Fraction	mg/kg	<20		
C35 - C40 Aromatic Fraction	mg/kg	<5.0		
C5 - C40 Aromatic Fraction	mg/kg	<55		
Total Petroleum Hydrocarbons	-			
C5 - C6 Fraction	mg/kg	<1.0		
C6 - C8 Fraction	mg/kg	<2.0		
C8 - C10 Fraction	mg/kg	<2.0		
C10 - C12 Fraction	mg/kg	<5.0		
C12 - C16 Fraction	mg/kg	<10		
C16 - C21 Fraction	mg/kg	14		
C21 - C35 Fraction	mg/kg	<20		
C35 - C40 Fraction	mg/kg	<5.0		
C5 - C40 Fraction	mg/kg	<55		

Metot EN : European Standard; ISO : International Organization for Standardization; CZ_SOP_D06_03_160 (US EPA 8041A, US EPA 3500 except chapt. 9.1); CZ_SOP_D06_03_152 except chap. 9.2 (TNRCC Method 1006)

✓ İşaretli parametre akreditasyon kapsamımızda yer almaktadır.

Bilgi
1) TOK sonucu örneğin orijinal (nemli) hali için verilmiştir.
2) ISO 18512 standardına göre koruma yapılmadığından ve maksimum bekletme süresi bilinmediğinden müşterinin onayı ve bilgisi doğrultusunda çalışılmıştır.
3) İlgili analiz onaylı iş birliği yaptığımız laboratuvarımıza yaptırılmıştır.
4) Kuru ağırlık

Rapor Sonu

Ömer Yasin BALIK
Laboratuvar Sorumlusu

Tasdik Olunur
17/04/2014
Doç.Dr.Aysun YILMAZ
Laboratuvar Müdürü

Merkez Mahallesi Tatlıpınar Sokak No:13 Mart Plaza Kat:2/A Kağıthane / İstanbul Tel. : (0212) 321 09 00 (pbx) Faks : (0212) 321 09 75
e-mail : info@cevreanaliz.com www.cevreanaliz.com

Annex 7.4.C: USEPA Screening Criteria

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile;
R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information												Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
1.8E-02	C	5.1E-06	C	1.5E-01	I					1	0.1		ALAR	1596-84-5	3.0E+01	c	1.3E+02	c	5.5E-01	c	2.4E+00	c	4.3E+00	c		9.5E-04	c	
8.7E-03	I			4.0E-03	I					1	0.1		Acephate	30560-19-1	6.1E+01	c**	2.7E+02	c*					8.9E+00	c**		2.0E-03	c**	
		2.2E-06	I			9.0E-03	I	V		1		1.1E+05	Acetaldehyde	75-07-0	1.1E+01	c**	4.9E+01	c**	1.3E+00	c**	5.6E+00	c**	2.6E+00	c**		5.2E-04	c**	
				2.0E-02	I					1	0.1		Acetochlor	34256-82-1	1.2E+03	n	1.6E+04	n					3.5E+02	n		2.8E-01	n	
				9.0E-01	I	3.1E+01	A	V		1		1.1E+05	Acetone	67-64-1	6.1E+04	n	6.7E+05	nms	3.2E+04	n	1.4E+05	n	1.4E+04	n		2.9E+00	n	
						2.0E-03	X	V		1		1.1E+05	Acetone Cyanohydrin	75-86-5	5.0E+01	n	2.1E+02	n	2.1E+00	n	8.8E+00	n	4.2E+00	n		8.4E-04	n	
						6.0E-02	I	V		1		1.3E+05	Acetonitrile	75-05-8	8.1E+02	n	3.4E+03	n	6.3E+01	n	2.6E+02	n	1.3E+02	n		2.6E-02	n	
				1.0E-01	I			V		1		2.5E+03	Acetophenone	98-86-2	7.8E+03	ns	1.2E+05	nms					1.9E+03	n		5.8E-01	n	
3.8E+00	C	1.3E-03	C							1	0.1		Acetylaminofluorene, 2-	53-96-3	1.4E-01	c	6.1E-01	c	2.2E-03	c	9.4E-03	c	1.6E-02	c		7.2E-05	c	
				5.0E-04	I	2.0E-05	I	V		1		2.3E+04	Acrolein	107-02-8	1.4E-01	n	6.0E-01	n	2.1E-02	n	8.8E-02	n	4.2E-02	n		8.4E-06	n	
5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M	1	0.1		Acrylamide	79-06-1	2.4E-01	c	4.6E+00	c	1.0E-02	c	1.2E-01	c	5.0E-02	c		1.1E-05	c	
				5.0E-01	I	1.0E-03	I			1	0.1		Acrylic Acid	79-10-7	3.0E+04	n	3.9E+05	nm	1.0E+00	n	4.4E+00	n	9.9E+03	n		2.0E+00	n	
5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V		1		1.1E+04	Acrylonitrile	107-13-1	2.5E-01	c*	1.1E+00	c*	4.1E-02	c*	1.8E-01	c*	5.2E-02	c*		1.1E-05	c*	
						6.0E-03	P			1	0.1		Adiponitrile	111-69-3	8.5E+06	nm	3.6E+07	nm	6.3E+00	n	2.6E+01	n						
5.6E-02	C			1.0E-02	I					1	0.1		Alachlor	15972-60-8	9.5E+00	c*	4.1E+01	c					1.0E+00	c	2.0E+00	8.6E-04	c	1.6E-03
				1.0E-03	I					1	0.1		Aldicarb	116-06-3	6.2E+01	n	8.2E+02	n					2.0E+01	n	3.0E+00	4.9E-03	n	7.5E-04
				1.0E-03	I					1	0.1		Aldicarb Sulfone	1646-88-4	6.2E+01	n	8.2E+02	n					2.0E+01	n	2.0E+00	4.4E-03	n	4.4E-04
										1	0.1		Aldicarb sulfoxide	1646-87-3											4.0E+00			8.8E-04
1.7E+01	I	4.9E-03	I	3.0E-05	I					1	0.1		Aldrin	309-00-2	3.1E-02	c*	1.4E-01	c	5.7E-04	c	2.5E-03	c	4.6E-03	c		7.5E-04	c	
				2.5E-01	I					1	0.1		Ally	74223-64-6	1.5E+04	n	2.1E+05	nm					4.9E+03	n		1.9E+00	n	
				5.0E-03	I	1.0E-04	X			1	0.1		Allyl Alcohol	107-18-6	3.1E+02	n	4.1E+03	n	1.0E-01	n	4.4E-01	n	1.0E+02	n		2.0E-02	n	
2.1E-02	C	6.0E-06	C			1.0E-03	I	V		1		1.4E+03	Allyl Chloride	107-05-1	7.2E-01	c**	3.2E+00	c**	4.7E-01	c**	2.0E+00	c**	7.3E-01	c**		2.3E-04	c**	
				1.0E+00	P	5.0E-03	P			1			Aluminum	7429-90-5	7.7E+04	n	1.1E+06	nm	5.2E+00	n	2.2E+01	n	2.0E+04	n		3.0E+04	n	
				4.0E-04	I					1			Aluminum Phosphide	20859-73-8	3.1E+01	n	4.7E+02	n					8.0E+00	n			n	
				3.0E-04	I					1	0.1		Amdro	67485-29-4	1.8E+01	n	2.5E+02	n					5.9E+00	n		2.1E+03	n	
				9.0E-03	I					1	0.1		Ametryn	834-12-8	5.5E+02	n	7.4E+03	n					1.5E+02	n		1.6E-01	n	
2.1E+01	C	6.0E-03	C							1	0.1		Aminobiphenyl, 4-	92-67-1	2.5E-02	c	1.1E-01	c	4.7E-04	c	2.0E-03	c	3.0E-03	c		1.5E-05	c	
				8.0E-02	P					1	0.1		Aminophenol, m-	591-27-5	4.9E+03	n	6.6E+04	n					1.6E+03	n		6.1E-01	n	
				2.0E-02	P					1	0.1		Aminophenol, p-	123-30-8	1.2E+03	n	1.6E+04	n					4.0E+02	n		1.5E-01	n	
				2.5E-03	I					1	0.1		Amitraz	33089-61-1	1.5E+02	n	2.1E+03	n					8.2E+00	n		4.2E+00	n	
						1.0E-01	I			1			Ammonia	7664-41-7					1.0E+02	n	4.4E+02	n						
				2.0E-01	I					1			Ammonium Sulfamate	7773-06-0	1.6E+04	n	2.3E+05	nm					4.0E+03	n			n	
						3.0E-03	X	V		1		1.4E+04	Amyl Alcohol, tert-	75-85-4	8.2E+01	n	3.4E+02	n	3.1E+00	n	1.3E+01	n	6.3E+00	n		1.3E-03	n	
5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03	I			1	0.1		Aniline	62-53-3	9.3E+01	c**	4.1E+02	c*	1.0E+00	n	4.4E+00	n	1.3E+01	c*		4.6E-03	c*	
4.0E-02	P			2.0E-03	X					1	0.1		Anthraquinone, 9,10-	84-65-1	1.3E+01	c**	5.8E+01	c*					1.4E+00	c*		1.4E-02	c*	
				4.0E-04	I					0.15			Antimony (metallic)	7440-36-0	3.1E+01	n	4.7E+02	n					7.8E+00	n	6.0E+00	3.5E-01	n	2.7E-01
				5.0E-04	H					0.15			Antimony Pentoxide	1314-60-9	3.9E+01	n	5.8E+02	n					9.7E+00	n			n	
				9.0E-04	H					0.15			Antimony Potassium Tartrate	11071-15-1	7.0E+01	n	1.1E+03	n					1.8E+01	n			n	
				4.0E-04	H					0.15			Antimony Tetroxide	1332-81-6	3.1E+01	n	4.7E+02	n					7.8E+00	n			n	
						2.0E-04	I			0.15			Antimony Trioxide	1309-64-4	2.8E+05	nm	1.2E+06	nm	2.1E-01	n	8.8E-01	n						
				1.3E-02	I					1	0.1		Apollo	74115-24-5	8.0E+02	n	1.1E+04	n					2.3E+02	n		1.4E+01	n	
2.5E-02	I	7.1E-06	I	5.0E-02	H					1	0.1		Aramite	140-57-8	2.1E+01	c	9.2E+01	c	4.0E-01	c	1.7E+00	c	1.3E+00	c		1.5E-02	c	
1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C			1	0.03		Arsenic, Inorganic	7440-38-2	6.7E-01	c*R	3.0E+00	cR	6.5E-04	c*	2.9E-03	c*	5.2E-02	c	1.0E+01	1.5E-03	c	2.9E-01
				3.5E-06	C	5.0E-05	I			1			Arsine	7784-42-1	2.7E-01	n	4.1E+00	n	5.2E-02	n	2.2E-01	n	7.0E-02	n			n	
				9.0E-03	I					1	0.1		Assure	76578-14-8	5.5E+02	n	7.4E+03	n					1.2E+02	n		1.9E+00	n	
				5.0E-02	I					1	0.1		Asulam	3337-71-1	3.1E+03	n	4.1E+04	n					1.0E+03	n		2.6E-01	n	
2.3E-01	C			3.5E-02	I					1	0.1		Atrazine	1912-24-9	2.3E+00	c	1.0E+01	c					3.0E-01	c	3.0E+00	1.9E-04	c	1.9E-03
8.8E-01	C	2.5E-04	C							1	0.1		Auramine	492-80-8	6.1E-01	c	2.6E+00	c	1.1E-02	c	4.9E-02	c	6.6E-02	c		6.0E-04	c	
				4.0E-04	I					1	0.1		Avermectin B1	65195-55-3	2.5E+01	n	3.3E+02	n					8.0E+00	n		1.4E+01	n	
1.1E-01	I	3.1E-05	I					V		1			Azobenzene	103-33-3	5.6E+00	c	2.6E+01	c	9.1E-02	c	4.0E-01	c	1.2E-01	c		9.2E-04	c	
				1.0E+00	P	7.0E-06	P			1	0.1		Azodicarbonamide	123-77-3	8.5E+03	n	4.0E+04	n	7.3E-03	n	3.1E-02	n	2.0E+04	n		6.8E+00	n	
				2.0E-01	I	5.0E-04	H			0.07			Barium	7440-39-3	1.5E+04	n	2.2E+05	nm	5.2E-01	n	2.2E+00	n	3.8E+03	n	2.0E+03	1.6E+02	n	8.2E+01
				4.0E-03	I					1	0.1		Baygon	114-26-1	2.5E+02	n	3.3E+03	n					7.8E+01	n		2.5E-02	n	
				3.0E-02	I					1	0.1		Bayleton	43121-43-3	1.8E+03	n	2.5E+04	n					5.5E+02	n		4.4E-01	n	
				2.5E-02	I					1	0.1		Baythroid	68359-37-5	1.5E+03	n	2.1E+04	n					1.2E+02	n		3.1E+01	n	
				3.0E-01	I					1	0.1		Benefin	1861-40-1	1.8E+04	n	2.5E+05	nm					1.7E+03	n		5.6E+01	n	
				5.0E-02	I					1	0.1		Benomyl	17804-35-2	3.1E+03	n	4.1E+04	n					9.7E+02	n		8.5E-01	n	
				3.0E-02	I					1	0.1		Bentazon	25057-89-0	1.8E+03	n	2.5E+04	n					5.7E+02	n		1.2E-01	n	
				1.0E-01	I			V		1		1.2E+03	Benzaldehyde	100-52-7	7.8E+03	ns	1.2E+05	nms					1.9E+03	n		4.3E-01	n	
5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V		1		1.8E+03	Benzene	71-43-2	1.2E+00	c*	5.1E+00	c*	3.6E-01	c*	1.6E+00	c*	4.5E-01	c*	5.0E+00	2.3E-04	c*	2.6E-03
1.0E-01	X			3.0E-04	X					1	0.1		Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	5.3E+00	c**	2.3E+01	c*					7.8E-01	c**		2.2E-04	c**	
				1.0E-03	P			V		1		1.3E+03	Benzenethiol	108-98-5	7.8E+01	n	1.2E+03	n					1.7E+01	n		1.1E-02	n	
2.3E+02	I	6.7E-02	I	3.0E-03	I				M	1	0.1		Benzidine	92-87-5	5.2E-04	c	1.0E-02	c	1.5E-05	c	1.8E-04	c	1.1E-04	c		2.7E-07	c	
				4.0E+00	I					1	0.1		Benzoic Acid	65-85-0	2.5E+05	nm	3.3E+06	nm					7.5E+04	n		1.8E+01	n	
1.3E+01	I							V		1		3.2E+02	Benzotrichloride	98-07-7	5.3E-02	c	2.5E-01	c					2.9E-03	c		6.5E-06	c	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information												Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vo c	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				1.0E-01	P					1	0.1		Benzyl Alcohol	100-51-6	6.2E+03	n	8.2E+04	n					2.0E+03	n		4.8E-01	n	
1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		1		1.5E+03	Benzyl Chloride	100-44-7	1.1E+00	c*	4.8E+00	c*	5.7E-02	c*	2.5E-01	c*	8.9E-02	c*		9.7E-05	c*	
		2.4E-03	I	2.0E-03	I	2.0E-05	I			0.007			Beryllium and compounds	7440-41-7	1.6E+02	n	2.3E+03	n	1.2E-03	c*	5.1E-03	c*	2.5E+01	n	4.0E+00	1.9E+01	n	3.2E+00
				1.0E-04	I					1	0.1		Bidrin	141-66-2	6.2E+00	n	8.2E+01	n					2.0E+00	n		4.7E-04	n	
				9.0E-03	P					1	0.1		Bifenox	42576-02-3	5.5E+02	n	7.4E+03	n					1.0E+02	n		7.6E-01	n	
				1.5E-02	I					1	0.1		Biphenthrin	82657-04-3	9.2E+02	n	1.2E+04	n					3.0E+02	n		1.4E+03	n	
8.0E-03	I			5.0E-01	I	4.0E-04	X	V		1			Biphenyl, 1,1'-	92-52-4	4.7E+01	n	2.0E+02	n	4.2E-01	n	1.8E+00	n	8.3E-01	n		8.7E-03	n	
7.0E-02	H	1.0E-05	H	4.0E-02	I			V		1		1.0E+03	Bis(2-chloro-1-methylethyl) ether	108-60-1	4.9E+00	c	2.2E+01	c	2.8E-01	c	1.2E+00	c	3.6E-01	c		1.3E-04	c	
				3.0E-03	P					1	0.1		Bis(2-chloroethoxy)methane	111-91-1	1.8E+02	n	2.5E+03	n					5.9E+01	n		1.3E-02	n	
1.1E+00	I	3.3E-04	I					V		1		5.1E+03	Bis(2-chloroethyl)ether	111-44-4	2.3E-01	c	1.0E+00	c	8.5E-03	c	3.7E-02	c	1.4E-02	c		3.6E-06	c	
2.2E+02	I	6.2E-02	I					V		1		4.2E+03	Bis(chloromethyl)ether	542-88-1	8.3E-05	c	3.6E-04	c	4.5E-05	c	2.0E-04	c	7.2E-05	c		1.7E-08	c	
				5.0E-02	I					1	0.1		Bisphenol A	80-05-7	3.1E+03	n	4.1E+04	n					7.7E+02	n		5.8E+01	n	
				2.0E-01	I	2.0E-02	H			1			Boron And Borates Only	7440-42-8	1.6E+04	n	2.3E+05	nm	2.1E+01	n	8.8E+01	n	4.0E+03	n		1.3E+01	n	
				2.0E+00	P	2.0E-02	P			1			Boron Trichloride	10294-34-5	1.6E+05	nm	2.3E+06	nm	2.1E+01	n	8.8E+01	n	4.0E+04	n			n	
				4.0E-02	C	1.3E-02	C			1			Boron Trifluoride	7637-07-2	3.1E+03	n	4.7E+04	n	1.4E+01	n	5.7E+01	n	8.0E+02	n			n	
7.0E-01	I			4.0E-03	I					1			Bromate	15541-45-4	9.9E-01	c	4.7E+00	c					1.1E-01	c	1.0E+01	8.5E-04	c	7.7E-02
2.0E+00	X	6.0E-04	X					V		1		2.4E+03	Bromo-2-chloroethane, 1-	107-04-0	2.6E-02	c	1.1E-01	c	4.7E-03	c	2.0E-02	c	7.4E-03	c		2.1E-06	c	
				8.0E-03	I	6.0E-02	I	V		1		6.8E+02	Bromobenzene	108-86-1	2.9E+02	n	1.8E+03	ns	6.3E+01	n	2.6E+02	n	6.2E+01	n		4.2E-02	n	
						4.0E-02	X	V		1		4.0E+03	Bromochloromethane	74-97-5	1.5E+02	n	6.3E+02	n	4.2E+01	n	1.8E+02	n	8.3E+01	n		2.1E-02	n	
6.2E-02	I	3.7E-05	C	2.0E-02	I			V		1		9.3E+02	Bromodichloromethane	75-27-4	2.9E-01	c	1.3E+00	c	7.6E-02	c	3.3E-01	c	1.3E-01	c	8.0E+01(F)	3.6E-05	c	2.2E-02
7.9E-03	I	1.1E-06	I	2.0E-02	I					1	0.1		Bromoform	75-25-2	6.7E+01	c*	2.9E+02	c*	2.6E+00	c	1.1E+01	c	9.2E+00	c*	8.0E+01(F)	2.4E-03	c*	2.1E-02
