

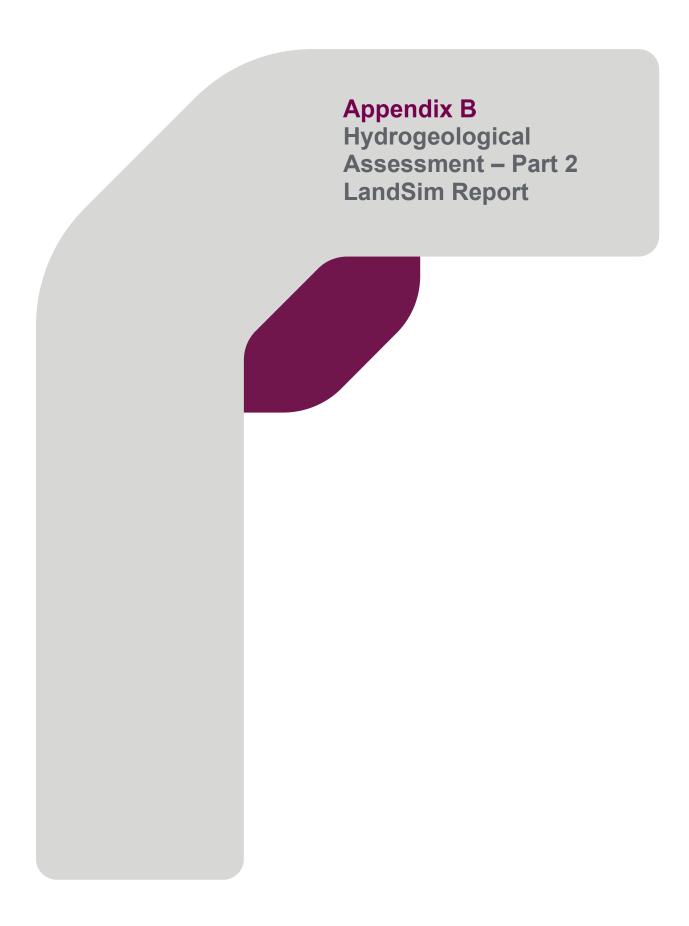
# INTEGRATED WASTE MANAGEMENT FACILITY AT HOLLYWOOD CIRCULAR ECONOMY CAMPUS

**Environmental Impact Assessment Report Volume IV: Hydrogeological Assessment** 



## **Contents**

APPENDIX A HYDROGEOLO	SICAL ASSESSMENT – PART 1 HYDROGEOLOGICAL RISK
ASSESSMENT	1
APPENDIX B HYDROGEOLO	GICAL ASSESSMENT - PART 2 LANDSIM REPORT3





# INTEGRATED WASTE MANAGEMENT FACILITY AT HOLLYWOOD CIRCULAR ECONOMY CAMPUS

Hydrogeological Assessment – Part 2 LandSim Report



# **Contents**

1	INTRODUCTION	1
	1.1 Preamble	1
	1.2 Site Location	1
	1.3 Proposed Landfill Engineering	2
	1.4 Report Objectives and Methodology	2
2	CONCEPTUAL HYDROGEOLOGICAL SITE MODEL	5
_	2.1 Source Term Characteristics	
	2.2 Contaminant Pathways	
	2.3 Receptors	
3	HYDROGEOLOGICAL RISK ASSESSMENT	12
•	3.1 The Nature of the Hydrogeological Risk Assessment	
	3.2 The Proposed Assessment Scenarios	
	3.3 The Priority Contaminants to be Modelled	
	3.4 Mathematical Modelling	
	3.5 Accidents and their Consequences	
	3.6 Emissions to Groundwater	
	3.7 Hydrogeological Completion Criteria	
4		
4	CONCLUSIONS	
	4.1 Compliance with the Candill Regulations	
	4.2 Compilation with the Gradiawater regulations	20
Tab	les	
Table	1.1: Proposed Landfill Phase Heights and Volumes	6
	1.2: Leachate Source Term Concentrations – Inert Cells (mg/l)	
	1.3: Leachate Source Term Concentrations – Non-Hazardous Cells (mg/l)	
	2.4: Contaminant Environmental Assessment Levels	
Table	3.1: Hazardous Contaminants	13
Table	3.2: Non-Hazardous Polluting Contaminants	13
	3.3: Declining Source Term Parameters – Managed & Post Managed Scenarios	
	3.4 Aquifer Characteristics - Post Managed Scenarios	
Table	3.5: Aquifer Pathway Properties	16
Table	3.6: Unsaturated Pathway Properties	16
Table	3.7: Infiltration to Waste	16
Table	3.8: Cell Dimensions and Waste Properties	17
Table	3.9: Source Concentrations – Inert Cells 6-8	17
Table	3.10 Source Concentrations – Non-Hazardous Cells 9-13	17
Table	3.11: Engineered Barrier System (EBS) Parameters – Inert Cells 6-8	18
Table	3.12: Engineered Barrier System (EBS) Parameters – Non-Hazardous Cells 9-13	18
Table	3.13: Calculated Post Management Leakage from Cell Specific EBS	19
	3.14: Accidents and Consequences	
	3.15: Model Results – 50 <sup>th</sup> %ile (most likely)	
	3.16: Model Results – 95 <sup>th</sup> %ile (worst case)	
	3.17: Predicted Cell Boundary Monitoring Well Concentrations	
	3.18: Completion Criteria for Ammoniacal Nitrogen in Leachate	
Table	3.19: Completion Criteria for Leachate Heads in Cells	22

## Hydrogeological Assessment - Part 2 LandSim Report

## **Figures**

Figure 1 Site Location	3
Figure 2 Landfill Cell Engineering Layout	4
Figure 3 Waste Acceptance Criteria for Landfills	8

# **Appendices**

Appendix A LandSim Model Input Parameters Appendix B LandSim Model Results

## 1 INTRODUCTION

#### 1.1 Preamble

Integrated Materials Solutions Limited Partnership (IMS) is seeking planning permission and an EPA licence review for landfilling of a mixture of non-hazardous and inert wastes at a proposed Circular Economy Campus and Integrated Waste Management Facility at the existing inert landfill facility at Hollywood Great, Nag's Head, Naul, Co. Dublin (hereinafter referred to as the IMS facility).

The location of the IMS facility and associated application boundary for the proposed development is shown in **Figure 1**.

The IMS facility is a former limestone and shale quarry that has been operating as an engineered landfill site since 2003. Under the terms of the current planning permissions and the existing Waste Licence (Ref. W0129-02) issued by the Environmental Protection Agency (EPA), only waste which meets the criteria for inert landfill as set out in the Landfill Directive (Directive 1999/31/EC) may be accepted at the site. The current cap on the waste volumes accepted at the site is restricted to 500,000 tonnes per annum both by the planning consents and the Waste Licence.

IMS is seeking consent to diversify the waste materials accepted at the Hollywood site to include a broader mix of wastes at a series of specially engineered cells to meet the demands of the construction sector and to allow for State self-sufficiency in particular waste streams. The proposal consists of permission for a 25-year lifetime of operation to develop engineered landfill cells on the site to landfill a mixture of non-hazardous and inert wastes at a rate of 500,000 tonnes per annum as per the existing operation.

A Hydrogeological Risk Assessment (HRA) is required to support the Environmental Impact Assessment Report (EIAR) for the planning and licensing applications and to specifically address the potential for the proposed facility to cause unacceptable impact to the water environment, principally from leachates leaking directly into groundwater and indirectly into surface water receptors. The report presents the methodology and results of this Hydrogeological Risk Assessment.

## 1.2 Site Location

The IMS facility is situated on a former quarry that operated from the 1940s up to 2007. Permission for the infilling and restoration of the former quarry using inert waste was first granted in 1988 and has continued to the present date. The total area in the ownership of IMS is 54.4 hectares. The principal physical characteristics of the operational landfill site are evident in **Figure 2** and includes:

- Site entrance, buildings and other infrastructure situated outside the quarry void on the western boundary
  of the IMS facility;
- Fully restored inert waste cells (Cells 1, 2, 3, 4 and 5) in the west of the IMS facility;
- The area to the south and east of the facility outside of the quarry void that represents natural ground capped by former quarry spoil and is characterised by a declining topographic elevation to the east;
- · The principal quarry void that includes:
  - Haul roads and ramps to allow vehicle access across the site;
  - Infilled inert waste cells currently under restoration (Cells 1, 2, 3, 4 and 5);
  - Presently operational engineered inert waste cells (Cell 6 & 7);
  - Currently empty void to be engineered as new waste cells (Cells 8-13);
  - 3 No. small ponds typically used for settlement of surface water pumped intermittently from the quarry void during active operation of the IMS facility.