				1.4E-03	I	5.0E-03	I	V		1		3.6E+03	Bromomethane	74-83-9	6.8E+00	n	3.0E+01	n	5.2E+00	n	2.2E+01	n	7.5E+00	n		1.9E-03	n	
				5.0E-03	H					1	0.1		Bromophos	2104-96-3	3.1E+02	n	4.1E+03	n					3.5E+01	n		1.5E-01	n	
				2.0E-02	I					1	0.1		Bromoxynil	1689-84-5	1.2E+03	n	1.6E+04	n					3.3E+02	n		2.8E-01	n	
				2.0E-02	I					1	0.1		Bromoxynil Octanoate	1689-99-2	1.2E+03	n	1.6E+04	n					1.4E+02	n		1.2E+00	n	
3.4E+00	C	3.0E-05	I			2.0E-03	I	V		1		6.7E+02	Butadiene, 1,3-	106-99-0	5.8E-02	c*	2.6E-01	c*	9.4E-02	c*	4.1E-01	c*	1.8E-02	c		9.9E-06	c	
				1.0E-01	I					1	0.1		Butanol, N-	71-36-3	6.2E+03	n	8.2E+04	n					2.0E+03	n		4.1E-01	n	
1.9E-03	P			2.0E-01	I					1	0.1		Butyl Benzyl Phthlate	85-68-7	2.8E+02	c*	1.2E+03	c					1.6E+01	c		2.3E-01	c	
				2.0E+00	P	3.0E+01	P			1	0.1		Butyl alcohol, sec-	78-92-2	1.2E+05	nm	1.6E+06	nm	3.1E+04	n	1.3E+05	n	4.0E+04	n		8.1E+00	n	
				5.0E-02	I					1	0.1		Butylate	2008-41-5	3.1E+03	n	4.1E+04	n					4.6E+02	n		4.5E-01	n	
2.0E-04	C	5.7E-08	C							1	0.1		Butylated hydroxyanisole	25013-16-5	2.7E+03	c	1.2E+04	c	4.9E+01	c	2.2E+02	c	2.4E+02	c		4.5E-01	c	
3.6E-03	P			3.0E-01	P					1	0.1		Butylated hydroxytoluene	128-37-0	1.5E+02	c	6.4E+02	c					3.3E+00	c		9.7E-02	c	
				5.0E-02	P			V		1		1.1E+02	Butylbenzene, n-	104-51-8	3.9E+03	ns	5.8E+04	ns					1.0E+03	n		3.2E+00	n	
				1.0E-01	X			V		1		1.5E+02	Butylbenzene, sec-	135-98-8	7.8E+03	ns	1.2E+05	nms					2.0E+03	n		5.9E+00	n	
				1.0E-01	X			V		1		1.8E+02	Butylbenzene,tert-	98-06-6	7.8E+03	ns	1.2E+05	nms					6.9E+02	n		1.6E+00	n	
				2.0E-02	A					1	0.1		Cacodylic Acid	75-60-5	1.2E+03	n	1.6E+04	n					4.0E+02	n			n	
		1.8E-03	I	1.0E-03	I	1.0E-05	A			0.025	0.001		Cadmium (Diet)	7440-43-9	7.0E+01	n	9.8E+02	n										
		1.8E-03	I	5.0E-04	I	1.0E-05	A			0.05	0.001		Cadmium (Water)	7440-43-9					1.6E-03	c**	6.8E-03	c**	9.2E+00	n	5.0E+00	6.9E-01	n	3.8E-01
				5.0E-01	I	2.2E-03	C			1	0.1		Caprolactam	105-60-2	3.1E+04	n	4.0E+05	nm	2.3E+00	n	9.6E+00	n	9.9E+03	n		2.5E+00	n	
1.5E-01	C	4.3E-05	C	2.0E-03	I					1	0.1		Captafol	2425-06-1	3.6E+00	c*	1.5E+01	c	6.5E-02	c	2.9E-01	c	4.0E-01	c*		7.1E-04	c*	
2.3E-03	C	6.6E-07	C	1.3E-01	I					1	0.1		Captan	133-06-2	2.3E+02	c*	1.0E+03	c	4.3E+00	c	1.9E+01	c	3.1E+01	c*		2.2E-02	c*	
				1.0E-01	I					1	0.1		Carbaryl	63-25-2	6.2E+03	n	8.2E+04	n					1.8E+03	n		1.7E+00	n	
				5.0E-03	I					1	0.1		Carbofuran	1563-66-2	3.1E+02	n	4.1E+03	n					9.4E+01	n	4.0E+01	3.7E-02	n	1.6E-02
				1.0E-01	I	7.0E-01	I	V		1		7.4E+02	Carbon Disulfide	75-15-0	7.7E+02	ns	3.5E+03	ns	7.3E+02	n	3.1E+03	n	8.1E+02	n		2.4E-01	n	
7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		1		4.6E+02	Carbon Tetrachloride	56 23 5	6.5E-01	c	2.9E+00	c	4.7E-01	c	2.0E+00	c	4.5E-01	c	5.0E+00	1.8E-04	c	1.9E-03
				1.0E-02	I					1	0.1		Carbosulfan	55285-14-8	6.2E+02	n	8.2E+03	n					5.1E+01	n		1.2E+00	n	
				1.0E-01	I					1	0.1		Carboxin	5234-68-4	6.2E+03	n	8.2E+04	n					1.9E+03	n		1.0E+00	n	
						9.0E-04	I			1			Ceric oxide	1306-38-3	1.3E+06	nm	5.4E+06	nm	9.4E-01	n	3.9E+00	n						
				1.0E-01	I					1	0.1		Chloral Hydrate	302-17-0	6.2E+03	n	8.2E+04	n					2.0E+03	n		4.0E-01	n	
				1.5E-02	I					1	0.1		Chloramben	133-90-4	9.2E+02	n	1.2E+04	n					2.9E+02	n		7.0E-02	n	
4.0E-01	H									1	0.1		Chloranil	118-75-2	1.3E+00	c	5.7E+00	c					1.8E-01	c		1.5E-04	c	
3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I			1	0.04		Chlordane	12789-03-6	1.8E+00	c*	8.0E+00	c*	2.8E-02	c*	1.2E-01	c*	2.2E-01	c*	2.0E+00	1.5E-02	c*	1.4E-01
1.0E+01	I	4.6E-03	C	3.0E-04	I					1	0.1		Chlordecone (Kepone)	143-50-0	5.3E-02	c	2.3E-01	c	6.1E-04	c	2.7E-03	c	3.5E-03	c		1.2E-04	c	
				7.0E-04	A					1	0.1		Chlorfenvinphos	470-90-6	4.3E+01	n	5.8E+02	n					1.1E+01	n		3.1E-02	n	
				2.0E-02	I					1	0.1		Chlorimuron, Ethyl-	90982-32-4	1.2E+03	n	1.6E+04	n					3.9E+02	n		1.3E-01	n	
				1.0E-01	I	1.5E-04	A			1			Chlorine	7782-50-5	7.5E+03	n	1.0E+05	nm	1.5E-01	n	6.4E-01	n	2.0E+03	n		9.0E-01	n	
				3.0E-02	I	2.0E-04	I			1			Chlorine Dioxide	10049-04-4	2.3E+03	n	3.4E+04	n	2.1E-01	n	8.8E-01	n	6.0E+02	n			n	
				3.0E-02	I					1			Chlorite (Sodium Salt)	7758-19-2	2.3E+03	n	3.5E+04	n					6.0E+02	n	1.0E+03		n	
						5.0E+01	I	V		1		1.2E+03	Chloro-1,1-difluoroethane, 1-	75-68-3	5.4E+04	ns	2.3E+05	nms	5.2E+04	n	2.2E+05	n	1.0E+05	n		5.2E+01	n	
		3.0E-04	I	2.0E-02	H	2.0E-02	I	V		1		7.5E+02	Chloro-1,3-butadiene, 2-	126-99-8	1.0E-02	c	4.4E-02	c	9.4E-03	c	4.1E-02	c	1.9E-02	c		9.8E-06	c	
4.6E-01	H									1	0.1		Chloro-2-methylaniline HCl, 4-	3165-93-3	1.2E+00	c	5.0E+00	c					1.7E-01	c		1.5E-04	c	
1.0E-01	P	7.7E-05	C	3.0E-03	X					1	0.1		Chloro-2-methylaniline, 4-	95-69-2	5.3E+00	c*	2.3E+01	c	3.6E-02	c	1.6E-01	c	6.9E-01	c*		3.9E-04	c*	
2.7E-01	X							V		1	0.1	2.8E+04	Chloroacetaldehyde, 2-	107-20-0	2.0E+00	c	8.6E+00	c					2.9E-01	c		5.8E-05	c	
				2.0E-03	H					1	0.1		Chloroacetic Acid	79-11-8	1.2E+02	n	1.6E+03	n					4.0E+01	n	6.0E+01	8.1E-03	n	1.2E-02
						3.0E-05	I			1	0.1		Chloroacetophenone, 2-	532-27-4	4.3E+04	n	1.8E+05	nm	3.1E-02	n	1.3E-01	n						

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information												Contaminant		Screening Levels														Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vo c	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
2.0E-01	P			4.0E-03	I					1	0.1		Chloroaniline, p-	106-47-8	2.7E+00	c*	1.2E+01	c					3.6E-01	c		1.6E-04	c	
				2.0E-02	I	5.0E-02	P	V		1		7.6E+02	Chlorobenzene	108-90-7	2.8E+02	n	1.3E+03	ns	5.2E+01	n	2.2E+02	n	7.8E+01	n	1.0E+02	5.3E-02	n	6.8E-02
1.1E-01	C	3.1E-05	C	2.0E-02	I					1	0.1		Chlorobenzilate	510-15-6	4.8E+00	c	2.1E+01	c	9.1E-02	c	4.0E-01	c	3.1E-01	c		1.0E-03	c	
				3.0E-02	X					1	0.1		Chlorobenzoic Acid, p-	74-11-3	1.8E+03	n	2.5E+04	n					5.1E+02	n		1.3E-01	n	
				3.0E-03	P	3.0E-01	P	V		1		1.2E+02	Chlorobenzotrifluoride, 4-	98-56-6	2.1E+02	ns	2.5E+03	ns	3.1E+02	n	1.3E+03	n	3.5E+01	n		1.2E-01	n	
				4.0E-02	P			V		1		7.3E+02	Chlorobutane, 1-	109-69-3	3.1E+03	ns	4.7E+04	ns					6.4E+02	n		2.6E-01	n	
						5.0E+01	I	V		1		1.7E+03	Chlorodifluoromethane	75-45-6	4.9E+04	ns	2.1E+05	nms	5.2E+04	n	2.2E+05	n	1.0E+05	n		4.3E+01	n	
				2.0E-02	P					1	0.1		Chloroethanol, 2-	107-07-3	1.2E+03	n	1.6E+04	n					4.0E+02	n		8.1E-02	n	
3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V		1		2.5E+03	Chloroform	67-66-3	3.2E-01	c	1.4E+00	c	1.2E-01	c	5.3E-01	c	2.2E-01	c	8.0E+01(F)	6.1E-05	c	2.2E-02
						9.0E-02	I	V		1		1.3E+03	Chloromethane	74-87-3	1.1E+02	n	4.6E+02	n	9.4E+01	n	3.9E+02	n	1.9E+02	n		4.9E-02	n	
2.4E+00	C	6.9E-04	C					V		1		2.6E+04	Chloromethyl Methyl Ether	107-30-2	2.0E-02	c	8.9E-02	c	4.1E-03	c	1.8E-02	c	6.5E-03	c		1.4E-06	c	
3.0E-01	P			3.0E-03	P	1.0E-05	X			1	0.1		Chloronitrobenzene, o-	88-73-3	1.8E+00	c	7.7E+00	c	1.0E-02	n	4.4E-02	n	2.3E-01	c		2.2E-04	c	
6.3E-03	P			1.0E-03	P	6.0E-04	P			1	0.1		Chloronitrobenzene, p-	100-00-5	6.2E+01	n	3.7E+02	c**	6.3E-01	n	2.6E+00	n	1.1E+01	c**		1.0E-02	c**	
				5.0E-03	I			V		1		2.2E+04	Chlorophenol, 2-	95-57-8	3.9E+02	n	5.8E+03	n					9.1E+01	n		7.4E-02	n	
						4.0E-04	C	V		1		6.2E+02	Chloropicrin	76-06-2	2.0E+00	n	8.2E+00	n	4.2E-01	n	1.8E+00	n	8.3E-01	n		2.5E-04	n	
3.1E-03	C	8.9E-07	C	1.5E-02	I					1	0.1		Chlorothalonil	1897-45-6	1.7E+02	c**	7.4E+02	c*	3.2E+00	c	1.4E+01	c	2.2E+01	c*		4.9E-02	c*	
				2.0E-02	I			V		1		9.1E+02	Chlorotoluene, o-	95-49-8	1.6E+03	ns	2.3E+04	ns					2.4E+02	n		2.3E-01	n	
				2.0E-02	X			V		1		2.5E+02	Chlorotoluene, p-	106-43-4	1.6E+03	ns	2.3E+04	ns					2.5E+02	n		2.4E-01	n	
2.4E+02	C	6.9E-02	C							1	0.1		Chlorozotocin	54749-90-5	2.2E-03	c	9.6E-03	c	4.1E-05	c	1.8E-04	c	3.2E-04	c		7.1E-08	c	
				2.0E-01	I					1	0.1		Chlorpropham	101-21-3	1.2E+04	n	1.6E+05	nm					2.8E+03	n		2.6E+00	n	
				1.0E-03	A					1	0.1		Chlorpyrifos	2921-88-2	6.2E+01	n	8.2E+02	n					8.4E+00	n		1.2E-01	n	
				1.0E-02	H					1	0.1		Chlorpyrifos Methyl	5598-13-0	6.2E+02	n	8.2E+03	n					1.2E+02	n		5.4E-01	n	
				5.0E-02	I					1	0.1		Chlorsulfuron	64902-72-3	3.1E+03	n	4.1E+04	n					9.9E+02	n		8.3E-01	n	
				8.0E-04	H					1	0.1		Chlorthiophos	60238-56-4	4.9E+01	n	6.6E+02	n					2.8E+00	n		7.3E-02	n	
				1.5E+00	I					0.013			Chromium(III), Insoluble Salts	16065-83-1	1.2E+05	nm	1.8E+06	nm					2.2E+04	n		4.0E+07	n	
5.0E-01	J	8.4E-02	S	3.0E-03	I	1.0E-04	I		M	0.025			Chromium(VI)	18540-29-9	3.0E-01	c	6.3E+00	c	1.2E-05	c	1.5E-04	c	3.5E-02	c		6.7E-04	c	
										0.013			Chromium, Total	7440-47-3											1.0E+02			1.8E+05
		9.0E-03	P	3.0E-04	P	6.0E-06	P			1			Cobalt	7440-48-4	2.3E+01	n	3.5E+02	n	3.1E-04	c*	1.4E-03	c*	6.0E+00	n		2.7E-01	n	
		6.2E-04	I						M	1	0.1		Coke Oven Emissions	8007-45-2					1.6E-03	c	2.0E-02	c						
				4.0E-02	H					1			Copper	7440-50-8	3.1E+03	n	4.7E+04	n					8.0E+02	n	1.3E+03	2.8E+01	n	4.6E+01
				5.0E-02	I	6.0E-01	C			1	0.1		Cresol, m-	108-39-4	3.1E+03	n	4.1E+04	n	6.3E+02	n	2.6E+03	n	9.3E+02	n		7.4E-01	n	
				5.0E-02	I	6.0E-01	C			1	0.1		Cresol, o-	95-48-7	3.1E+03	n	4.1E+04	n	6.3E+02	n	2.6E+03	n	9.3E+02	n		7.5E-01	n	
				1.0E-01	A	6.0E-01	C			1	0.1		Cresol, p-	106-44-5	6.2E+03	n	8.2E+04	n	6.3E+02	n	2.6E+03	n	1.9E+03	n		1.5E+00	n	
				1.0E-01	A					1	0.1		Cresol, p-chloro-m-	59-50-7	6.2E+03	n	8.2E+04	n					1.4E+03	n		1.7E+00	n	
				1.0E-01	A	6.0E-01	C			1	0.1		Cresols	1319-77-3	6.2E+03	n	8.2E+04	n	6.3E+02	n	2.6E+03	n	1.9E+03	n		1.5E+00	n	
1.9E+00	H			1.0E-03	P			V		1		1.7E+04	Crotonaldehyde, trans-	123-73-9	3.7E-01	c	1.7E+00	c					4.0E-02	c		8.2E-06	c	
				1.0E-01	I	4.0E-01	I	V		1		2.7E+02	Cumene	98-82-8	1.9E+03	ns	9.9E+03	ns	4.2E+02	n	1.8E+03	n	4.5E+02	n		7.4E-01	n	
2.2E-01	C	6.3E-05	C							1	0.1		Cupferron	135-20-6	2.4E+00	c	1.0E+01	c	4.5E-02	c	1.9E-01	c	3.5E-01	c		6.1E-04	c	
8.4E-01	H			2.0E-03	H					1	0.1		Cyanazine	21725-46-2	6.3E-01	c	2.7E+00	c					8.7E-02	c		4.1E-05	c	
													Cyanides																
				1.0E-03	I					1			~Calcium Cyanide	592-01-8	7.8E+01	n	1.2E+03	n					2.0E+01	n			n	
				5.0E-03	I					1			~Copper Cyanide	544-92-3	3.9E+02	n	5.8E+03	n					1.0E+02	n			n	
				6.0E-04	I	8.0E-04	S	V		1		1.0E+07	~Cyanide (CN-)	57-12-5	2.1E+01	n	1.3E+02	n	8.3E-01	n	3.5E+00	n	1.5E+00	n	2.0E+02	1.5E-02	n	2.0E+00
				1.0E-03	I			V		1			~Cyanogen	460-19-5	7.8E+01	n	1.2E+03	n					2.0E+01	n			n	
				9.0E-02	I			V		1			~Cyanogen Bromide	506-68-3	7.0E+03	n	1.1E+05	nm					1.8E+03	n			n	
				5.0E-02	I			V		1			~Cyanogen Chloride	506-77-4	3.9E+03	n	5.8E+04	n					1.0E+03	n			n	
				6.0E-04	I	8.0E-04	I	V		1		1.0E+07	~Hydrogen Cyanide	74-90-8	2.3E+01	n	1.5E+02	n	8.3E-01	n	3.5E+00	n	1.5E+00	n		1.5E-02	n	
				2.0E-03	I					1			~Potassium Cyanide	151-50-8	1.6E+02	n	2.3E+03	n					4.0E+01	n			n	
				5.0E-03	I					0.04			~Potassium Silver Cyanide	506-61-6	3.9E+02	n	5.8E+03	n					8.2E+01	n			n	
				1.0E-01	I					0.04			~Silver Cyanide	506-64-9	7.8E+03	n	1.2E+05	nm					1.8E+03	n			n	
				1.0E-03	I					1			~Sodium Cyanide	143-33-9	7.8E+01	n	1.2E+03	n					2.0E+01	n	2.0E+02		n	
				2.0E-04	P					1			~Thiocyanates	NA	1.6E+01	n	2.3E+02	n					4.0E+00	n			n	
				2.0E-04	X					1			~Thiocyanic Acid	463-56-9									4.0E+00	n			n	
				5.0E-02	I					1			~Zinc Cyanide	557-21-1	3.9E+03	n	5.8E+04	n					1.0E+03	n			n	
						6.0E+00	I	V		1		1.2E+02	Cyclohexane	110-82-7	6.5E+03	ns	2.7E+04	ns	6.3E+03	n	2.6E+04	n	1.3E+04	n		1.3E+01	n	
2.3E-02	H									1	0.1		Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	2.3E+01	c	1.0E+02	c					2.4E+00	c		1.4E-02	c	
				5.0E+00	I	7.0E-01	P			1	0.1		Cyclohexanone	108-94-1	3.1E+05	nm	4.1E+06	nm	7.3E+02	n	3.1E+03	n	9.9E+04	n		2.3E+01	n	
				5.0E-03	P	1.0E+00	X	V		1		2.8E+02	Cyclohexene	110-83-8	3.1E+02	ns	2.9E+03	ns	1.0E+03	n	4.4E+03	n	7.0E+01	n		4.6E-02	n	