# 1.3 Proposed Landfill Engineering

**Figure 2** shows the proposed layout of the site. The key elements of this layout of relevance to this risk assessment include:

- Specially engineered landfill cells for inert and non-hazardous wastes;
- Surface water management infrastructure for the landfill to capture, attenuate and treat storm water;
- Leachate management infrastructure for the landfill to capture and store leachate prior to tankering off site.

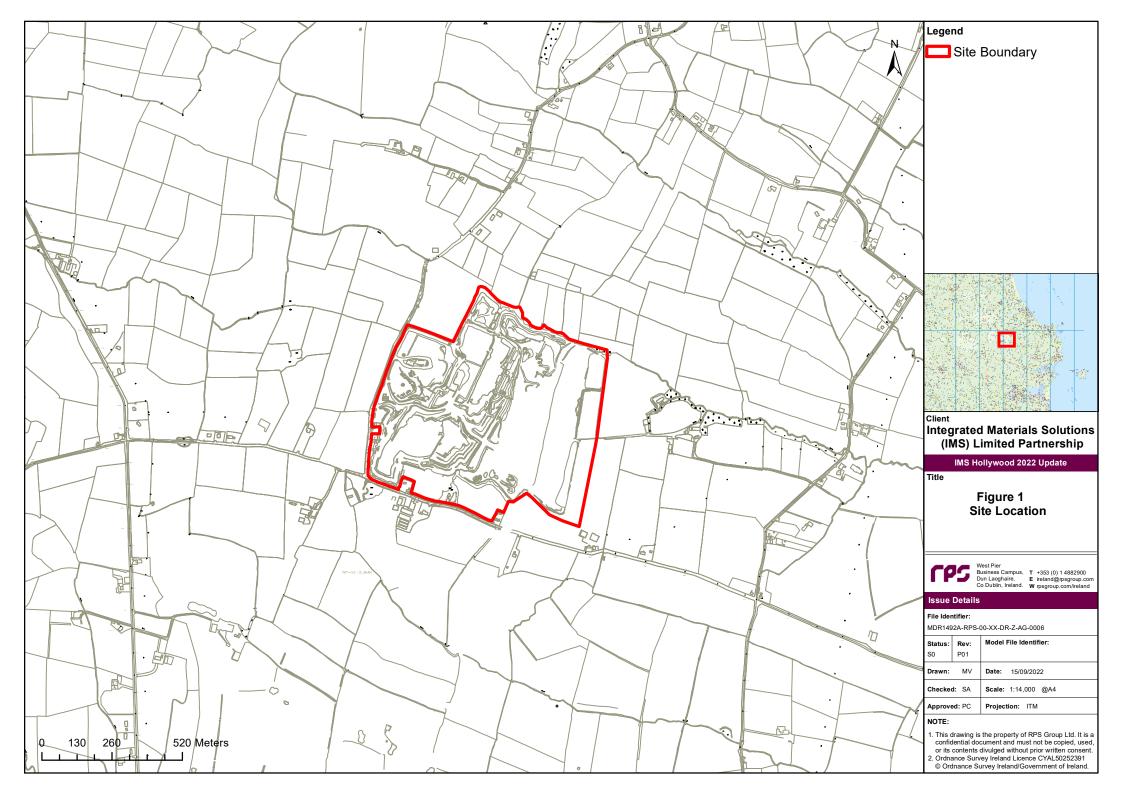
Further detailed descriptions of the proposed engineering and phasing of the landfill cells is presented in the Environmental Impact Assessment Report (EIAR) supporting the planning application for the site.

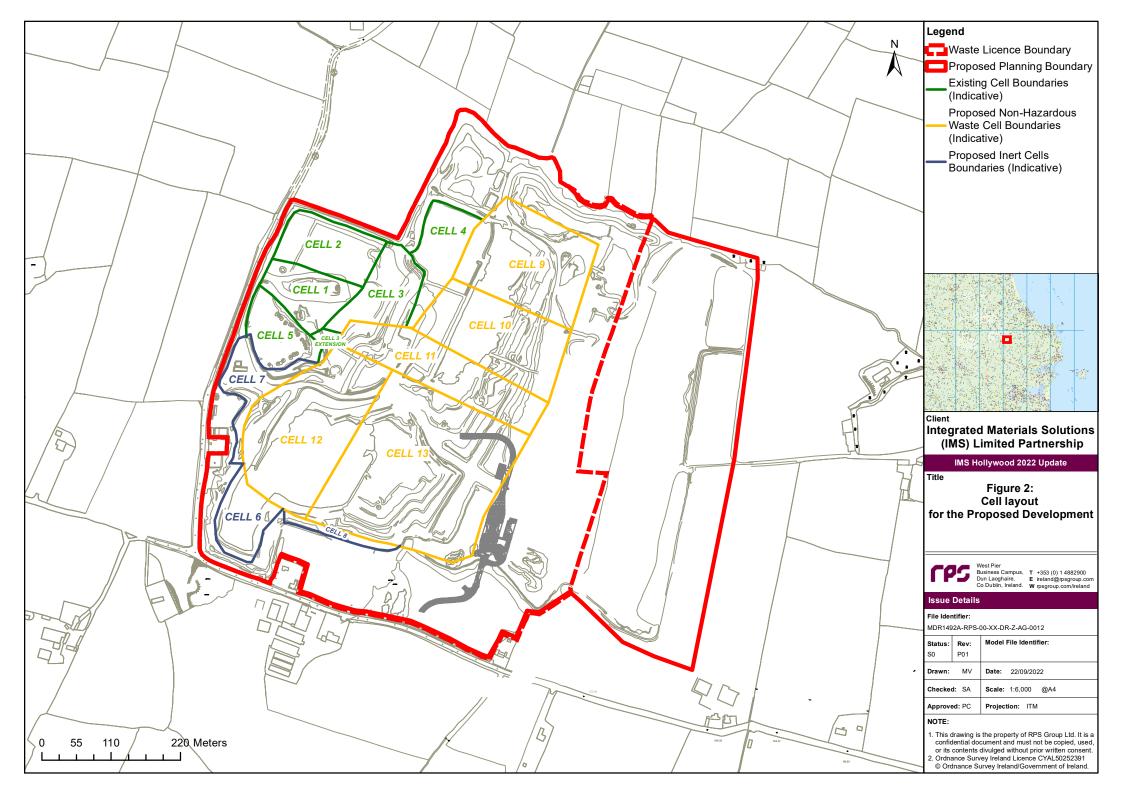
# 1.4 Report Objectives and Methodology

The objective of this report is to undertake a hydrogeological risk assessment for the proposed development at using an appropriate risk tool and methodology recognised by regulatory guidance. The risk assessment will utilise a probabilistic model (LandSim) constructed using a combination of site-specific information where available and published literature information or professional judgement where site-specific information is not available.

Being a probabilistic model, input data that is uncertain will be defined within likely ranges to allow a percentile probability of possible outcomes to be calculated. In keeping with guidance, the risk assessment will report 95th percentile (95th%ile) values, i.e. the value that is only exceeded on five occasions in one hundred. This percentile is used to ensure the assessment remains highly likely to predict the worst-case outcome, or put another way, where a compliant outcome is predicted, regulators can have high confidence that this is a likely outcome.

A substantial amount of work has been undertaken on the hydrogeological setting of the site based on extensive intrusive investigation and groundwater monitoring. This evidence, and a revised Conceptual Hydrogeological Model based on it, has been reported separately within the Hydrogeological Assessment of the Integrated Waste Management Facility at Hollywood Landfill Report (RPS Report MDR1492Rp00013). This report is therefore the source of all the hydrogeological data and conceptual setting required for the LandSim model.





## 2 CONCEPTUAL HYDROGEOLOGICAL SITE MODEL

## 2.1 Source Term Characteristics

## 2.1.1 Waste Types

The proposed landfill site will be classified as a non-hazardous landfill site comprising circa 25% inert and 75% non-hazardous wastes (indicative fractions only). The 75% non-hazardous material deposited is expected to comprise the following predominant waste types:

- 57% soils;
- 12% Incinerator Bottom Ash (IBA);
- 3% inert fines;
- 1.5% Waste Water Treatment Plant (WWTP) sludges; and
- 1.5% non-specified non-hazardous waste.