				2.0E-01	I					1	0.1		Cyclohexylamine	108-91-8	1.2E+04	n	1.6E+05	nm					3.8E+03	n		1.0E+00	n	
				5.0E-03	I					1	0.1		Cyhalothrin/karate	68085-85-8	3.1E+02	n	4.1E+03	n					1.0E+02	n		6.8E+01	n	
				1.0E-02	I					1	0.1		Cypermethrin	52315-07-8	6.2E+02	n	8.2E+03	n					2.0E+02	n		3.2E+01	n	
				7.5E-03	I					1	0.1		Cyromazine	66215-27-8	4.6E+02	n	6.2E+03	n					1.5E+02	n		3.8E-02	n	
2.4E-01	I	6.9E-05	C							1	0.1		DDD	72-54-8	2.2E+00	c	9.6E+00	c	4.1E-02	c	1.8E-01	c	3.1E-02	c		7.2E-03	c	
3.4E-01	I	9.7E-05	C							1	0.1		DDE, p,p'-	72-55-9	1.6E+00	c	6.8E+00	c	2.9E-02	c	1.3E-01	c	2.3E-01	c		5.4E-02	c	
3.4E-01	I	9.7E-05	I	5.0E-04	I					1	0.03		DDT	50-29-3	1.9E+00	c*	8.6E+00	c*	2.9E-02	c	1.3E-01	c	2.3E-01	c*		7.7E-02	c*	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile;
R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information													Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				1.0E-02	I					1	0.1		Dacthal	1861-32-1	6.2E+02	n	8.2E+03	n					1.2E+02	n		1.5E-01	n	
				3.0E-02	I					1	0.1		Dalapon	75-99-0	1.8E+03	n	2.5E+04	n					6.0E+02	n	2.0E+02	1.2E-01	n	4.1E-02
7.0E-04	I			7.0E-03	I					1	0.1		Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	4.3E+02	n	3.3E+03	c**					1.1E+02	c**		6.2E+01	c**	
				4.0E-05	I					1	0.1		Demeton	8065-48-3	2.5E+00	n	3.3E+01	n					6.7E-01	n			n	
1.2E-03	I			6.0E-01	I					1	0.1		Di(2-ethylhexyl)adipate	103-23-1	4.4E+02	c*	1.9E+03	c					6.5E+01	c	4.0E+02	4.7E+00	c	2.9E+01
6.1E-02	H									1	0.1		Diallate	2303-16-4	8.7E+00	c	3.8E+01	c					5.2E-01	c		7.8E-04	c	
				7.0E-04	A					1	0.1		Diazinon	333-41-5	4.3E+01	n	5.8E+02	n					1.0E+01	n		6.5E-02	n	
				1.0E-02	X			V		1			Dibenzothiophene	132-65-0	7.8E+02	n	1.2E+04	n					6.5E+01	n		1.2E+00	n	
8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	1		9.8E+02	Dibromo-3-chloropropane, 1,2-	96-12-8	5.3E-03	c	6.4E-02	c	1.7E-04	c	2.0E-03	c	3.3E-04	c	2.0E-01	1.4E-07	c	8.6E-05
				1.0E-02	I					1	0.1		Dibromobenzene, 1,4-	106-37-6	6.2E+02	n	8.2E+03	n					1.3E+02	n		1.2E-01	n	
8.4E-02	I	2.7E-05	C	2.0E-02	I			V		1	0.1	8.0E+02	Dibromochloromethane	124-48-1	7.3E-01	c	3.2E+00	c	1.0E-01	c	4.5E-01	c	1.7E-01	c	8.0E+01(F)	4.5E-05	c	2.1E-02
2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1		1.3E+03	Dibromoethane, 1,2-	106-93-4	3.6E-02	c	1.6E-01	c	4.7E-03	c	2.0E-02	c	7.5E-03	c	5.0E-02	2.1E-06	c	1.4E-05
				1.0E-02	H	4.0E-03	X	V		1		2.8E+03	Dibromomethane (Methylene Bromide)	74-95-3	2.3E+01	n	9.8E+01	n	4.2E+00	n	1.8E+01	n	8.0E+00	n		2.0E-03	n	
				3.0E-04	P					1	0.1		Dibutyltin Compounds	NA	1.8E+01	n	2.5E+02	n					6.0E+00	n			n	
				3.0E-02	I					1	0.1		Dicamba	1918-00-9	1.8E+03	n	2.5E+04	n					5.7E+02	n		1.5E-01	n	
		4.2E-03	P					V		1		5.2E+02	Dichloro-2-butene, 1,4-	764-41-0	7.4E-03	c	3.2E-02	c	6.7E-04	c	2.9E-03	c	1.3E-03	c		6.2E-07	c	
		4.2E-03	P					V		1	0.1	5.2E+02	Dichloro-2-butene, cis-1,4-	1476-11-5	7.4E-03	c	3.2E-02	c	6.7E-04	c	2.9E-03	c	1.3E-03	c		6.2E-07	c	
		4.2E-03	P					V		1	0.1	7.6E+02	Dichloro-2-butene, trans-1,4-	110-57-6	7.4E-03	c	3.2E-02	c	6.7E-04	c	2.9E-03	c	1.3E-03	c		6.2E-07	c	
5.0E-02	I			4.0E-03	I					1	0.1		Dichloroacetic Acid	79-43-6	1.1E+01	c*	4.6E+01	c*					1.5E+00	c*	6.0E+01	3.1E-04	c*	1.2E-02
				9.0E-02	I	2.0E-01	H	V		1		3.8E+02	Dichlorobenzene, 1,2-	95-50-1	1.8E+03	ns	9.3E+03	ns	2.1E+02	n	8.8E+02	n	3.0E+02	n	6.0E+02	3.0E-01	n	5.8E-01
5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V		1			Dichlorobenzene, 1,4-	106-46-7	2.6E+00	c	1.1E+01	c	2.6E-01	c	1.1E+00	c	4.8E-01	c	7.5E+01	4.6E-04	c	7.2E-02
4.5E-01	I	3.4E-04	C							1	0.1		Dichlorobenzidine, 3,3'-	91-94-1	1.2E+00	c	5.1E+00	c	8.3E-03	c	3.6E-02	c	1.2E-01	c		8.1E-04	c	
				9.0E-03	X					1	0.1		Dichlorobenzophenone, 4,4'-	90-98-2	5.5E+02	n	7.4E+03	n					7.8E+01	n		4.7E-01	n	
				2.0E-01	I	1.0E-01	X	V		1		8.5E+02	Dichlorodifluoromethane	75-71-8	8.7E+01	n	3.7E+02	n	1.0E+02	n	4.4E+02	n	2.0E+02	n		3.0E-01	n	
5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1		1.7E+03	Dichloroethane, 1,1-	75-34-3	3.6E+00	c	1.6E+01	c	1.8E+00	c	7.7E+00	c	2.7E+00	c		7.8E-04	c	
9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		1		3.0E+03	Dichloroethane, 1,2-	107-06-2	4.6E-01	c*	2.0E+00	c*	1.1E-01	c*	4.7E-01	c*	1.7E-01	c*	5.0E+00	4.8E-05	c*	1.4E-03
				5.0E-02	I	2.0E-01	I	V		1		1.2E+03	Dichloroethylene, 1,1-	75-35-4	2.3E+02	n	1.0E+03	n	2.1E+02	n	8.8E+02	n	2.8E+02	n	7.0E+00	1.0E-01	n	2.5E-03
				2.0E-03	I			V		1		2.4E+03	Dichloroethylene, 1,2-cis-	156-59-2	1.6E+02	n	2.3E+03	n					3.6E+01	n	7.0E+01	1.1E-02	n	2.1E-02
				2.0E-02	I			V		1		1.7E+03	Dichloroethylene, 1,2-trans-	156-60-5	1.6E+03	n	2.3E+04	ns					3.6E+02	n	1.0E+02	1.1E-01	n	2.9E-02
				3.0E-03	I					1	0.1		Dichlorophenol, 2,4-	120-83-2	1.8E+02	n	2.5E+03	n					4.6E+01	n		5.4E-02	n	
				1.0E-02	I					1	0.05		Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	6.9E+02	n	9.7E+03	n					1.7E+02	n	7.0E+01	4.5E-02	n	1.8E-02
				8.0E-03	I					1	0.1		Dichlorophenoxybutyric Acid, 4-(2,4-	94-82-6	4.9E+02	n	6.6E+03	n					1.2E+02	n		4.8E-02	n	
3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V		1		1.4E+03	Dichloropropane, 1,2-	78-87-5	1.0E+00	c*	4.4E+00	c*	2.8E-01	c*	1.2E+00	c*	4.4E-01	c*	5.0E+00	1.5E-04	c*	1.7E-03
				2.0E-02	P			V		1		1.5E+03	Dichloropropane, 1,3-	142-28-9	1.6E+03	ns	2.3E+04	ns					3.7E+02	n		1.3E-01	n	
				3.0E-03	I					1	0.1		Dichloropropanol, 2,3-	616-23-9	1.8E+02	n	2.5E+03	n					5.9E+01	n		1.3E-02	n	
1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		1		1.6E+03	Dichloropropene, 1,3-	542-75-6	1.8E+00	c*	8.2E+00	c*	7.0E-01	c*	3.1E+00	c*	4.7E-01	c*		1.7E-04	c*	
2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I			1	0.1		Dichlorvos	62-73-7	1.8E+00	c*	8.0E+00	c*	3.4E-02	c*	1.5E-01	c*	2.6E-01	c*		8.1E-05	c*	
				8.0E-02	P	3.0E-04	X	V		1			Dicyclopentadiene	77-73-6	1.3E+00	n	5.4E+00	n	3.1E-01	n	1.3E+00	n	6.3E-01	n		2.2E-03	n	
1.6E+01	I	4.6E-03	I	5.0E-05	I					1	0.1		Dieldrin	60-57-1	3.3E-02	c*	1.4E-01	c	6.1E-04	c	2.7E-03	c	1.7E-03	c		6.9E-05	c	
		3.0E-04	C			5.0E-03	I			1	0.1		Diesel Engine Exhaust	NA					9.4E-03	c	4.1E-02	c						
				2.0E-03	P	2.0E-04	P			1	0.1		Diethanolamine	111-42-2	1.2E+02	n	1.6E+03	n	2.1E-01	n	8.8E-01	n	4.0E+01	n		8.1E-03	n	
				3.0E-02	P	1.0E-04	P			1	0.1		Diethylene Glycol Monobutyl Ether	112-34-5	1.8E+03	n	2.4E+04	n	1.0E-01	n	4.4E-01	n	6.0E+02	n		1.3E-01	n	
				6.0E-02	P	3.0E-04	P			1	0.1		Diethylene Glycol Monoethyl Ether	111-90-0	3.7E+03	n	4.8E+04	n	3.1E-01	n	1.3E+00	n	1.2E+03	n		2.4E-01	n	
				1.0E-03	P					1	0.1		Diethylformamide	617-84-5	6.2E+01	n	8.2E+02	n					2.0E+01	n		4.1E-03	n	
3.5E+02	C	1.0E-01	C							1	0.1		Diethylstilbestrol	56-53-1	1.5E-03	c	6.6E-03	c	2.8E-05	c	1.2E-04	c	4.9E-05	c		2.7E-05	c	
				8.0E-02	I					1	0.1		Difenzoquat	43222-48-6	4.9E+03	n	6.6E+04	n					1.6E+03	n			n	
				2.0E-02	I					1	0.1		Diflubenzuron	35367-38-5	1.2E+03	n	1.6E+04	n					2.9E+02	n		3.3E-01	n	
						4.0E+01	I	V		1		1.4E+03	Difluoroethane, 1,1-	75-37-6	4.8E+04	ns	2.0E+05	nms	4.2E+04	n	1.8E+05	n	8.3E+04	n		2.8E+01	n	
4.4E-02	C	1.3E-05	C					V		1	0.1		Dihydrosafrole	94-58-6	2.6E-01	c	1.1E+00	c	2.2E-01	c	9.4E-01	c	3.0E-01	c		3.7E-04	c	
						7.0E-01	P	V		1		2.3E+03	Diisopropyl Ether	108-20-3	2.2E+03	n	9.4E+03	ns	7.3E+02	n	3.1E+03	n	1.5E+03	n		3.7E-01	n	
				8.0E-02	I			V		1		5.3E+02	Diisopropyl Methylphosphonate	1445-75-6	6.3E+03	ns	9.3E+04	ns					1.6E+03	n		4.5E-01	n	
				2.0E-02	I					1	0.1		Dimethipin	55290-64-7	1.2E+03	n	1.6E+04	n					4.0E+02	n		8.8E-02	n	
				2.0E-04	I					1	0.1		Dimethoate	60-51-5	1.2E+01	n	1.6E+02	n					4.0E+00	n		9.0E-04	n	
1.6E+00	P									1	0.1		Dimethoxybenzidine, 3,3'-	119-90-4	3.3E-01	c	1.4E+00	c					4.7E-02	c		5.7E-05	c	
1.7E-03	P			6.0E-02	P					1	0.1		Dimethyl methylphosphonate	756-79-6	3.1E+02	c*	1.4E+03	c*					4.6E+01	c*		9.6E-03	c*	
4.6E+00	C	1.3E-03	C							1	0.1		Dimethylamino azobenzene [p-]	60-11-7	1.2E-01	c	5.0E-01	c	2.2E-03	c	9.4E-03	c	4.9E-03	c		2.1E-05	c	
5.8E-01	H									1	0.1		Dimethylaniline HCl, 2,4-	21436-96-4	9.2E-01	c	4.0E+00	c					1.3E-01	c		1.2E-04	c	
2.0E-01	P			2.0E-03	X					1	0.1		Dimethylaniline, 2,4-	95-68-1	2.7E+00	c*	1.2E+01	c					3.7E-01	c		2.1E-04	c	
				2.0E-03	I			V		1		8.3E+02	Dimethylaniline, N,N-	121-69-7	1.6E+02	n	2.3E+03	ns					3.5E+01	n		1.3E-02	n	
1.1E+01	P									1	0.1		Dimethylbenzidine, 3,3'-	119-93-7	4.8E-02	c	2.1E-01	c					6.5E-03	c		4.3E-05	c	
				1.0E-01	P	3.0E-02	I			1	0.1		Dimethylformamide	68-12-2	6.2E+03	n	8.2E+04	n	3.1E+01	n	1.3E+02	n	2.0E+03	n		4.0E-01	n	
				1.0E-04	X	2.0E-06	X			1	0.1		Dimethylhydrazine, 1,1-	57-14-7	6.2E+00	n	8.2E+01	n	2.1E-03	n	8.8E-03	n	2.0E+00	n		4.5E-04	n	
5.5E+02	C	1.6E-01	C							1	0.1		Dimethylhydrazine, 1,2-	540-73-8	9.7E-04	c	4.2E-03	c	1.8E-05	c	7.7E-05	c	1.4E-04	c		3.2E-08	c	
				2.0E-02	I					1	0.1		Dimethylphenol, 2,4-	105-67-9	1.2E+03	n	1.6E+04	n					3.6E+02	n		4.2E-01	n	
				6.0E-04	I					1	0.1		Dimethylphenol, 2,6-	576-26-1	3.7E+01	n	4.9E+02	n					1.1E+01	n		1.3E-02	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information												Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volc	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				1.0E-03	I					1	0.1		Dimethylphenol, 3,4-	95-65-8	6.2E+01	n	8.2E+02	n					1.8E+01	n		2.1E-02	n	
4.5E-02	C	1.3E-05	C					V		1	0.1	1.1E+03	Dimethylvinylchloride	513-37-1	2.1E-01	c	9.3E-01	c	2.2E-01	c	9.4E-01	c	3.3E-01	c		2.0E-04	c	
				8.0E-05	X					1	0.1		Dinitro-o-cresol, 4,6-	534-52-1	4.9E+00	n	6.6E+01	n					1.5E+00	n		2.6E-03	n	
				2.0E-03	I					1	0.1		Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	1.2E+02	n	1.6E+03	n					2.3E+01	n		7.7E-01	n	
				1.0E-04	P					1	0.1		Dinitrobenzene, 1,2-	528-29-0	6.2E+00	n	8.2E+01	n					1.9E+00	n		1.8E-03	n	
				1.0E-04	I					1	0.1		Dinitrobenzene, 1,3-	99-65-0	6.2E+00	n	8.2E+01	n					2.0E+00	n		1.8E-03	n	
				1.0E-04	P					1	0.1		Dinitrobenzene, 1,4-	100-25-4	6.2E+00	n	8.2E+01	n					2.0E+00	n		1.8E-03	n	
				2.0E-03	I					1	0.1		Dinitrophenol, 2,4-	51-28-5	1.2E+02	n	1.6E+03	n					3.9E+01	n		4.4E-02	n	
6.8E-01	I									1	0.1		Dinitrotoluene Mixture, 2,4/2,6-	NA	7.8E-01	c	3.4E+00	c					1.1E-01	c		1.5E-04	c	
3.1E-01	C	8.9E-05	C	2.0E-03	I					1	0.102		Dinitrotoluene, 2,4-	121-14-2	1.7E+00	c*	7.4E+00	c	3.2E-02	c	1.4E-01	c	2.4E-01	c		3.2E-04	c	
1.5E+00	P			3.0E-04	X					1	0.099		Dinitrotoluene, 2,6-	606-20-2	3.6E-01	c*	1.5E+00	c					4.8E-02	c		6.7E-05	c	
				2.0E-03	S					1	0.006		Dinitrotoluene, 2-Amino-4,6-	35572-78-2	1.5E+02	n	2.3E+03	n					3.9E+01	n		3.0E-02	n	
				2.0E-03	S					1	0.009		Dinitrotoluene, 4-Amino-2,6-	19406-51-0	1.5E+02	n	2.3E+03	n					3.9E+01	n		3.0E-02	n	
4.5E-01	X			9.0E-04	X					1	0.1		Dinitrotoluene, Technical grade	25321-14-6	1.2E+00	c*	5.1E+00	c					1.6E-01	c		2.2E-04	c	
				1.0E-03	I					1	0.1		Dinoseb	88-85-7	6.2E+01	n	8.2E+02	n					1.5E+01	n	7.0E+00	1.3E-01	n	6.2E-02
1.0E-01	I	5.0E-06	I	3.0E-02	I	3.0E-02	I			1	0.1		Dioxane, 1,4-	123-91-1	5.3E+00	c	2.3E+01	c	5.6E-01	c*	2.5E+00	c*	7.8E-01	c		1.6E-04	c	
													Dioxins															
6.2E+03	I	1.3E+00	I							1	0.03		~Hexachlorodibenzo-p-dioxin, Mixture	NA	1.0E-04	c	4.7E-04	c	2.2E-06	c	9.4E-06	c	1.3E-05	c		1.7E-05	c	
1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C			1	0.03		~TCDD, 2,3,7,8-	1746-01-6	4.9E-06	c*	2.2E-05	c*	7.4E-08	c	3.2E-07	c	6.0E-07	c*	3.0E-05	3.0E-07	c*	1.5E-05
				3.0E-02	I					1	0.1		Diphenamid	957-51-7	1.8E+03	n	2.5E+04	n					5.3E+02	n		5.2E+00	n	
				8.0E-04	X					1	0.1		Diphenyl Sulfone	127-63-9	4.9E+01	n	6.6E+02	n					1.5E+01	n		3.6E-02	n	
				2.5E-02	I					1	0.1		Diphenylamine	122-39-4	1.5E+03	n	2.1E+04	n					3.1E+02	n		5.8E-01	n	
8.0E-01	I	2.2E-04	I							1	0.1		Diphenylhydrazine, 1,2-	122-66-7	6.7E-01	c	2.9E+00	c	1.3E-02	c	5.6E-02	c	7.7E-02	c		2.5E-04	c	
				2.2E-03	I					1	0.1		Diquat	85-00-7	1.4E+02	n	1.8E+03	n					4.4E+01	n	2.0E+01	8.3E-01	n	3.7E-01
7.4E+00	C	2.1E-03	C							1	0.1		Direct Black 38	1937-37-7	7.2E-02	c	3.1E-01	c	1.3E-03	c	5.8E-03	c	1.1E-02	c		5.1E+00	c	
7.4E+00	C	2.1E-03	C							1	0.1		Direct Blue 6	2602-46-2	7.2E-02	c	3.1E-01	c	1.3E-03	c	5.8E-03	c	1.1E-02	c		1.7E+01	c	
6.7E+00	C	1.9E-03	C							1	0.1		Direct Brown 95	16071-86-6	7.9E-02	c	3.4E-01	c	1.5E-03	c	6.5E-03	c	1.2E-02	c			c	
				4.0E-05	I					1	0.1		Disulfoton	298-04-4	2.5E+00	n	3.3E+01	n					5.0E-01	n		9.4E-04	n	
				1.0E-02	I			V		1	0.1		Dithiane, 1,4-	505-29-3	6.2E+02	n	8.2E+03	n					2.0E+02	n		9.7E-02	n	
				2.0E-03	I					1	0.1		Diuron	330-54-1	1.2E+02	n	1.6E+03	n					3.6E+01	n		1.5E-02	n	
				4.0E-03	I					1	0.1		Dodine	2439-10-3	2.5E+02	n	3.3E+03	n					8.0E+01	n		4.1E-01	n	
				2.5E-02	I			V		1			EPTC	759-94-4	2.0E+03	n	2.9E+04	n					3.8E+02	n		2.0E-01	n	
				6.0E-03	I					1	0.1		Endosulfan	115-29-7	3.7E+02	n	4.9E+03	n					1.0E+02	n		1.4E+00	n	
				2.0E-02	I					1	0.1		Endothall	145-73-3	1.2E+03	n	1.6E+04	n					3.8E+02	n	1.0E+02	9.1E-02	n	2.4E-02
				3.0E-04	I					1	0.1		Endrin	72-20-8	1.8E+01	n	2.5E+02	n					2.3E+00	n	2.0E+00	9.2E-02	n	8.1E-02
9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		1		1.1E+04	Epichlorohydrin	106-89-8	1.9E+01	n	8.2E+01	n	1.0E+00	n	4.4E+00	n	2.0E+00	n		4.5E-04	n	
						2.0E-02	I	V		1		1.5E+04	Epoxybutane, 1,2-	106-88-7	1.6E+02	n	6.7E+02	n	2.1E+01	n	8.8E+01	n	4.2E+01	n		9.2E-03	n	
				5.0E-03	I					1	0.1		Ethephon	16672-87-0	3.1E+02	n	4.1E+03	n					1.0E+02	n		2.1E-02	n	
				5.0E-04	I					1	0.1		Ethion	563-12-2	3.1E+01	n	4.1E+02	n					4.3E+00	n		8.5E-03	n	
				1.0E-01	P	6.0E-02	P			1	0.1		Ethoxyethanol Acetate, 2-	111-15-9	6.2E+03	n	8.2E+04	n	6.3E+01	n	2.6E+02	n	2.0E+03	n		4.2E-01	n	
				9.0E-02	P	2.0E-01	I			1	0.1		Ethoxyethanol, 2-	110-80-5	5.5E+03	n	7.4E+04	n	2.1E+02	n	8.8E+02	n	1.8E+03	n		3.6E-01	n	
				9.0E-01	I	7.0E-02	P	V		1		1.1E+04	Ethyl Acetate	141-78-6	6.2E+02	n	2.6E+03	n	7.3E+01	n	3.1E+02	n	1.4E+02	n		3.1E-02	n	
4.8E-02	H							V		1		2.5E+03	Ethyl Acrylate	140-88-5	1.4E+01	c	6.8E+01	c					1.6E+00	c		3.5E-04	c	
						1.0E+01	I	V		1		2.1E+03	Ethyl Chloride (Chloroethane)	75-00-3	1.4E+04	ns	5.7E+04	ns	1.0E+04	n	4.4E+04	n	2.1E+04	n		5.9E+00	n	
				2.0E-01	I			V		1		1.0E+04	Ethyl Ether	60-29-7	1.6E+04	ns	2.3E+05	nms					3.9E+03	n		8.8E-01	n	
				9.0E-02	H	3.0E-01	P	V		1		1.1E+03	Ethyl Methacrylate	97-63-2	1.4E+03	ns	7.1E+03	ns	3.1E+02	n	1.3E+03	n	4.6E+02	n		1.1E-01	n	
				1.0E-05	I					1	0.1		Ethyl-p-nitrophenyl Phosphonate	2104-64-5	6.2E-01	n	8.2E+00	n					8.9E-02	n		2.8E-03	n	
1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		1		4.8E+02	Ethylbenzene	100-41-4	5.8E+00	c	2.5E+01	c	1.1E+00	c	4.9E+00	c	1.5E+00	c	7.0E+02	1.7E-03	c	7.8E-01
				7.0E-02	P					1	0.1		Ethylene Cyanohydrin	109-78-4	4.3E+03	n	5.8E+04	n					1.4E+03	n		2.8E-01	n	
				9.0E-02	P					1	0.1		Ethylene Diamine	107-15-3	5.5E+03	n	7.4E+04	n					1.8E+03	n		4.1E-01	n	
				2.0E+00	I	4.0E-01	C			1	0.1		Ethylene Glycol	107-21-1	1.2E+05	nm	1.6E+06	nm	4.2E+02	n	1.8E+03	n	4.0E+04	n		8.1E+00	n	
				1.0E-01	I	1.6E+00	I			1	0.1		Ethylene Glycol Monobutyl Ether	111-76-2	6.2E+03	n	8.2E+04	n	1.7E+03	n	7.0E+03	n	2.0E+03	n		4.1E-01	n	
3.1E-01	C	8.8E-05	C			3.0E-02	C	V		1		1.2E+05	Ethylene Oxide	75-21-8	1.8E-01	c	7.9E-01	c	3.2E-02	c	1.4E-01	c	5.1E-02	c		1.1E-05	c	
4.5E-02	C	1.3E-05	C	8.0E-05	I					1	0.1		Ethylene Thiourea	96-45-7	4.9E+00	n	5.1E+01	c**	2.2E-01	c	9.4E-01	c	1.6E+00	n		3.6E-04	n	
6.5E+01	C	1.9E-02	C					V		1	0.1	1.5E+05	Ethyleneimine	151-56-4	2.5E-03	c	1.1E-02	c	1.5E-04	c	6.5E-04	c	2.4E-04	c		5.2E-08	c	
				3.0E+00	I					1	0.1		Ethylphthalyl Ethyl Glycolate	84-72-0	1.8E+05	nm	2.5E+06	nm					5.8E+04	n		1.3E+02	n	
				8.0E-03	I					1	0.1		Express	101200-48-0	4.9E+02	n	6.6E+03	n					1.6E+02	n		6.1E-02	n	
				2.5E-04	I					1	0.1		Fenamiphos	22224-92-6	1.5E+01	n	2.1E+02	n					4.4E+00	n		4.3E-03	n	
				2.5E-02	I					1	0.1		Fenpropathrin	39515-41-8	1.5E+03	n	2.1E+04	n					6.4E+01	n		2.9E+00	n	
				1.3E-02	I					1	0.1		Fluometuron	2164-17-2	8.0E+02	n	1.1E+04	n					2.4E+02	n		1.9E-01	n	
				4.0E-02	C	1.3E-02	C			1			Fluoride	16984-48-8	3.1E+03	n	4.7E+04	n	1.4E+01	n	5.7E+01	n	8.0E+02	n		1.2E+02	n	
				6.0E-02	I	1.3E-02	C			1			Fluorine (Soluble Fluoride)	7782-41-4	4.7E+03	n	7.0E+04	n	1.4E+01	n	5.7E+01	n	1.2E+03	n	4.0E+03	1.8E+02	n	6.0E+02
				8.0E-02	I					1	0.1		Fluridone	59756-60-4	4.9E+03	n	6.6E+04	n					1.4E+03	n		1.6E+02	n	
				2.0E-02	I					1	0.1		Flurprimidol	56425-91-3	1.2E+03	n	1.6E+04	n					3.4E+02	n		1.6E+00	n	
				6.0E-02	I					1	0.1		Flutolanil	66332-96-5	3.7E+03	n	4.9E+04	n					9.5E+02	n		5.0E+00	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information												Contaminant		Screening Levels													Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				1.0E-02	I					1	0.1		Fluvalinate	69409-94-5	6.2E+02	n	8.2E+03	n					2.0E+02	n		2.9E+02	n	
3.5E-03	I			1.0E-01	I					1	0.1		Folpet	133-07-3	1.5E+02	c*	6.6E+02	c					2.0E+01	c*		4.7E-03	c*	
1.9E-01	I									1	0.1		Fomesafen	72178-02-0	2.8E+00	c	1.2E+01	c					3.9E-01	c		1.3E-03	c	
				2.0E-03	I					1	0.1		Fonofos	944-22-9	1.2E+02	n	1.6E+03	n					2.4E+01	n		4.7E-02	n	
		1.3E-05	I	2.0E-01	I	9.8E-03	A			1	0.1		Formaldehyde	50-00-0	1.2E+04	n	1.6E+05	nm	2.2E-01	c*	9.4E-01	c*	4.0E+03	n		8.0E-01	n	
				9.0E-01	P	3.0E-04	X			1	0.1		Formic Acid	64-18-6	4.9E+04	n	5.2E+05	nm	3.1E-01	n	1.3E+00	n	1.8E+04	n		3.6E+00	n	
				3.0E+00	I					1	0.1		Fosetyl-AL	39148-24-8	1.8E+05	nm	2.5E+06	nm					6.0E+04	n			n	
													Furans																
				1.0E-03	X			V		1	0.03		~Dibenzofuran	132-64-9	7.2E+01	n	1.0E+03	n					7.9E+00	n		1.5E-01	n	
				1.0E-03	I			V		1	0.03	6.2E+03	~Furan	110-00-9	7.2E+01	n	1.0E+03	n					1.9E+01	n		7.3E-03	n	
				9.0E-01	I	2.0E+00	I	V		1	0.03	1.7E+05	~Tetrahydrofuran	109-99-9	1.8E+04	n	9.6E+04	n	2.1E+03	n	8.8E+03	n	3.4E+03	n		7.5E-01	n	
3.8E+00	H									1	0.1		Furazolidone	67-45-8	1.4E-01	c	6.1E-01	c					2.0E-02	c		3.9E-05	c	
				3.0E-03	I	5.0E-02	H			1	0.1		Furfural	98-01-1	1.8E+02	n	2.5E+03	n	5.2E+01	n	2.2E+02	n	6.0E+01	n		1.3E-02	n	
1.5E+00	C	4.3E-04	C							1	0.1		Furium	531-82-8	3.6E-01	c	1.5E+00	c	6.5E-03	c	2.9E-02	c	5.0E-02	c		6.8E-05	c	
3.0E-02	I	8.6E-06	C							1	0.1		Furmecyclox	60568-05-0	1.8E+01	c	7.7E+01	c	3.3E-01	c	1.4E+00	c	1.1E+00	c		1.2E-03	c	
				4.0E-04	I					1	0.1		Glufosinate, Ammonium	77182-82-2	2.5E+01	n	3.3E+02	n					8.0E+00	n		1.8E-03	n	
						8.0E-05	C			1	0.1		Glutaraldehyde	111-30-8	1.1E+05	nm	4.8E+05	nm	8.3E-02	n	3.5E-01	n						
				4.0E-04	I	1.0E-03	H			1	0.1		Glycidyl	765-34-4	2.5E+01	n	3.3E+02	n	1.0E+00	n	4.4E+00	n	8.0E+00	n		1.6E-03	n	
				1.0E-01	I					1	0.1		Glyphosate	1071-83-6	6.2E+03	n	8.2E+04	n					2.0E+03	n	7.0E+02	8.8E+00	n	3.1E+00
				3.0E-03	I					1	0.1		Goal	42874-03-3	1.8E+02	n	2.5E+03	n					3.2E+01	n		2.5E+00	n	
				1.0E-02	X					1	0.1		Guanidine	113-00-8	6.2E+02	n	8.2E+03	n					2.0E+02	n		4.5E-02	n	
				2.0E-02	P					1	0.1		Guanidine Chloride	50-01-1	1.2E+03	n	1.6E+04	n					4.0E+02	n			n	
				3.0E-03	A	1.0E-02	A			1	0.1		Guthion	86-50-0	1.8E+02	n	2.5E+03	n	1.0E+01	n	4.4E+01	n	5.6E+01	n		1.7E-02	n	
				5.0E-05	I					1	0.1		Haloxyfop, Methyl	69806-40-2	3.1E+00	n	4.1E+01	n					7.6E-01	n		8.4E-03	n	
				1.3E-02	I					1	0.1		Harmony	79277-27-3	8.0E+02	n	1.1E+04	n					2.6E+02	n		7.8E-02	n	
4.5E+00	I	1.3E-03	I	5.0E-04	I					1	0.1		Heptachlor	76-44-8	1.2E-01	c	5.1E-01	c	2.2E-03	c	9.4E-03	c	2.0E-03	c	4.0E-01	1.6E-04	c	3.3E-02
9.1E+00	I	2.6E-03	I	1.3E-05	I					1	0.1		Heptachlor Epoxide	1024-57-3	5.9E-02	c*	2.5E-01	c*	1.1E-03	c	4.7E-03	c	3.8E-03	c*	2.0E-01	7.8E-05	c*	4.1E-03
				2.0E-03	I					1	0.1		Hexabromobenzene	87-82-1	1.2E+02	n	1.6E+03	n					4.0E+01	n		2.3E-01	n	
				2.0E-04	I					1	0.1		Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	1.2E+01	n	1.6E+02	n					4.0E+00	n			n	
1.6E+00	I	4.6E-04	I	8.0E-04	I					1	0.1		Hexachlorobenzene	118-74-1	3.3E-01	c	1.4E+00	c	6.1E-03	c	2.7E-02	c	4.9E-02	c	1.0E+00	6.1E-04	c	1.3E-02
7.8E-02	I	2.2E-05	I	1.0E-03	P					1	0.1		Hexachlorobutadiene	87-68-3	6.8E+00	c**	3.0E+01	c*	1.3E-01	c	5.6E-01	c	3.0E-01	c*		5.7E-04	c*	
6.3E+00	I	1.8E-03	I	8.0E-03	A					1	0.1		Hexachlorocyclohexane, Alpha-	319-84-6	8.5E-02	c	3.7E-01	c	1.6E-03	c	6.8E-03	c	7.1E-03	c		4.1E-05	c	
1.8E+00	I	5.3E-04	I							1	0.1		Hexachlorocyclohexane, Beta-	319-85-7	3.0E-01	c	1.3E+00	c	5.3E-03	c	2.3E-02	c	2.5E-02	c		1.4E-04	c	
1.1E+00	C	3.1E-04	C	3.0E-04	I					1	0.04		Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	5.6E-01	c*	2.5E+00	c	9.1E-03	c	4.0E-02	c	4.1E-02	c*	2.0E-01	2.4E-04	c*	1.2E-03
1.8E+00	I	5.1E-04	I							1	0.1		Hexachlorocyclohexane, Technical	608-73-1	3.0E-01	c	1.3E+00	c	5.5E-03	c	2.4E-02	c	2.5E-02	c		1.4E-04	c	
				6.0E-03	I	2.0E-04	I			1	0.1		Hexachlorocyclopentadiene	77-47-4	3.7E+02	n	4.9E+03	n	2.1E-01	n	8.8E-01	n	3.1E+01	n	5.0E+01	9.6E-02	n	1.6E-01
4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I			1	0.1		Hexachloroethane	67-72-1	1.3E+01	c**	5.8E+01	c*	2.6E-01	c	1.1E+00	c	9.0E-01	c**		5.5E-04	c**	
				3.0E-04	I					1	0.1		Hexachlorophene	70-30-4	1.8E+01	n	2.5E+02	n					6.0E+00	n		8.0E+00	n	
1.1E-01	I			3.0E-03	I					1	0.015		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	6.0E+00	c*	2.8E+01	c					7.0E-01	c*		2.7E-04	c*	
						1.0E-05	I	V		1		5.2E+03	Hexamethylene Diisocyanate, 1,6-	822-06-0	3.1E+00	n	1.3E+01	n	1.0E-02	n	4.4E-02	n	2.1E-02	n		2.1E-04	n	
				4.0E-04	P					1	0.1		Hexamethylphosphoramide	680-31-9	2.5E+01	n	3.3E+02	n					8.0E+00	n		1.8E-03	n	
				6.0E-02	H	7.0E-01	I	V		1		1.4E+02	Hexane, N-	110-54-3	5.4E+02	ns	2.5E+03	ns	7.3E+02	n	3.1E+03	n	3.2E+02	n		2.3E+00	n	
				2.0E+00	P					1	0.1		Hexanedioic Acid	124-04-9	1.2E+05	nm	1.6E+06	nm					4.0E+04	n		9.9E+00	n	
				5.0E-03	I	3.0E-02	I	V		1		3.3E+03	Hexanone, 2-	591-78-6	2.0E+02	n	1.3E+03	n	3.1E+01	n	1.3E+02	n	3.8E+01	n		8.8E-03	n	
				3.3E-02	I					1	0.1		Hexazinone	51235-04-2	2.0E+03	n	2.7E+04	n					6.4E+02	n		3.0E-01	n	
3.0E+00	I	4.9E-03	I			3.0E-05	P			1			Hydrazine	302-01-2	2.3E-01	c	1.1E+00	c	5.7E-04	c*	2.5E-03	c*	2.6E-02	c			c	
3.0E+00	I	4.9E-03	I							1			Hydrazine Sulfate	10034-93-2	2.3E-01	c	1.1E+00	c	5.7E-04	c	2.5E-03	c	2.6E-02	c			c	
						2.0E-02	I			1			Hydrogen Chloride	7647-01-0	2.8E+07	nm	1.2E+08	nm	2.1E+01	n	8.8E+01	n						
				4.0E-02	C	1.4E-02	C			1			Hydrogen Fluoride	7664-39-3	3.1E+03	n	4.7E+04	n	1.5E+01	n	6.1E+01	n	8.0E+02	n			n	
						2.0E-03	I			1			Hydrogen Sulfide	7783-06-4	2.8E+06	nm	1.2E+07	nm	2.1E+00	n	8.8E+00	n						
6.0E-02	P			4.0E-02	P					1	0.1		Hydroquinone	123-31-9	8.9E+00	c	3.8E+01	c					1.3E+00	c		8.7E-04	c	
				1.3E-02	I					1	0.1		Imazalil	35554-44-0	8.0E+02	n	1.1E+04	n					1.9E+02	n		3.2E+00	n	
				2.5E-01	I					1	0.1		Imazaquin	81335-37-7	1.5E+04	n	2.1E+05	nm					4.9E+03	n		2.4E+01	n	
				1.0E-02	A					1			Iodine	7553-56-2	7.8E+02	n	1.2E+04	n					2.0E+02	n		1.2E+01	n	
				4.0E-02	I					1	0.1		Iprodione	36734-19-7	2.5E+03	n	3.3E+04	n					7.4E+02	n		2.2E-01	n	
				7.0E-01	P					1			Iron	7439-89-6	5.5E+04	n	8.2E+05	nm					1.4E+04	n		3.5E+02	n	
				3.0E-01	I					1	0.1		Isobutyl Alcohol	78-83-1	1.8E+04	n	2.5E+05	nm					5.9E+03	n		1.2E+00	n	
9.5E-04	I			2.0E-01	I	2.0E+00	C			1	0.1		Isophorone	78-59-1	5.6E+02	c*	2.4E+03	c*	2.1E+03	n	8.8E+03	n	7.8E+01	c*		2.6E-02	c*	
				1.5E-02	I					1	0.1		Isopropalin	33820-53-0	9.2E+02	n	1.2E+04	n					4.0E+01	n		9.2E-01	n	