Inert waste is defined as follows;

- (a) It does not undergo any significant physical, chemical or biological transformations;
- (b) It does not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm to human health; and
- (c) Total leachability, pollutant content and the ecotoxicity of its leachate are insignificant and, in particular, do not endanger the quality of any surface water or groundwater.

Based on this definition of inert waste, the proportion of waste should not produce any leachate that could result in any significant discharge of Hazardous Substances or Non-Hazardous Pollutants throughout the lifecycle of the site. Therefore, with regard to this inert waste stream, the site does not present a risk to groundwater and surface water quality. However, it is considered that a quantitative risk assessment is required for these phases given that the landfill is located where the receiving environment is sensitive, i.e. constructed above saturated strata considered to be viable as water resources or in continuity with downgradient surface water bodies. Both of these criteria are attributes of the Hollywood landfill site.

#### 2.1.2 Source Areas

The site will be engineered as phased cells within the existing quarry void space as shown on **Figure 2** and as detailed in Chapter 5 of Volume II of the EIAR. Note that some cell layouts have been rationalised for this application whereby those modelled in this assessment as phases 12 and 13 are now designated as Cell 12 and phases 14A, 14B and 15 are now designated as Cell 12 for this application.

The phase sizes together with the fill depth and durations of the proposed phases are shown in **Table 1.1**. Durations of the phases has been determined by adopting the proposed 500,000 tonnes per annum input rate and a volume conversion factor equal to 1.9 tonnes per cubic metre (t/m³).

Table 1.1: Proposed Landfill Phase Heights and Volumes

Proposed Cell	Modelled Phase	Maximum Waste Depth (metres)	Lift Duration (years)	Phase Void Volume (m³)	Cumulative Void Volume (m³)
6	6	32	2.0	268,530	268,530
7	7	25	2.3	306,182	574,712
8	8	25	3.8	495,165	1,069,877
9	9	19	3.0	398,571	1,468,448
10	10	24	3.3	433,707	1,902,155
11	11	28	3.1	401,799	2,303,954
12	12	35	3.0	392,421	2,696,375
	13	34	2.4	318,986	3,015,361
13	14A	30	1.6	207,758	3,223,119
	14B	29	1.2	155,894	3,379,013
	15	31	6.9	907,816	4,286,829

## 2.1.3 Leachate Quality

For the risk assessment, leachate quality for the site has been characterised using ranges considered conservatively representative of landfill leachate for a non-hazardous landfill nor receiving household wastes. Four indicative leachate contaminants of concern have been modelled based on the expected waste streams described above. A combination of hazardous and non-hazardous inorganic, heavy metal and organic contaminants have chosen reflecting the types of contaminant potentially present within the non-hazardous waste materials.

Soils are by far the largest waste type comprising 76% of the non-hazardous material (57% of total wastes) and are most likely to be impacted by petroleum hydrocarbons and heavy metals. Naphthalene has been modelled as a representative of diesel range organics and PAH contaminants more generally due to it being the lightest and most environmentally mobile of the PAH compounds and the most abundant component of coal tar. Naphthalene is also classified by the International Agency for Research on Cancer (IARC) as possibly having the ability to cause cancer in humans.

Cadmium has been modelled due to its toxicity and as it is a Priority Hazardous Substance as defined by Annex X of the Water Framework Directive (2000/60/EC).

As IBA is the next largest waste type comprising 16% of the non-hazardous material (12% of total wastes), and is characterised by soluble phytotoxic metal salts, copper has been modelled as a landfill leachate contaminant due to its presence up to c. 0.5 mg/l in IBA leachates studied from the UK (Assessment of Hazard Classification of UK IBA, WRc, 2002).

Ammoniacal nitrogen has been modelled as it is a highly mobile contaminant commonly produced within landfill leachate and leaching of IBA up to c. 10 mg/l (Testing of Residues from Incineration of Municipal Solid Waste, EA Science Report P1-494/SR2, 2004). Ammoniacal Nitrogen is an aquatic toxin and conservative environmental fate-transport properties, i.e. having negligible retardation and biodegradation potential.