						7.0E+00	C			1	0.1		Isopropanol	67-63-0	9.9E+09	nm	4.2E+10	nm	7.3E+03	n	3.1E+04	n						
				1.0E-01	I					1	0.1		Isopropyl Methyl Phosphonic Acid	1832-54-8	6.2E+03	n	8.2E+04	n					2.0E+03	n		4.3E-01	n	
				5.0E-02	I					1	0.1		Isoxaben	82558-50-7	3.1E+03	n	4.1E+04	n					7.3E+02	n		2.0E+00	n	
						3.0E-01	A	V		1			JP-7	NA	4.3E+08	nm	1.8E+09	nm	3.1E+02	n	1.3E+03	n	6.3E+02	n			n	
				7.5E-02	I					1	0.1		Kerb	23950-58-5	4.6E+03	n	6.2E+04	n					1.2E+03	n		1.2E+00	n	
				2.0E-03	I					1	0.1		Lactofen	77501-63-4	1.2E+02	n	1.6E+03	n					2.5E+01	n		1.2E+00	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information												Contaminant		Screening Levels													Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
													Lead Compounds															
2.8E-01	C	8.0E-05	C							1	0.1		~Lead acetate	301-04-2	1.9E+00	c	8.2E+00	c	3.5E-02	c	1.5E-01	c	2.8E-01	c			c	
										1			~Lead and Compounds	7439-92-1	4.0E+02	L	8.0E+02	L	1.5E-01	L		L		L	1.5E+01		L	1.4E+01
3.8E-02	C	1.1E-05	C							1	0.1		~Lead subacetate	1335-32-6	1.4E+01	c	6.1E+01	c	2.6E-01	c	1.1E+00	c	2.1E+00	c			c	
				1.0E-07	I					1	0.1		~Tetraethyl Lead	78-00-2	6.2E-03	n	8.2E-02	n					1.3E-03	n		4.7E-06	n	
				2.0E-03	I					1	0.1		Linuron	330-55-2	1.2E+02	n	1.6E+03	n					3.3E+01	n		2.9E-02	n	
				2.0E-03	P					1			Lithium	7439-93-2	1.6E+02	n	2.3E+03	n					4.0E+01	n		1.2E+01	n	
				2.0E-01	I					1	0.1		Londax	83055-99-6	1.2E+04	n	1.6E+05	nm					3.9E+03	n		1.0E+00	n	
				5.0E-04	I					1	0.1		MCPA	94-74-6	3.1E+01	n	4.1E+02	n					7.5E+00	n		2.0E-03	n	
				1.0E-02	I					1	0.1		MCPB	94-81-5	6.2E+02	n	8.2E+03	n					1.5E+02	n		5.8E-02	n	
				1.0E-03	I					1	0.1		MCPP	93-65-2	6.2E+01	n	8.2E+02	n					1.6E+01	n		4.6E-03	n	
				2.0E-02	I					1	0.1		Malathion	121-75-5	1.2E+03	n	1.6E+04	n					3.9E+02	n		1.0E-01	n	
				1.0E-01	I	7.0E-04	C			1	0.1		Maleic Anhydride	108-31-6	6.1E+03	n	8.1E+04	n	7.3E-01	n	3.1E+00	n	1.9E+03	n		3.8E-01	n	
				5.0E-01	I					1	0.1		Maleic Hydrazide	123-33-1	3.1E+04	n	4.1E+05	nm					1.0E+04	n		2.1E+00	n	
				1.0E-04	P					1	0.1		Malononitrile	109-77-3	6.2E+00	n	8.2E+01	n					2.0E+00	n		4.1E-04	n	
				3.0E-02	H					1	0.1		Mancozeb	8018-01-7	1.8E+03	n	2.5E+04	n					5.9E+02	n		8.4E-01	n	
				5.0E-03	I					1	0.1		Maneb	12427-38-2	3.1E+02	n	4.1E+03	n					9.9E+01	n		1.4E-01	n	
				1.4E-01	I	5.0E-05	I			1			Manganese (Diet)	7439-96-5														
				2.4E-02	S	5.0E-05	I			0.04			Manganese (Non-diet)	7439-96-5	1.8E+03	n	2.6E+04	n	5.2E-02	n	2.2E-01	n	4.3E+02	n		2.8E+01	n	
				9.0E-05	H					1	0.1		Mephosfolan	950-10-7	5.5E+00	n	7.4E+01	n					1.8E+00	n		2.6E-03	n	
				3.0E-02	I					1	0.1		Mepiquat Chloride	24307-26-4	1.8E+03	n	2.5E+04	n					6.0E+02	n		2.0E-01	n	
													Mercury Compounds															
				3.0E-04	I	3.0E-04	S			0.07			~Mercuric Chloride (and other Mercury salts)	7487-94-7	2.3E+01	n	3.5E+02	n	3.1E-01	n	1.3E+00	n	5.7E+00	n	2.0E+00		n	
						3.0E-04	I	V		1		3.1E+00	~Mercury (elemental)	7439-97-6	9.4E+00	ns	4.0E+01	ns	3.1E-01	n	1.3E+00	n	6.3E-01	n	2.0E+00	3.3E-02	n	1.0E-01
				1.0E-04	I					1			~Methyl Mercury	22967-92-6	7.8E+00	n	1.2E+02	n					2.0E+00	n			n	
				8.0E-05	I					1	0.1		~Phenylmercuric Acetate	62-38-4	4.9E+00	n	6.6E+01	n					1.6E+00	n		5.0E-04	n	
				3.0E-05	I					1	0.1		Merphos	150-50-5	1.8E+00	n	2.5E+01	n					6.0E-01	n		5.9E-02	n	
				3.0E-05	I					1	0.1		Merphos Oxide	78-48-8	1.8E+00	n	2.5E+01	n					8.5E-02	n		4.2E-04	n	
				6.0E-02	I					1	0.1		Metalaxyl	57837-19-1	3.7E+03	n	4.9E+04	n					1.2E+03	n		3.3E-01	n	
				1.0E-04	I	3.0E-02	P	V		1		4.6E+03	Methacrylonitrile	126-98-7	7.5E+00	n	1.0E+02	n	3.1E+01	n	1.3E+02	n	1.9E+00	n		4.3E-04	n	
				5.0E-05	I					1	0.1		Methamidophos	10265-92-6	3.1E+00	n	4.1E+01	n					1.0E+00	n		2.1E-04	n	
				2.0E+00	I	2.0E+01	I			1	0.1		Methanol	67-56-1	1.2E+05	nm	1.6E+06	nm	2.1E+04	n	8.8E+04	n	4.0E+04	n		8.1E+00	n	
				1.0E-03	I					1	0.1		Methidathion	950-37-8	6.2E+01	n	8.2E+02	n					1.9E+01	n		4.7E-03	n	
				2.5E-02	I					1	0.1		Methomyl	16752-77-5	1.5E+03	n	2.1E+04	n					5.0E+02	n		1.1E-01	n	
4.9E-02	C	1.4E-05	C							1	0.1		Methoxy-5-nitroaniline, 2-	99-59-2	1.1E+01	c	4.7E+01	c	2.0E-01	c	8.8E-01	c	1.5E+00	c		5.3E-04	c	
				5.0E-03	I					1	0.1		Methoxychlor	72-43-5	3.1E+02	n	4.1E+03	n					3.7E+01	n	4.0E+01	2.0E+00	n	2.2E+00
				8.0E-03	P	1.0E-03	P			1	0.1		Methoxyethanol Acetate, 2-	110-49-6	4.9E+02	n	6.6E+03	n	1.0E+00	n	4.4E+00	n	1.6E+02	n		3.3E-02	n	
				5.0E-03	P	2.0E-02	I			1	0.1		Methoxyethanol, 2-	109-86-4	3.1E+02	n	4.1E+03	n	2.1E+01	n	8.8E+01	n	1.0E+02	n		2.0E-02	n	
				1.0E+00	X			V		1		2.9E+04	Methyl Acetate	79-20-9	7.8E+04	ns	1.2E+06	nms					2.0E+04	n		4.1E+00	n	
				3.0E-02	H	2.0E-02	P	V		1		6.8E+03	Methyl Acrylate	96-33-3	1.4E+02	n	6.0E+02	n	2.1E+01	n	8.8E+01	n	3.9E+01	n		8.3E-03	n	
				6.0E-01	I	5.0E+00	I	V		1		2.8E+04	Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.7E+04	n	1.9E+05	nms	5.2E+03	n	2.2E+04	n	5.6E+03	n		1.2E+00	n	
		1.0E-03	X	1.0E-03	P	2.0E-05	X			1	0.1		Methyl Hydrazine	60-34-4	6.2E+01	n	8.2E+02	n	2.8E-03	c**	1.2E-02	c**	2.0E+01	n		4.5E-03	n	
				8.0E-02	H	3.0E+00	I	V		1		3.4E+03	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	5.3E+03	ns	5.6E+04	ns	3.1E+03	n	1.3E+04	n	1.2E+03	n		2.8E-01	n	
						1.0E-03	C	V		1	0.1	1.7E+04	Methyl Isocyanate	624-83-9	4.6E+00	n	1.9E+01	n	1.0E+00	n	4.4E+00	n	2.1E+00	n		5.9E-04	n	
				1.4E+00	I	7.0E-01	I	V		1		2.4E+03	Methyl Methacrylate	80-62-6	4.4E+03	ns	1.9E+04	ns	7.3E+02	n	3.1E+03	n	1.4E+03	n		3.0E-01	n	
				2.5E-04	I					1	0.1		Methyl Parathion	298-00-0	1.5E+01	n	2.1E+02	n					4.5E+00	n		7.4E-03	n	
				6.0E-02	X					1	0.1		Methyl Phosphonic Acid	993-13-5	3.7E+03	n	4.9E+04	n					1.2E+03	n		2.4E-01	n	
				6.0E-03	H	4.0E-02	H	V		1		3.9E+02	Methyl Styrene (Mixed Isomers)	25013-15-4	2.3E+02	n	1.5E+03	ns	4.2E+01	n	1.8E+02	n	3.8E+01	n		6.2E-02	n	
9.9E-02	C	2.8E-05	C							1	0.1		Methyl methanesulfonate	66-27-3	5.4E+00	c	2.3E+01	c	1.0E-01	c	4.4E-01	c	7.9E-01	c		1.6E-04	c	
1.8E-03	C	2.6E-07	C			3.0E+00	I	V		1		8.9E+03	Methyl tert-Butyl Ether (MTBE)	1634-04-4	4.7E+01	c	2.1E+02	c	1.1E+01	c	4.7E+01	c	1.4E+01	c		3.2E-03	c	
				3.0E-04	X					1	0.1		Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	1.8E+01	n	2.5E+02	n					6.0E+00	n		3.6E-03	n	
9.0E-03	P			2.0E-02	X					1	0.1		Methyl-5-Nitroaniline, 2-	99-55-8	5.9E+01	c*	2.6E+02	c*					8.1E+00	c*		4.5E-03	c*	
8.3E+00	C	2.4E-03	C							1	0.1		Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	6.4E-02	c	2.8E-01	c	1.2E-03	c	5.1E-03	c	9.4E-03	c		3.2E-06	c	
1.3E-01	C	3.7E-05	C							1	0.1		Methylaniline Hydrochloride, 2-	636-21-5	4.1E+00	c	1.8E+01	c	7.6E-02	c	3.3E-01	c	5.7E-01	c		2.5E-04	c	
				1.0E-02	A					1	0.1		Methylarsonic acid	124-58-3	6.2E+02	n	8.2E+03	n					2.0E+02	n			n	
				2.0E-04	X					1	0.1		Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	1.2E+01	n	1.6E+02	n					4.0E+00	n			n	
1.0E-01	X			3.0E-04	X					1	0.1		Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	5.3E+00	c**	2.3E+01	c*					7.8E-01	c**			c**	
2.2E+01	C	6.3E-03	C						M	1	0.1		Methylcholanthrene, 3-	56-49-5	5.4E-03	c	1.0E-01	c	1.6E-04	c	1.9E-03	c	1.1E-03	c		2.2E-03	c	
2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	1		3.3E+03	Methylene Chloride	75-09-2	5.7E+01	c**	1.0E+03	c**	1.0E+02	c**	1.2E+03	c**	1.1E+01	c**	5.0E+00	2.9E-03	c**	1.3E-03
1.0E-01	P	4.3E-04	C	2.0E-03	P				M	1	0.1		Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	1.2E+00	c	2.3E+01	c*	2.4E-03	c	2.9E-02	c	1.6E-01	c		1.8E-03	c	
4.6E-02	I	1.3E-05	C							1	0.1		Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	1.2E+01	c	5.0E+01	c	2.2E-01	c	9.4E-01	c	4.6E-01	c		2.6E-03	c	
1.6E+00	C	4.6E-04	C			2.0E-02	C			1	0.1		Methylenebisbenzenamine, 4,4'-	101-77-9	3.3E-01	c	1.4E+00	c	6.1E-03	c	2.7E-02	c	4.7E-02	c		2.1E-04	c	
						6.0E-04	I			1	0.1		Methylenediphenyl Diisocyanate	101-68-8	8.5E+05	nm	3.6E+06	nm	6.3E-01	n	2.6E+00	n						
				7.0E-02	H			V		1		5.0E+02	Methylstyrene, Alpha-	98-83-9	5.5E+03	ns	8.2E+04	ns					7.8E+02	n		1.2E+00	n	
				1.5E-01	I					1	0.1		Metolachlor	51218-45-2	9.2E+03	n	1.2E+05	nm					2.7E+03	n		3.2E+00	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information												Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				2.5E-02	I					1	0.1		Metribuzin	21087-64-9	1.5E+03	n	2.1E+04	n					4.9E+02	n		1.5E-01	n	
				3.0E+00	P			V		1	0.1	3.4E-01	Mineral oils	8012-95-1	1.8E+05	nms	2.5E+06	nms					6.0E+04	n		2.4E+03	n	
1.8E+01	C	5.1E-03	C	2.0E-04	I					1	0.1		Mirex	2385-85-5	3.0E-02	c	1.3E-01	c	5.5E-04	c	2.4E-03	c	4.3E-03	c		3.1E-03	c	
				2.0E-03	I					1	0.1		Molinate	2212-67-1	1.2E+02	n	1.6E+03	n					3.0E+01	n		1.7E-02	n	
				5.0E-03	I					1			Molybdenum	7439-98-7	3.9E+02	n	5.8E+03	n					1.0E+02	n		2.0E+00	n	
				1.0E-01	I					1			Monochloramine	10599-90-3	7.8E+03	n	1.2E+05	nm					2.0E+03	n	4.0E+03		n	
				2.0E-03	P					1	0.1		Monomethylaniline	100-61-8	1.2E+02	n	1.6E+03	n					3.8E+01	n		1.4E-02	n	
				3.0E-04	X					1	0.1		N,N'-Diphenyl-1,4-benzenediamine	74-31-7	1.8E+01	n	2.5E+02	n					3.6E+00	n		3.7E-01	n	
				2.0E-03	I					1	0.1		Naled	300-76-5	1.2E+02	n	1.6E+03	n					4.0E+01	n		1.8E-02	n	
				3.0E-02	X	1.0E-01	P	V		1			Naphtha, High Flash Aromatic (HFAN)	64724-95-6	2.3E+03	n	3.5E+04	n	1.0E+02	n	4.4E+02	n	1.5E+02	n			n	
1.8E+00	C	0.0E+00	C							1	0.1		Naphthylamine, 2-	91-59-8	3.0E-01	c	1.3E+00	c					3.9E-02	c		2.0E-04	c	
				1.0E-01	I					1	0.1		Napropamide	15299-99-7	6.2E+03	n	8.2E+04	n					1.6E+03	n		1.1E+01	n	
				1.1E-02	C	1.4E-05	C			0.04			Nickel Carbonyl	13463-39-3	8.2E+02	n	1.1E+04	n	1.5E-02	n	6.1E-02	n	2.0E+02	n			n	
				1.1E-02	C	2.0E-05	C			1			Nickel Oxide	1313-99-1	8.4E+02	n	1.2E+04	n	2.1E-02	n	8.8E-02	n	2.2E+02	n			n	
		2.4E-04	I	1.1E-02	C	1.4E-05	C			0.04			Nickel Refinery Dust	NA	8.2E+02	n	1.1E+04	n	1.2E-02	c**	5.1E-02	c**	2.2E+02	n		3.2E+01	n	
		2.6E-04	C	2.0E-02	I	9.0E-05	A			0.04			Nickel Soluble Salts	7440-02-0	1.5E+03	n	2.2E+04	n	1.1E-02	c**	4.7E-02	c**	3.9E+02	n		2.6E+01	n	
1.7E+00	C	4.8E-04	I	1.1E-02	C	1.4E-05	C			0.04			Nickel Subsulfide	12035-72-2	4.1E-01	c	1.9E+00	c	5.8E-03	c**	2.6E-02	c**	4.5E-02	c			c	
				1.6E+00	I					1			Nitrate	14797-55-8	1.3E+05	nm	1.9E+06	nm					3.2E+04	n	1.0E+04		n	
										1			Nitrate + Nitrite (as N)	NA											1.0E+04			
				1.0E-01	I					1			Nitrite	14797-65-0	7.8E+03	n	1.2E+05	nm					2.0E+03	n	1.0E+03		n	
				1.0E-02	X	5.0E-05	X			1	0.1		Nitroaniline, 2-	88-74-4	6.1E+02	n	8.0E+03	n	5.2E-02	n	2.2E-01	n	1.9E+02	n		8.0E-02	n	
2.0E-02	P			4.0E-03	P	6.0E-03	P			1	0.1		Nitroaniline, 4-	100-01-6	2.7E+01	c**	1.2E+02	c*	6.3E+00	n	2.6E+01	n	3.8E+00	c*		1.6E-03	c*	
		4.0E-05	I	2.0E-03	I	9.0E-03	I	V		1		3.1E+03	Nitrobenzene	98-95-3	5.1E+00	c*	2.2E+01	c*	7.0E-02	c	3.1E-01	c	1.4E-01	c*		9.2E-05	c*	
				3.0E+03	P					1	0.1		Nitrocellulose	9004-70-0	1.8E+08	nm	2.5E+09	nm					6.0E+07	n		1.3E+04	n	
				7.0E-02	H					1	0.1		Nitrofurantoin	67-20-9	4.3E+03	n	5.8E+04	n					1.4E+03	n		6.1E-01	n	
1.3E+00	C	3.7E-04	C							1	0.1		Nitrofurazone	59-87-0	4.1E-01	c	1.8E+00	c	7.6E-03	c	3.3E-02	c	6.0E-02	c		5.4E-05	c	
1.7E-02	P			1.0E-04	P					1	0.1		Nitroglycerin	55-63-0	6.2E+00	n	8.2E+01	n					2.0E+00	n		8.5E-04	n	
				1.0E-01	I					1	0.1		Nitroguanidine	556-88-7	6.2E+03	n	8.2E+04	n					2.0E+03	n		4.8E-01	n	
		8.8E-06	P			5.0E-03	P	V		1		1.8E+04	Nitromethane	75-52-5	5.4E+00	c*	2.4E+01	c*	3.2E-01	c*	1.4E+00	c*	6.4E-01	c*		1.4E-04	c*	
		2.7E-03	H			2.0E-02	I	V		1		4.9E+03	Nitropropane, 2-	79-46-9	1.4E-02	c	6.0E-02	c	1.0E-03	c	4.5E-03	c	2.1E-03	c		5.4E-07	c	