These chemical species are shown in **Table 1.2** and **Table 1.3** together with the reason for their inclusion within the risk assessment. A representative leachate term has been derived based on landfill Waste Acceptance Criteria (WAC) reproduced as that shows the concentration limits expressed in mg/kg at L/S10. Accordingly, 10% of these figures has been taken to represent the leachate concentration in mg/l.

It is recognised the likely leachate resulting from a predominantly solid, soil-based waste mass will generate a much lower strength leachate than landfills containing putrescible domestic type wastes. It would be overly pessimistic to assign leachate concentrations equal to the maximum limits of hazardous waste acceptance, the leachate source has been based on a maximum of 10% of the WAC limit for hazardous waste where available and a most likely concentration of 1%. A minimum of zero has been assigned to recognise soils having a reasonable likelihood of not containing the modelled contaminants.

In the absence of a WAC limit for specific organic compounds, maximum leachate concentrations for naphthalene have been based on solubility limits with the maximum concentration at 10% (and 1% most likely) of the maximum solubility for the non-hazardous cells and 1% (and 1% most likely) of the maximum solubility for the inert waste cells. Again, a minimum of zero has been assigned for all phases to recognise soils having a reasonable likelihood being absent of the contaminant.

In the absence of specific leachate data, ammoniacal nitrogen concentrations have been conservatively defined as ranging between 5 and 50 mg/l for non-hazardous cells and between 2 and 20 mg/l for the inert cells.

Table 1.2: Leachate Source Term Concentrations – Inert Cells (mg/l)

Leachate Species			Source of data		
	inclusion	Min	Likely	Max	
Hazardous Substa	ances				
Cadmium	Priority heavy metal	1e-30	4e-06	4e-05	10%/1%/0% inert WAC
Naphthalene	Diesel hydrocarbon indicator	1e-30	0.031	3.1	10%/1%/0% Maximum Solubility
Non-Hazardous P	olluting Substances				
Ammonia	Mobile ecotoxin	2	-	20	Conservative Estimate
Copper	Ecotoxic metal in IBA	1e-30	0.002	0.020	10%/1%/0% inert WAC

Table 1.3: Leachate Source Term Concentrations - Non-Hazardous Cells (mg/l)

Leachate Species			Concentration Range			
	inclusion	Min	Likely	Max		
Hazardous Substa	ances					
Cadmium	Priority heavy metal	1e-30	0.001	0.01	10%/1%/0% inert WAC	
Naphthalene	Diesel hydrocarbon indicator	1e-30	0.31	31	10%/1%/0% Maximum Solubility	
Non-Hazardous Polluting Substances						
Ammonia	Mobile ecotoxin	5	-	50	Conservative Estimate	
Copper	Ecotoxic metal in IBA	1e-30	0.050	0.500	10%/1%/0% inert WAC	

Figure 3 Waste Acceptance Criteria for Landfills

Parameter	Inert waste landfill	Stable non-reactive/ non-hazardous	Hazardous waste landfill			
Parameters determined on the waste – total concentration						
Total organic carbon (%w/w)	3%	5%	6%*			
Loss on ignition (%w/w)			10%			
BTEX (mg/kg)	6					
PCBs (7 congeners) (mg/kg)	1					
Mineral oil C10-C40 (mg/kg)	500					
PAHs (mg/kg)	100					
рН		>6				
Acid neutralisation capacity		To be evaluated	To be evaluated			
Limit values (mg/kg) for com	pliance leachi	ng test using BS EN 124	57 at L/S 10 l/kg			
As (arsenic)	0.5	2	25			
Ba (barium)	20	100	300			
Cd (cadmium)	0.04	1	5			
Cr (chromium (total))	0.5	10	70			
Cu (copper)	2	50	100			
Hg (mercury)	0.01	0.2	2			
Mo (molybdenum)	0.5	10	30			
Ni (nickel)	0.4	10	40			
Pb (lead)	0.5	10	50			
Sb (antimony)	0.06	0.7	5			
Se (selenium)	0.1	0.5	7			
Zn (zinc)	4	50	200			
CI (chloride)	800	15,000	25,000			
F (fluoride)	10	150	50			
SO <sub>4</sub> (sulphate)	*1,000	20,000	50,000			
Total dissolved solids (TDS)	4,000	60,000	10,0000			
Phenol index	1					
Dissolved organic carbon at own pH or pH7.5-8.0®	500	800	1,000			

## 2.1.4 Infiltration and Leachate Levels

For the uncapped filling stages of the landfill, an effective rainfall figure of 758 mm/year has been used (as per the drainage design employed in the EIAR). Under capped conditions, the infiltration rate has been set at 23 mm/annum representing 3% of the annual effective rainfall of the site.