2.7E+01	C	7.7E-03	C						M	1	0.1		Nitroso-N-ethylurea, N-	759-73-9	4.4E-03	c	8.6E-02	c	1.3E-04	c	1.6E-03	c	9.2E-04	c		2.2E-07	c	
1.2E+02	C	3.4E-02	C						M	1	0.1		Nitroso-N-methylurea, N-	684-93-5	9.9E-04	c	1.9E-02	c	3.0E-05	c	3.6E-04	c	2.1E-04	c		4.6E-08	c	
5.4E+00	I	1.6E-03	I					V		1			Nitroso-di-N-butylamine, N-	924-16-3	9.4E-02	c	4.3E-01	c	1.8E-03	c	7.7E-03	c	2.7E-03	c		5.5E-06	c	
7.0E+00	I	2.0E-03	C							1	0.1		Nitroso-di-N-propylamine, N-	621-64-7	7.6E-02	c	3.3E-01	c	1.4E-03	c	6.1E-03	c	1.1E-02	c		8.1E-06	c	
2.8E+00	I	8.0E-04	C							1	0.1		Nitrosodiethanolamine, N-	1116-54-7	1.9E-01	c	8.2E-01	c	3.5E-03	c	1.5E-02	c	2.8E-02	c		5.6E-06	c	
1.5E+02	I	4.3E-02	I						M	1	0.1		Nitrosodiethylamine, N-	55-18-5	7.9E-04	c	1.5E-02	c	2.4E-05	c	2.9E-04	c	1.7E-04	c		6.0E-08	c	
5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X		M	1	0.1		Nitrosodimethylamine, N-	62-75-9	2.3E-03	c	4.5E-02	c	7.2E-05	c	8.8E-04	c	4.9E-04	c		1.2E-07	c	
4.9E-03	I	2.6E-06	C							1	0.1		Nitrosodiphenylamine, N-	86-30-6	1.1E+02	c	4.7E+02	c	1.1E+00	c	4.7E+00	c	1.2E+01	c		6.6E-02	c	
2.2E+01	I	6.3E-03	C							1	0.1		Nitrosoethylethylamine, N-	10595-95-6	2.4E-02	c	1.0E-01	c	4.5E-04	c	1.9E-03	c	3.5E-03	c		1.0E-06	c	
6.7E+00	C	1.9E-03	C							1	0.1		Nitrosomorpholine [N-]	59-89-2	7.9E-02	c	3.4E-01	c	1.5E-03	c	6.5E-03	c	1.2E-02	c		2.8E-06	c	
9.4E+00	C	2.7E-03	C							1	0.1		Nitrosopiperidine [N-]	100-75-4	5.7E-02	c	2.5E-01	c	1.0E-03	c	4.5E-03	c	8.2E-03	c		4.4E-06	c	
2.1E+00	I	6.1E-04	I							1	0.1		Nitrosopyrrolidine, N-	930-55-2	2.5E-01	c	1.1E+00	c	4.6E-03	c	2.0E-02	c	3.7E-02	c		1.4E-05	c	
				1.0E-04	X					1	0.1		Nitrotoluene, m-	99-08-1	6.2E+00	n	8.2E+01	n					1.7E+00	n		1.6E-03	n	
2.2E-01	P			9.0E-04	P			V		1		1.5E+03	Nitrotoluene, o-	88-72-2	3.2E+00	c*	1.5E+01	c*					3.1E-01	c*		2.9E-04	c*	
1.6E-02	P			4.0E-03	P					1	0.1		Nitrotoluene, p-	99-99-0	3.3E+01	c**	1.4E+02	c*					4.2E+00	c*		3.9E-03	c*	
				3.0E-04	X	2.0E-02	P	V		1		6.9E+00	Nonane, n-	111-84-2	1.1E+01	ns	7.2E+01	ns	2.1E+01	n	8.8E+01	n	5.3E+00	n		7.5E-02	n	
				4.0E-02	I					1	0.1		Norflurazon	27314-13-2	2.5E+03	n	3.3E+04	n					7.7E+02	n		5.0E+00	n	
				7.0E-04	I					1	0.1		Nustar	85509-19-9	4.3E+01	n	5.8E+02	n					1.1E+01	n		1.8E+00	n	
				3.0E-03	I					1	0.1		Octabromodiphenyl Ether	32536-52-0	1.8E+02	n	2.5E+03	n					6.0E+01	n		1.2E+01	n	
				5.0E-02	I					1	0.006		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	3.8E+03	n	5.7E+04	n					1.0E+03	n		1.3E+00	n	
				2.0E-03	H					1	0.1		Octamethylpyrophosphoramide	152-16-9	1.2E+02	n	1.6E+03	n					4.0E+01	n		9.6E-03	n	
				5.0E-02	I					1	0.1		Oryzalin	19044-88-3	3.1E+03	n	4.1E+04	n					8.1E+02	n		1.5E+00	n	
				5.0E-03	I					1	0.1		Oxadiazon	19666-30-9	3.1E+02	n	4.1E+03	n					4.7E+01	n		4.8E-01	n	
				2.5E-02	I					1	0.1		Oxamyl	23135-22-0	1.5E+03	n	2.1E+04	n					5.0E+02	n	2.0E+02	1.1E-01	n	4.4E-02
				1.3E-02	I					1	0.1		Paclobutrazol	76738-62-0	8.0E+02	n	1.1E+04	n					2.3E+02	n		4.6E-01	n	
				4.5E-03	I					1	0.1		Paraquat Dichloride	1910-42-5	2.8E+02	n	3.7E+03	n					9.0E+01	n		1.2E+00	n	
				6.0E-03	H					1	0.1		Parathion	56-38-2	3.7E+02	n	4.9E+03	n					8.6E+01	n		4.3E-01	n	
				5.0E-02	H					1	0.1		Pebulate	1114-71-2	3.1E+03	n	4.1E+04	n					5.6E+02	n		4.5E-01	n	
				4.0E-02	I					1	0.1		Pendimethalin	40487-42-1	2.5E+03	n	3.3E+04	n					1.8E+02	n		2.1E+00	n	
				2.0E-03	I					1	0.1		Pentabromodiphenyl Ether	32534-81-9	1.2E+02	n	1.6E+03	n					4.0E+01	n		1.7E+00	n	
				1.0E-04	I					1	0.1		Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	6.2E+00	n	8.2E+01	n					2.0E+00	n		8.7E-02	n	
				8.0E-04	I					1	0.1		Pentachlorobenzene	608-93-5	4.9E+01	n	6.6E+02	n					3.2E+00	n		2.4E-02	n	
9.0E-02	P									1	0.1		Pentachloroethane	76-01-7	5.9E+00	c	2.6E+01	c					6.4E-01	c		3.1E-04	c	
2.6E-01	H			3.0E-03	I					1	0.1		Pentachloronitrobenzene	82-68-8	2.0E+00	c*	8.9E+00	c					1.2E-01	c		1.4E-03	c	
4.0E-01	I	5.1E-06	C	5.0E-03	I					1	0.25		Pentachlorophenol	87-86-5	9.9E-01	c	4.0E+00	c	5.5E-01	c	2.4E+00	c	4.0E-02	c	1.0E+00	4.0E-04	c	1.0E-02

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information												Contaminant		Screening Levels														Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volc	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
4.0E-03	X			2.0E-03	P					1	0.1		Pentaerythritol tetranitrate (PETN)	78-11-5	1.2E+02	n	5.8E+02	c**					1.9E+01	c**		2.8E-02	c**	
						1.0E+00	P	V		1		3.9E+02	Pentane, n-	109-66-0	8.1E+02	ns	3.4E+03	ns	1.0E+03	n	4.4E+03	n	2.1E+03	n		1.0E+01	n	
													Perchlorates																
				7.0E-04	I					1			~Ammonium Perchlorate	7790-98-9	5.5E+01	n	8.2E+02	n					1.4E+01	n			n	
				7.0E-04	I					1			~Lithium Perchlorate	7791-03-9	5.5E+01	n	8.2E+02	n					1.4E+01	n			n	
				7.0E-04	I					1			~Perchlorate and Perchlorate Salts	14797-73-0	5.5E+01	n	8.2E+02	n					1.4E+01	n	1.5E+01(F)		n	
				7.0E-04	I					1			~Potassium Perchlorate	7778-74-7	5.5E+01	n	8.2E+02	n					1.4E+01	n			n	
				7.0E-04	I					1			~Sodium Perchlorate	7601-89-0	5.5E+01	n	8.2E+02	n					1.4E+01	n			n	
				5.0E-02	I					1	0.1		Permethrin	52645-53-1	3.1E+03	n	4.1E+04	n					1.0E+03	n		2.4E+02	n	
2.2E-03	C	6.3E-07	C							1	0.1		Phenacetin	62-44-2	2.4E+02	c	1.0E+03	c	4.5E+00	c	1.9E+01	c	3.4E+01	c		9.7E-03	c	
				2.5E-01	I					1	0.1		Phenmedipham	13684-63-4	1.5E+04	n	2.1E+05	nm					4.0E+03	n		2.1E+01	n	
				3.0E-01	I	2.0E-01	C			1	0.1		Phenol	108-95-2	1.8E+04	n	2.5E+05	nm	2.1E+02	n	8.8E+02	n	5.8E+03	n		3.3E+00	n	
				5.0E-04	X					1	0.1		Phenothiazine	92-84-2	3.1E+01	n	4.1E+02	n					4.3E+00	n		1.4E-02	n	
				6.0E-03	I					1	0.1		Phenylenediamine, m-	108-45-2	3.7E+02	n	4.9E+03	n					1.2E+02	n		3.2E-02	n	
4.7E-02	H									1	0.1		Phenylenediamine, o-	95-54-5	1.1E+01	c	4.9E+01	c					1.6E+00	c		4.4E-04	c	
				1.9E-01	H					1	0.1		Phenylenediamine, p-	106-50-3	1.2E+04	n	1.6E+05	nm					3.8E+03	n		1.0E+00	n	
1.9E-03	H									1	0.1		Phenylphenol, 2-	90-43-7	2.7E+02	c	1.2E+03	c					3.0E+01	c		4.0E-01	c	
				2.0E-04	H					1	0.1		Phorate	298-02-2	1.2E+01	n	1.6E+02	n					3.0E+00	n		3.4E-03	n	
						3.0E-04	I	V		1		1.6E+03	Phosgene	75-44-5	3.1E-01	n	1.3E+00	n	3.1E-01	n	1.3E+00	n						
				2.0E-02	I					1	0.1		Phosmet	732-11-6	1.2E+03	n	1.6E+04	n					3.7E+02	n		8.2E-02	n	
													Phosphates, Inorganic																
				4.9E+01	P					1			~Aluminum metaphosphate	13776-88-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Ammonium polyphosphate	68333-79-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Calcium pyrophosphate	7790-76-3	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Diammonium phosphate	7783-28-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Dicalcium phosphate	7757-93-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Dimagnesium phosphate	7782-75-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Dipotassium phosphate	7758-11-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Disodium phosphate	7558-79-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Monoaluminum phosphate	13530-50-2	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Monoammonium phosphate	7722-76-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Monocalcium phosphate	7758-23-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Monomagnesium phosphate	7757-86-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Monopotassium phosphate	7778-77-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Monosodium phosphate	7558-80-7	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Polyphosphoric acid	8017-16-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Potassium tripolyphosphate	13845-36-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Sodium acid pyrophosphate	7758-16-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Sodium aluminum phosphate (acidic)	7785-88-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Sodium aluminum phosphate (anhydrous)	10279-59-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Sodium aluminum phosphate (tetrahydrate)	10305-76-7	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Sodium hexametaphosphate	10124-56-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Sodium polyphosphate	68915-31-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Sodium trimetaphosphate	7785-84-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Sodium tripolyphosphate	7758-29-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Tetrapotassium phosphate	7320-34-5	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Tetrasodium pyrophosphate	7722-88-5	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Tricalcium phosphate	7758-87-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Trimagnesium phosphate	7757-87-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Tripotassium phosphate	7778-53-2	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				4.9E+01	P					1			~Trisodium phosphate	7601-54-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
				3.0E-04	I	3.0E-04	I			1			Phosphine	7803-51-2	2.3E+01	n	3.5E+02	n	3.1E-01	n	1.3E+00	n	6.0E+00	n			n	
				4.9E+01	P	1.0E-02	I			1			Phosphoric Acid	7664-38-2	3.0E+06	nm	2.9E+07	nm	1.0E+01	n	4.4E+01	n	9.7E+05	n			n	
				2.0E-05	I					1			Phosphorus, White	7723-14-0	1.6E+00	n	2.3E+01	n					4.0E-01	n		1.5E-03	n	
													Phthalates																
1.4E-02	I	2.4E-06	C	2.0E-02	I					1	0.1		~Bis(2-ethylhexyl)phthalate	117-81-7	3.8E+01	c*	1.6E+02	c	1.2E+00	c	5.1E+00	c	5.6E+00	c*	6.0E+00	1.3E+00	c*	1.4E+00
				1.0E+00	I					1	0.1		~Butylphthalyl Butylglycolate	85-70-1	6.2E+04	n	8.2E+05	nm					1.3E+04	n		3.0E+02	n	
				1.0E-01	I					1	0.1		~Dibutyl Phthalate	84-74-2	6.2E+03	n	8.2E+04	n					9.0E+02	n		2.3E+00	n	
				8.0E-01	I					1	0.1		~Diethyl Phthalate	84-66-2	4.9E+04	n	6.6E+05	nm					1.5E+04	n		6.1E+00	n	
				1.0E-01	I			V		1			~Dimethylterephthalate	120-61-6	7.8E+03	n	1.2E+05	nm					1.9E+03	n		4.9E-01	n	
				1.0E-02	P					1	0.1		~Octyl Phthalate, di-N-	117-84-0	6.2E+02	n	8.2E+03	n					2.0E+02	n		5.7E+01	n	
				1.0E+00	H					1	0.1		~Phthalic Acid, P-	100-21-0	6.2E+04	n	8.2E+05	nm					1.9E+04	n		6.8E+00	n	
				2.0E+00	I	2.0E-02	C			1	0.1		~Phthalic Anhydride	85-44-9	1.2E+05	nm	1.6E+06	nm	2.1E+01	n	8.8E+01	n	3.9E+04	n		8.5E+00	n	
				7.0E-02	I					1	0.1		Picloram	1918-02-1	4.3E+03	n	5.8E+04	n					1.4E+03	n	5.0E+02	3.8E-01	n	1.4E-01

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information												Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volc	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				1.0E-04	X					1	0.1		Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	6.2E+00	n	8.2E+01	n					2.0E+00	n		1.3E-03	n	
				1.0E-02	I					1	0.1		Pirimiphos, Methyl	29232-93-7	6.2E+02	n	8.2E+03	n					1.2E+02	n		1.2E-01	n	
3.0E+01	C	8.6E-03	C	7.0E-06	H					1	0.1		Polybrominated Biphenyls	59536-65-1	1.8E-02	c*	7.7E-02	c*	3.3E-04	c	1.4E-03	c	2.6E-03	c*			c*	
													Polychlorinated Biphenyls (PCBs)															
7.0E-02	S	2.0E-05	S	7.0E-05	I					1	0.14		~Aroclor 1016	12674-11-2	4.0E+00	n	3.0E+01	c**	1.4E-01	c	6.1E-01	c	1.1E+00	c**		1.1E-01	c**	
2.0E+00	S	5.7E-04	S					V		1	0.14	7.6E+02	~Aroclor 1221	11104-28-2	1.5E-01	c	6.6E-01	c	4.9E-03	c	2.1E-02	c	4.6E-03	c		7.9E-05	c	
2.0E+00	S	5.7E-04	S					V		1	0.14	7.3E+01	~Aroclor 1232	11141-16-5	1.5E-01	c	6.6E-01	c	4.9E-03	c	2.1E-02	c	4.6E-03	c		7.9E-05	c	
2.0E+00	S	5.7E-04	S							1	0.14		~Aroclor 1242	53469-21-9	2.4E-01	c	1.0E+00	c	4.9E-03	c	2.1E-02	c	3.9E-02	c		6.1E-03	c	
2.0E+00	S	5.7E-04	S							1	0.14		~Aroclor 1248	12672-29-6	2.4E-01	c	1.0E+00	c	4.9E-03	c	2.1E-02	c	3.9E-02	c		6.0E-03	c	
2.0E+00	S	5.7E-04	S	2.0E-05	I					1	0.14		~Aroclor 1254	11097-69-1	2.4E-01	c**	1.0E+00	c*	4.9E-03	c	2.1E-02	c	3.9E-02	c*		1.0E-02	c*	
2.0E+00	S	5.7E-04	S							1	0.14		~Aroclor 1260	11096-82-5	2.4E-01	c	1.0E+00	c	4.9E-03	c	2.1E-02	c	3.9E-02	c		2.7E-02	c	
				6.0E-04	X					1	0.1		~Aroclor 5460	11126-42-4	1.7E+02	n	1.7E+03	n					1.2E+01	n		2.0E+00	n	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E			1	0.14		~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.2E-01	c*	5.3E-01	c*	2.5E-03	c	1.1E-02	c	2.0E-02	c*		1.4E-02	c*	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E			1	0.14		~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.2E-01	c*	5.3E-01	c*	2.5E-03	c	1.1E-02	c	2.0E-02	c*		8.4E-03	c*	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E			1	0.14		~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.2E-01	c*	5.3E-01	c*	2.5E-03	c	1.1E-02	c	2.0E-02	c*		8.5E-03	c*	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E			1	0.14		~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	1.2E-01	c*	5.3E-01	c*	2.5E-03	c	1.1E-02	c	2.0E-02	c*		8.5E-03	c*	
3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E			1	0.14		~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	1.2E-04	c*	5.3E-04	c*	2.5E-06	c	1.1E-05	c	2.0E-05	c*		8.4E-06	c*	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E			1	0.14		~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.2E-01	c*	5.3E-01	c*	2.5E-03	c	1.1E-02	c	2.0E-02	c*		5.2E-03	c*	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E			1	0.14		~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.2E-01	c*	5.3E-01	c*	2.5E-03	c	1.1E-02	c	2.0E-02	c*		5.1E-03	c*	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E			1	0.14		~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	1.2E-01	c*	5.3E-01	c*	2.5E-03	c	1.1E-02	c	2.0E-02	c*		5.2E-03	c*	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E			1	0.14		~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.2E-01	c*	5.3E-01	c*	2.5E-03	c	1.1E-02	c	2.0E-02	c*		5.2E-03	c*	
1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E			1	0.14		~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	3.7E-05	c*	1.6E-04	c*	7.4E-07	c	3.2E-06	c	6.0E-06	c*		1.5E-06	c*	
2.0E+00	I	5.7E-04	I							1	0.14		~Polychlorinated Biphenyls (high risk)	1336-36-3	2.4E-01	c	1.0E+00	c	4.9E-03	c	2.1E-02	c						
4.0E-01	I	1.0E-04	I							1	0.14		~Polychlorinated Biphenyls (low risk)	1336-36-3					2.8E-02	c	1.2E-01	c	1.9E-01	c	5.0E-01	3.0E-02	c	7.8E-02
7.0E-02	I	2.0E-05	I							1	0.14		~Polychlorinated Biphenyls (lowest risk)	1336-36-3					1.4E-01	c	6.1E-01	c						
1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E			1	0.14		~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	3.7E-02	c*	1.6E-01	c*	7.4E-04	c	3.2E-03	c	6.0E-03	c*		9.4E-04	c*	
3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E			1	0.14		~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	1.2E-02	c*	5.3E-02	c*	2.5E-04	c	1.1E-03	c	2.0E-03	c*		3.1E-04	c*	
						6.0E-04	I			1	0.1		Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	8.5E+05	nm	3.6E+06	nm	6.3E-01	n	2.6E+00	n						
													Polynuclear Aromatic Hydrocarbons (PAHs)															
				6.0E-02	I			V		1	0.13		~Acenaphthene	83-32-9	3.5E+03	n	4.5E+04	n					5.3E+02	n		5.5E+00	n	
				3.0E-01	I			V		1	0.13		~Anthracene	120-12-7	1.7E+04	n	2.3E+05	nm					1.8E+03	n		5.8E+01	n	
7.3E-01	E	1.1E-04	C						M	1	0.13		~Benz[a]anthracene	56-55-3	1.5E-01	c	2.9E+00	c	9.2E-03	c	1.1E-01	c	3.4E-02	c		1.2E-02	c	
1.2E+00	C	1.1E-04	C							1	0.13		~Benzo(j)fluoranthene	205-82-3	4.1E-01	c	1.8E+00	c	2.6E-02	c	1.1E-01	c	6.5E-02	c		7.8E-02	c	
7.3E+00	I	1.1E-03	C						M	1	0.13		~Benzo[a]pyrene	50-32-8	1.5E-02	c	2.9E-01	c	9.2E-04	c	1.1E-02	c	3.4E-03	c	2.0E-01	4.0E-03	c	2.4E-01
7.3E-01	E	1.1E-04	C						M	1	0.13		~Benzo[b]fluoranthene	205-99-2	1.5E-01	c	2.9E+00	c	9.2E-03	c	1.1E-01	c	3.4E-02	c		4.1E-02	c	
7.3E-02	E	1.1E-04	C						M	1	0.13		~Benzo[k]fluoranthene	207-08-9	1.5E+00	c	2.9E+01	c	9.2E-03	c	1.1E-01	c	3.4E-01	c		4.0E-01	c	
				8.0E-02	I			V		1			~Chloronaphthalene, Beta-	91-58-7	6.3E+03	n	9.3E+04	n					7.5E+02	n		3.8E+00	n	
7.3E-03	E	1.1E-05	C						M	1	0.13		~Chrysene	218-01-9	1.5E+01	c	2.9E+02	c	9.2E-02	c	1.1E+00	c	3.4E+00	c		1.2E+00	c	
7.3E+00	E	1.2E-03	C						M	1	0.13		~Dibenz[a,h]anthracene	53-70-3	1.5E-02	c	2.9E-01	c	8.4E-04	c	1.0E-02	c	3.4E-03	c		1.3E-02	c	
1.2E+01	C	1.1E-03	C							1	0.13		~Dibenzo(a,e)pyrene	192-65-4	4.1E-02	c	1.8E-01	c	2.6E-03	c	1.1E-02	c	6.5E-03	c		8.4E-02	c	
2.5E+02	C	7.1E-02	C						M	1	0.13		~Dimethylbenz(a)anthracene, 7,12-	57-97-6	4.5E-04	c	8.5E-03	c	1.4E-05	c	1.7E-04	c	1.0E-04	c		9.9E-05	c	
				4.0E-02	I					1	0.13		~Fluoranthene	206-44-0	2.3E+03	n	3.0E+04	n					8.0E+02	n		8.9E+01	n	
				4.0E-02	I			V		1	0.13		~Fluorene	86-73-7	2.3E+03	n	3.0E+04	n					2.9E+02	n		5.4E+00	n	
7.3E-01	E	1.1E-04	C						M	1	0.13		~Indeno[1,2,3-cd]pyrene	193-39-5	1.5E-01	c	2.9E+00	c	9.2E-03	c	1.1E-01	c	3.4E-02	c		2.4E-01	c	
2.9E-02	P			7.0E-02	A			V		1	0.13		~Methylnaphthalene, 1-	90-12-0	1.7E+01	c	7.3E+01	c					1.1E+00	c		5.8E-03	c	
				4.0E-03	I			V		1	0.13		~Methylnaphthalene, 2-	91-57-6	2.3E+02	n	3.0E+03	n					3.6E+01	n		1.9E-01	n	
		3.4E-05	C	2.0E-02	I	3.0E-03	I	V		1	0.13		~Naphthalene	91-20-3	3.8E+00	c*	1.7E+01	c*	8.3E-02	c*	3.6E-01	c*	1.7E-01	c*		5.4E-04	c*	
1.2E+00	C	1.1E-04	C							1	0.13		~Nitropyrene, 4-	57835-92-4	4.1E-01	c	1.8E+00	c	2.6E-02	c	1.1E-01	c	1.9E-02	c		3.2E-03	c	
				3.0E-02	I			V		1	0.13		~Pyrene	129-00-0	1.7E+03	n	2.3E+04	n					1.2E+02	n		1.3E+01	n	
1.5E-01	I			9.0E-03	I					1	0.1		Prochloraz	67747-09-5	3.6E+00	c	1.5E+01	c					3.7E-01	c		1.9E-03	c	
				6.0E-03	H					1	0.1		Profluralin	26399-36-0	3.7E+02	n	4.9E+03	n					2.6E+01	n		1.6E+00	n	
				1.5E-02	I					1	0.1		Prometon	1610-18-0	9.2E+02	n	1.2E+04	n					2.5E+02	n		1.2E-01	n	
				4.0E-03	I					1	0.1		Prometryn	7287-19-6	2.5E+02	n	3.3E+03	n					6.0E+01	n		9.0E-02	n	
				1.3E-02	I					1	0.1		Propachlor	1918-16-7	8.0E+02	n	1.1E+04	n					2.5E+02	n		1.5E-01	n	
				5.0E-03	I					1	0.1		Propanil	709-98-8	3.1E+02	n	4.1E+03	n					8.2E+01	n		4.5E-02	n	
				2.0E-02	I					1	0.1		Propargite	2312-35-8	1.2E+03	n	1.6E+04	n					1.6E+02	n		1.2E+01	n	
				2.0E-03	I					1	0.1		Propargyl Alcohol	107-19-7	1.2E+02	n	1.6E+03	n					4.0E+01	n		8.1E-03	n	
				2.0E-02	I					1	0.1		Propazine	139-40-2	1.2E+03	n	1.6E+04	n					3.4E+02	n		3.0E-01	n	
				2.0E-02	I					1	0.1		Propham	122-42-9	1.2E+03	n	1.6E+04	n					3.5E+02	n		2.2E-01	n	
				1.3E-02	I					1	0.1		Propiconazole	60207-90-1	8.0E+02	n	1.1E+04	n					2.1E+02	n		6.9E-01	n	
						8.0E-03	I	V		1		3.3E+04	Propionaldehyde	123-38-6	7.5E+01	n	3.1E+02	n	8.3E+00	n	3.5E+01	n	1.7E+01	n		3.4E-03	n	
				1.0E-01	X	1.0E+00	X	V		1	0.1	2.6E+02	Propyl benzene	103-65-1	3.3E+03	ns	2.2E+04	ns	1.0E+03	n	4.4E+03	n	6.6E+02	n		1.2E+00	n	
						3.0E+00	C	V		1	0.1	3.5E+02	Propylene	115-07-1	2.2E+03	ns	9.3E+03	ns	3.1E+03	n	1.3E+04	n	6.3E+03	n		6.0E+00	n	
				2.0E+01	P					1	0.1		Propylene Glycol	57-55-6	1.2E+06	nm	1.6E+07	nm					4.0E+05	n		8.1E+01	n	
						2.7E-04	A			1	0.1		Propylene Glycol Dinitrate	6423-43-4	3.9E+05	nm	1.6E+06	nm	2.8E-01	n	1.2E+00	n						

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile;
R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information												Contaminant		Screening Levels														Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volc	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				7.0E-01	H					1	0.1		Propylene Glycol Monoethyl Ether	1569-02-4	4.3E+04	n	5.8E+05	nm					1.4E+04	n		2.8E+00	n		
				7.0E-01	H	2.0E+00	I			1	0.1		Propylene Glycol Monomethyl Ether	107-98-2	4.3E+04	n	5.8E+05	nm	2.1E+03	n	8.8E+03	n	1.4E+04	n		2.8E+00	n		
2.4E-01	I	3.7E-06	I			3.0E-02	I	V		1		7.8E+04	Propylene Oxide	75-56-9	2.1E+00	c	9.7E+00	c	7.6E-01	c*	3.3E+00	c*	2.7E-01	c		5.6E-05	c		
				2.5E-01	I					1	0.1		Pursuit	81335-77-5	1.5E+04	n	2.1E+05	nm					4.7E+03	n		4.1E+00	n		
				2.5E-02	I					1	0.1		Pydrin	51630-58-1	1.5E+03	n	2.1E+04	n					5.0E+02	n		3.2E+02	n		
				1.0E-03	I			V		1		5.3E+05	Pyridine	110-86-1	7.8E+01	n	1.2E+03	n					2.0E+01	n		6.8E-03	n		
				5.0E-04	I					1	0.1		Quinalphos	13593-03-8	3.1E+01	n	4.1E+02	n					5.1E+00	n		4.3E-02	n		
3.0E+00	I									1	0.1		Quinoline	91-22-5	1.8E-01	c	7.7E-01	c					2.4E-02	c		7.8E-05	c		
						3.0E-02	A			1			Refractory Ceramic Fibers	NA	4.3E+07	nm	1.8E+08	nm	3.1E+01	n	1.3E+02	n							
				3.0E-02	I					1	0.1		Resmethrin	10453-86-8	1.8E+03	n	2.5E+04	n					6.7E+01	n		4.2E+01	n		
				5.0E-02	H					1	0.1		Ronnel	299-84-3	3.1E+03	n	4.1E+04	n					4.1E+02	n		3.7E+00	n		
				4.0E-03	I					1	0.1		Rotenone	83-79-4	2.5E+02	n	3.3E+03	n					6.1E+01	n		3.2E+01	n		
2.2E-01	C	6.3E-05	C						M	1	0.1		Safrole	94-59-7	5.4E-01	c	1.0E+01	c	1.6E-02	c	1.9E-01	c	9.5E-02	c		5.9E-05	c		
				2.5E-02	I					1	0.1		Savey	78587-05-0	1.5E+03	n	2.1E+04	n					1.1E+02	n		5.0E-01	n		
				5.0E-03	I					1			Selenious Acid	7783-00-8	3.9E+02	n	5.8E+03	n					1.0E+02	n			n		
				5.0E-03	I	2.0E-02	C			1			Selenium	7782-49-2	3.9E+02	n	5.8E+03	n	2.1E+01	n	8.8E+01	n	1.0E+02	n	5.0E+01	5.2E-01	n	2.6E-01	
				5.0E-03	C	2.0E-02	C			1			Selenium Sulfide	7446-34-6	3.9E+02	n	5.8E+03	n	2.1E+01	n	8.8E+01	n	1.0E+02	n			n		
				9.0E-02	I					1	0.1		Sethoxydim	74051-80-2	5.5E+03	n	7.4E+04	n					1.0E+03	n		9.3E+00	n		
						3.0E-03	C			1			Silica (crystalline, respirable)	7631-86-9	4.3E+06	nm	1.8E+07	nm	3.1E+00	n	1.3E+01	n							
				5.0E-03	I					0.04			Silver	7440-22-4	3.9E+02	n	5.8E+03	n					9.4E+01	n		8.0E-01	n		
1.2E-01	H			5.0E-03	I					1	0.1		Simazine	122-34-9	4.4E+00	c*	1.9E+01	c					6.1E-01	c	4.0E+00	3.0E-04	c	2.0E-03	
				1.3E-02	I					1	0.1		Sodium Acifluorfen	62476-59-9	8.0E+02	n	1.1E+04	n					2.6E+02	n		2.1E+00	n		
				4.0E-03	I					1			Sodium Azide	26628-22-8	3.1E+02	n	4.7E+03	n					8.0E+01	n			n		
2.7E-01	H			3.0E-02	I					1	0.1		Sodium Diethyldithiocarbamate	148-18-5	2.0E+00	c	8.6E+00	c					2.9E-01	c			c		
				5.0E-02	A	1.3E-02	C			1			Sodium Fluoride	7681-49-4	3.9E+03	n	5.8E+04	n	1.4E+01	n	5.7E+01	n	1.0E+03	n			n		
				2.0E-05	I					1	0.1		Sodium Fluoroacetate	62-74-8	1.2E+00	n	1.6E+01	n					4.0E-01	n		8.1E-05	n		
				1.0E-03	H					1			Sodium Metavanadate	13718-26-8	7.8E+01	n	1.2E+03	n					2.0E+01	n			n		
2.4E-02	H			3.0E-02	I					1	0.1		Stirofos (Tetrachlorovinphos)	961-11-5	2.2E+01	c*	9.6E+01	c					2.8E+00	c		8.1E-03	c		
				6.0E-01	I					1			Strontium, Stable	7440-24-6	4.7E+04	n	7.0E+05	nm					1.2E+04	n		4.2E+02	n		
				3.0E-04	I					1	0.1		Strychnine	57-24-9	1.8E+01	n	2.5E+02	n					5.9E+00	n		6.5E-02	n		
				2.0E-01	I	1.0E+00	I	V		1		8.7E+02	Styrene	100-42-5	6.0E+03	ns	3.5E+04	ns	1.0E+03	n	4.4E+03	n	1.2E+03	n	1.0E+02	1.3E+00	n	1.1E-01	
				1.0E-03	P	2.0E-03	P			1	0.1		Sulfolane	126-33-0	6.2E+01	n	8.2E+02	n	2.1E+00	n	8.8E+00	n	2.0E+01	n		4.4E-03	n		
				8.0E-04	P					1	0.1		Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	4.9E+01	n	6.6E+02	n					1.1E+01	n		6.5E-02	n		
						1.0E-03	C			1			Sulfuric Acid	7664-93-9	1.4E+06	nm	6.0E+06	nm	1.0E+00	n	4.4E+00	n							
				2.5E-02	I					1	0.1		Systhane	88671-89-0	1.5E+03	n	2.1E+04	n					4.5E+02	n		5.6E+00	n		
				3.0E-02	H					1	0.1		TCMTB	21564-17-0	1.8E+03	n	2.5E+04	n					4.8E+02	n		3.3E+00	n		
				7.0E-02	I					1	0.1		Tebuthiuron	34014-18-1	4.3E+03	n	5.8E+04	n					1.4E+03	n		3.9E-01	n		
				2.0E-02	H					1	0.1		Temephos	3383-96-8	1.2E+03	n	1.6E+04	n					4.0E+02	n		7.6E+01	n		
				1.3E-02	I					1	0.1		Terbacil	5902-51-2	8.0E+02	n	1.1E+04	n					2.5E+02	n		7.5E-02	n		
				2.5E-05	H					1	0.1		Terbufos	13071-79-9	1.5E+00	n	2.1E+01	n					2.4E-01	n		5.2E-04	n		
				1.0E-03	I					1	0.1		Terbutryn	886-50-0	6.2E+01	n	8.2E+02	n					1.3E+01	n		1.9E-02	n		
				1.0E-04	I					1	0.1		Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1	6.2E+00	n	8.2E+01	n					2.0E+00	n		5.3E-02	n		
				3.0E-04	I					1	0.1		Tetrachlorobenzene, 1,2,4,5-	95-94-3	1.8E+01	n	2.5E+02	n					1.7E+00	n		7.9E-03	n		
2.6E-02	I	7.4E-06	I	3.0E-02	I			V		1		6.8E+02	Tetrachloroethane, 1,1,1,2-	630-20-6	2.0E+00	c	8.8E+00	c	3.8E-01	c	1.7E+00	c	5.7E-01	c		2.2E-04	c		
2.0E-01	I	5.8E-05	C	2.0E-02	I			V		1		1.9E+03	Tetrachloroethane, 1,1,2,2-	79-34-5	6.0E-01	c	2.7E+00	c	4.8E-02	c	2.1E-01	c	7.6E-02	c		3.0E-05	c		
2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		1		1.7E+02	Tetrachloroethylene	127-18-4	2.4E+01	c**	1.0E+02	c**	1.1E+01	c**	4.7E+01	c**	1.1E+01	c**	5.0E+00	5.1E-03	c**	2.3E-03	
				3.0E-02	I					1	0.1		Tetrachlorophenol, 2,3,4,6-	58-90-2	1.8E+03	n	2.5E+04	n					2.4E+02	n		1.5E+00	n		
2.0E+01	H									1	0.1		Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	2.7E-02	c	1.2E-01	c					1.3E-03	c		4.4E-06	c		
				5.0E-04	I					1	0.1		Tetraethyl Dithiopyrophosphate	3689-24-5	3.1E+01	n	4.1E+02	n					7.1E+00	n		5.2E-03	n		
						8.0E+01	I	V		1		1.1E+03	Tetrafluoroethane, 1,1,1,2-	811-97-2	1.0E+05	nms	4.3E+05	nms	8.3E+04	n	3.5E+05	n	1.7E+05	n		9.3E+01	n		
				2.0E-03	P					1	0.1		Tetryl (Trinitrophenylmethylnitramine)	479-45-8	1.2E+02	n	1.6E+03	n					3.9E+01	n		3.7E-01	n		
				7.0E-06	X					1			Thallium (I) Nitrate	10102-45-1	5.5E-01	n	8.2E+00	n					1.4E-01	n			n		
				1.0E-05	X					1			Thallium (Soluble Salts)	7440-28-0	7.8E-01	n	1.2E+01	n					2.0E-01	n	2.0E+00	1.4E-02	n	1.4E-01	
				6.0E-06	X					1			Thallium Acetate	563-68-8	4.7E-01	n	7.0E+00	n					1.2E-01	n			n		
				2.0E-05	X					1			Thallium Carbonate	6533-73-9	1.6E+00	n	2.3E+01	n					4.0E-01	n			n		
				6.0E-06	X					1			Thallium Chloride	7791-12-0	4.7E-01	n	7.0E+00	n					1.2E-01	n			n		
				2.0E-05	X					1			Thallium Sulfate	7446-18-6	1.6E+00	n	2.3E+01	n					4.0E-01	n			n		
				1.0E-02	I					1	0.1		Thiobencarb	28249-77-6	6.2E+02	n	8.2E+03	n					1.6E+02	n		5.5E-01	n		
				7.0E-02	X					1	0.008		Thiodiglycol	111-48-8	5.4E+03	n	7.9E+04	n					1.4E+03	n		2.8E-01	n		
				3.0E-04	H					1	0.1		Thiofanox	39196-18-4	1.8E+01	n	2.5E+02	n					5.3E+00	n		1.8E-03	n		
				8.0E-02	I					1	0.1		Thiophanate, Methyl	23564-05-8	4.9E+03	n	6.6E+04	n					1.6E+03	n		1.4E+00	n		
				5.0E-03	I					1	0.1		Thiram	137-26-8	3.1E+02	n	4.1E+03	n					9.8E+01	n		1.4E-01	n		
				6.0E-01	H					1			Tin	7440-31-5	4.7E+04	n	7.0E+05	nm					1.2E+04	n		3.0E+03	n		
						1.0E-04	A			1			Titanium Tetrachloride	7550-45-0	1.4E+05	nm	6.0E+05	nm	1.0E-01	n	4.4E-01	n							
				8.0E-02	I	5.0E+00	I	V		1		8.2E+02	Toluene	108-88-3	4.9E+03	ns	4.7E+04	ns	5.2E+03	n	2.2E+04	n	1.1E+03	n	1.0E+03	7.6E-01	n	6.9E-01	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information													Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vo c	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
1.8E-01	X			2.0E-04	X					1	0.1		Toluene-2,5-diamine	95-70-5	3.0E+00	c**	1.3E+01	c*					4.3E-01	c**		1.3E-04	c**	
3.0E-02	P			4.0E-03	X					1	0.1		Toluidine, p-	106-49-0	1.8E+01	c*	7.7E+01	c*					2.5E+00	c*		1.1E-03	c*	
				3.0E+00	P			V		1		3.4E-01	Total Petroleum Hydrocarbons (Aliphatic High)	NA	2.3E+05	nms	3.5E+06	nms					6.0E+04	n		2.4E+03	n	
						6.0E-01	P	V		1		1.4E+02	Total Petroleum Hydrocarbons (Aliphatic Low)	NA	5.2E+02	ns	2.2E+03	ns	6.3E+02	n	2.6E+03	n	1.3E+03	n		8.8E+00	n	
				1.0E-02	X	1.0E-01	P	V		1		6.9E+00	Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	9.6E+01	ns	4.4E+02	ns	1.0E+02	n	4.4E+02	n	1.0E+02	n		1.5E+00	n	
				4.0E-02	P					1	0.1		Total Petroleum Hydrocarbons (Aromatic High)	NA	2.5E+03	n	3.3E+04	n					8.0E+02	n		8.9E+01	n	
				4.0E-03	P	3.0E-02	P	V		1		1.8E+03	Total Petroleum Hydrocarbons (Aromatic Low)	NA	8.2E+01	n	4.2E+02	n	3.1E+01	n	1.3E+02	n	3.3E+01	n		1.7E-02	n	
				4.0E-03	P	3.0E-03	P	V		1			Total Petroleum Hydrocarbons (Aromatic Medium)	NA	1.1E+02	n	6.0E+02	n	3.1E+00	n	1.3E+01	n	5.5E+00	n		2.3E-02	n	
1.1E+00	I	3.2E-04	I							1	0.1		Toxaphene	8001-35-2	4.8E-01	c	2.1E+00	c	8.8E-03	c	3.8E-02	c	1.5E-02	c	3.0E+00	2.4E-03	c	4.6E-01
				7.5E-03	I					1	0.1		Tralomethrin	66841-25-6	4.6E+02	n	6.2E+03	n					1.5E+02	n		5.8E+01	n	
				3.0E-04	A					1	0.1		Tri-n-butyltin	688-73-3	1.8E+01	n	2.5E+02	n					3.7E+00	n		8.2E-02	n	
				8.0E+01	X					1	0.1		Triacetin	102-76-1	4.9E+06	nm	6.6E+07	nm					1.6E+06	n		4.5E+02	n	
				1.3E-02	I					1	0.1		Triallate	2303-17-5	8.0E+02	n	1.1E+04	n					1.2E+02	n		2.6E-01	n	
				1.0E-02	I					1	0.1		Triasulfuron	82097-50-5	6.2E+02	n	8.2E+03	n					2.0E+02	n		2.1E-01	n	
				5.0E-03	I					1	0.1		Tribromobenzene, 1,2,4-	615-54-3	3.1E+02	n	4.1E+03	n					4.5E+01	n		6.4E-02	n	
9.0E-03	P			1.0E-02	P					1	0.1		Tributyl Phosphate	126-73-8	5.9E+01	c*	2.6E+02	c*					5.1E+00	c*		2.5E-02	c*	
				3.0E-04	P					1	0.1		Tributyltin Compounds	NA	1.8E+01	n	2.5E+02	n					6.0E+00	n			n	
				3.0E-04	I					1	0.1		Tributyltin Oxide	56-35-9	1.8E+01	n	2.5E+02	n					5.7E+00	n		2.9E+02	n	
				3.0E+01	I	3.0E+01	H	V		1		9.1E+02	Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	4.0E+04	ns	1.7E+05	nms	3.1E+04	n	1.3E+05	n	5.5E+04	n		1.4E+02	n	
7.0E-02	I			2.0E-02	I					1	0.1		Trichloroacetic Acid	76-03-9	7.6E+00	c	3.3E+01	c					1.1E+00	c	6.0E+01	2.2E-04	c	1.2E-02
2.9E-02	H									1	0.1		Trichloroaniline HCl, 2,4,6-	33663-50-2	1.8E+01	c	8.0E+01	c					2.7E+00	c		7.4E-03	c	
7.0E-03	X			3.0E-05	X					1	0.1		Trichloroaniline, 2,4,6-	634-93-5	1.8E+00	n	2.5E+01	n					4.0E-01	n		3.6E-03	n	
				8.0E-04	X			V		1	0.1		Trichlorobenzene, 1,2,3-	87-61-6	4.9E+01	n	6.6E+02	n					7.0E+00	n		2.1E-02	n	
2.9E-02	P			1.0E-02	I	2.0E-03	P	V		1		4.0E+02	Trichlorobenzene, 1,2,4-	120-82-1	2.4E+01	c**	1.1E+02	c**	2.1E+00	n	8.8E+00	n	1.1E+00	c**	7.0E+01	3.3E-03	c**	2.0E-01
				2.0E+00	I	5.0E+00	I	V		1		6.4E+02	Trichloroethane, 1,1,1-	71-55-6	8.1E+03	ns	3.6E+04	ns	5.2E+03	n	2.2E+04	n	8.0E+03	n	2.0E+02	2.8E+00	n	7.0E-02
5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		1		2.2E+03	Trichloroethane, 1,1,2-	79-00-5	1.1E+00	c**	5.0E+00	c**	1.8E-01	c**	7.7E-01	c**	2.8E-01	c**	5.0E+00	8.9E-05	c**	1.6E-03
4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	1		6.9E+02	Trichloroethylene	79-01-6	9.4E-01	c**	6.0E+00	c**	4.8E-01	c**	3.0E+00	c**	4.9E-01	c**	5.0E+00	1.8E-04	c**	1.8E-03
				3.0E-01	I	7.0E-01	H	V		1		1.2E+03	Trichlorofluoromethane	75-69-4	7.3E+02	n	3.1E+03	ns	7.3E+02	n	3.1E+03	n	1.1E+03	n		7.3E-01	n	
				1.0E-01	I					1	0.1		Trichlorophenol, 2,4,5-	95-95-4	6.2E+03	n	8.2E+04	n					1.2E+03	n		4.4E+00	n	
1.1E-02	I	3.1E-06	I	1.0E-03	P					1	0.1		Trichlorophenol, 2,4,6-	88-06-2	4.8E+01	c**	2.1E+02	c**	9.1E-01	c	4.0E+00	c	4.0E+00	c**		1.5E-02	c**	
				1.0E-02	I					1	0.1		Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	6.2E+02	n	8.2E+03	n					1.6E+02	n		6.7E-02	n	
				8.0E-03	I					1	0.1		Trichlorophenoxypropionic acid, -2,4,5-	93-72-1	4.9E+02	n	6.6E+03	n					1.1E+02	n	5.0E+01	6.1E-02	n	2.8E-02
				5.0E-03	I			V		1		1.3E+03	Trichloropropane, 1,1,2-	598-77-6	3.9E+02	n	5.8E+03	ns					8.8E+01	n		3.5E-02	n	
3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	1		1.4E+03	Trichloropropane, 1,2,3-	96-18-4	5.1E-03	c	1.1E-01	c	3.1E-01	n	1.3E+00	n	7.5E-04	c		3.2E-07	c	
				3.0E-03	X	3.0E-04	P	V		1		4.5E+02	Trichloropropene, 1,2,3-	96-19-5	7.3E-01	n	3.1E+00	n	3.1E-01	n	1.3E+00	n	6.2E-01	n		3.1E-04	n	
				2.0E-02	A					1	0.1		Tricresyl Phosphate (TCP)	1330-78-5	5.8E+03	n	5.6E+04	n					1.6E+02	n		1.5E+01	n	
				3.0E-03	I					1	0.1		Tridiphane	58138-08-2	1.8E+02	n	2.5E+03	n					1.8E+01	n		1.3E-01	n	
						7.0E-03	I	V		1		2.8E+04	Triethylamine	121-44-8	1.2E+02	n	4.8E+02	n	7.3E+00	n	3.1E+01	n	1.5E+01	n		4.4E-03	n	
7.7E-03	I			7.5E-03	I					1	0.1		Trifluralin	1582-09-8	6.9E+01	c**	3.0E+02	c*					2.5E+00	c*		8.2E-02	c*	
2.0E-02	P			1.0E-02	P					1	0.1		Trimethyl Phosphate	512-56-1	2.7E+01	c*	1.2E+02	c*					3.9E+00	c*		8.6E-04	c*	
						5.0E-03	P	V		1		2.9E+02	Trimethylbenzene, 1,2,3-	526-73-8	4.9E+01	n	2.1E+02	n	5.2E+00	n	2.2E+01	n	1.0E+01	n		1.5E-02	n	
						7.0E-03	P	V		1		2.2E+02	Trimethylbenzene, 1,2,4-	95-63-6	5.8E+01	n	2.4E+02	ns	7.3E+00	n	3.1E+01	n	1.5E+01	n		2.1E-02	n	
				1.0E-02	X			V		1		1.8E+02	Trimethylbenzene, 1,3,5-	108-67-8	7.8E+02	ns	1.2E+04	ns					1.2E+02	n		1.7E-01	n	
				3.0E-02	I					1	0.013		Trinitrobenzene, 1,3,5-	99-35-4	2.2E+03	n	3.2E+04	n					5.9E+02	n		2.1E+00	n	
3.0E-02	I			5.0E-04	I					1	0.032		Trinitrotoluene, 2,4,6-	118-96-7	2.1E+01	c**	9.6E+01	c**					2.5E+00	c**		1.5E-02	c**	
				2.0E-02	P					1	0.1		Triphenylphosphine Oxide	791-28-6	1.2E+03	n	1.6E+04	n					3.6E+02	n		1.5E+00	n	
				2.0E-02	A					1	0.1		Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	1.2E+03	n	1.6E+04	n					3.6E+02	n		8.0E+00	n	
				1.0E-02	X					1	0.1		Tris(1-chloro-2-propyl)phosphate	13674-84-5	6.2E+02	n	8.2E+03	n					1.9E+02	n		6.5E-01	n	
2.0E-02	P			7.0E-03	P					1	0.1		Tris(2-chloroethyl)phosphate	115-96-8	2.7E+01	c*	1.2E+02	c*					3.8E+00	c*		3.8E-03	c*	
3.2E-03	P			1.0E-01	P					1	0.1		Tris(2-ethylhexyl)phosphate	78-42-2	1.7E+02	c*	7.2E+02	c					2.4E+01	c*		1.2E+02	c*	
				3.0E-03	I	4.0E-05	A			1			Uranium (Soluble Salts)	NA	2.3E+02	n	3.5E+03	n	4.2E-02	n	1.8E-01	n	6.0E+01	n	3.0E+01	2.7E+01	n	1.4E+01
1.0E+00	C	2.9E-04	C						M	1	0.1		Urethane	51-79-6	1.2E-01	c	2.3E+00	c	3.5E-03	c	4.2E-02	c	2.5E-02	c		5.6E-06	c	
		8.3E-03	P	9.0E-03	I	7.0E-06	P			0.026			Vanadium Pentoxide	1314-62-1	4.6E+02	c**	2.0E+03	c**	3.4E-04	c*	1.5E-03	c*	1.5E+02	n			n	
				5.0E-03	S	1.0E-04	A			0.026			Vanadium and Compounds	7440-62-2	3.9E+02	n	5.8E+03	n	1.0E-01	n	4.4E-01	n	8.6E+01	n		8.6E+01	n	
				1.0E-03	I					1	0.1		Vernolate	1929-77-7	6.2E+01	n	8.2E+02	n					1.1E+01	n		8.9E-03	n	
				2.5E-02	I					1	0.1		Vinclozolin	50471-44-8	1.5E+03	n	2.1E+04	n					4.4E+02	n		3.4E-01	n	
				1.0E+00	H	2.0E-01	I	V		1		2.8E+03	Vinyl Acetate	108-05-4	9.1E+02	n	3.8E+03	ns	2.1E+02	n	8.8E+02	n	4.1E+02	n		8.7E-02	n	
		3.2E-05	H			3.0E-03	I	V		1		3.4E+03	Vinyl Bromide	593-60-2	1.2E-01	c*	5.2E-01	c*	8.8E-02	c*	3.8E-01	c*	1.8E-01	c*		5.1E-05	c*	
7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	1		3.9E+03	Vinyl Chloride	75-01-4	5.9E-02	c	1.7E+00	c	1.7E-01	c	2.8E+00	c	1.9E-02	c	2.0E+00	6.5E-06	c	6.9E-04
				3.0E-04	I					1	0.1		Warfarin	81-81-2	1.8E+01	n	2.5E+02	n					5.6E+00	n		5.9E-03	n	
				2.0E-01	S	1.0E-01	S	V		1		3.9E+02	Xylene, P-	106-42-3	5.6E+02	ns	2.4E+03	ns	1.0E+02	n	4.4E+02	n	1.9E+02	n		1.9E-01	n	
				2.0E-01	S	1.0E-01	S	V		1		3.9E+02	Xylene, m-	108-38-3	5.5E+02	ns	2.4E+03	ns	1.0E+02	n	4.4E+02	n	1.9E+02	n		1.9E-01	n	
				2.0E-01	S	1.0E-01	S	V		1		4.3E+02	Xylene, o-	95-47-6	6.5E+02	ns	2.8E+03	ns	1.0E+02	n	4.4E+02	n	1.9E+02	n		1.9E-01	n	
				2.0E-01	I	1.0E-01	I	V		1		2.6E+02	Xylenes	1330-20-7	5.8E+02	ns	2.5E+03	ns	1.0E+02	n	4.4E+02	n	1.9E+02	n	1.0E+04	1.9E-01	n	9.8E+00
				3.0E-04	I					1			Zinc Phosphide	1314-84-7	2.3E+01	n	3.5E+02	n					6.0E+00	n			n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile;
R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information											Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				3.0E-01	I					1			Zinc and Compounds	7440-66-6	2.3E+04	n	3.5E+05	nm					6.0E+03	n		3.7E+02	n	
				5.0E-02	I					1	0.1		Zineb	12122-67-7	3.1E+03	n	4.1E+04	n					9.9E+02	n		2.9E+00	n	
				8.0E-05	X					1			Zirconium	7440-67-7	6.3E+00	n	9.3E+01	n					1.6E+00	n		4.8E+00	n	