During leachate level control within the landfill, excess leachate volumes above these values (representing the volume required to be removed from storage within the waste to maintain leachate levels above the liner during landfilling and aftercare) is removed from site. No leachate recirculation has been included in the model.

Leachate levels in the waste have been predicted using LandSim. Leachate levels within the landfill are dependent on the water balance for the site. LandSim calculates a water balance for the site, taking into consideration the following assumptions:

- Open waste areas are subject to direct infiltration from rainfall comprising annual average precipitation as recommended by guidance;
- Permanent landfill restoration comprises a clay cap;

- No absorptive capacity of waste accounted for as recommended by guidance due to waste moisture release on compaction;
- Leachate levels controlled within the landfill cells during active landfilling and aftercare and then allowed to recover during post landfilling management period;
- A post management of 25 years has been modelled; and
- No liquid wastes are proposed for disposal in the landfill.

The decline in leachate concentrations is strongly controlled by water inputs to the waste mass as described above and LandSim uses a kappa value to determine this declining source behaviour of landfills. The total water inputs in waste are based on the infiltration pre and post capping.

## 2.2 Contaminant Pathways

During the modelled landfill lifetime of 20,000 years, the pathways via which contaminants contained in landfill leachate may leave the site change depend on the form of landfill operation and leachate control. Three main phases of the landfill have been considered as set out in the following paragraphs.

## 2.2.1 Active Landfilling

Each phase is modelled to generate leachate during the open waste phase of the site. The period of open waste infiltration is shown in **Table 1.1**.

## 2.2.2 Post Restoration during Management Period

Once active landfilling has been completed, the site will be restored with a clay cap as described in Chapter 5 of Volume II of the EIAR to prevent further uncontrolled ingress of rainfall to generate leachates. Leachate controls will continue following restoration for the duration of the 25-year management period.

# 2.2.3 Post Management Period

Following termination of controls at the end of the management period, leachate levels will be determined by the balance of the volume of infiltrating rainfall entering the landfill with leachate leaving the landfill through the engineered barrier.

Flow of leachate through the landfill engineering will occur primarily through defects in the membrane liner comprising holes and tears created during installation. LandSim models the flow through such defects but also takes account of further membrane deterioration as a result of oxidation by leachate with a resulting further increase in permeability. This gradual increase in permeability is modelled by LandSim over a default period of 1,000 years with the final permeability value equalling that of the mineral component of the liner alone following the relative effective loss of permeability by the membrane.

After 1,000 years, equilibrium becomes established between infiltration and leakage through the engineered barrier system. The head of leachate that exists at this point is calculated as part of the risk assessment to test whether leachate breakout is predicted.

#### 2.2.4 Unsaturated Zone

An unsaturated zone is present beneath the site as evidenced by the groundwater monitoring undertaken at the site described within the Hydrogeological Assessment (RPS Report MDR1492Rp00013). The basal engineering is proposed to form a cell base at an elevation of 105 mAOD, Given a proposed cell engineered barrier thickness of 1 metre, the unsaturated zone has a upper elevation of 104 mAOD. Groundwater monitoring within the Namurian strata underlying the majority of the site show a dipping water table toward the east ranging from a maximum elevation of c. 102 mAOD to 100 mAOD (see Hydrogeological Assessment Report). This gives an unsaturated zone thickness for the model ranging between 2 and 4 metres with a most likely thickness of 3 metres.

In the absence of any quantitative measurements, an unsaturated hydraulic conductivity has been defined one order of magnitude lower than that for the saturated zone (see below). This is considered a conservative assumption.

## 2.2.5 Vertical Pathway

No separate vertical saturated pathway has been modelled beneath the site as this is not supported by the site Conceptual Hydrogeological Model.

#### 2.2.6 Saturated Zone

A detailed description and discussion on the character of the saturated strata beneath the site is provided in the Hydrogeological Assessment. For the purposes of the LandSim assessment, it is concluded that on the basis of the hydrogeological evidence gathered at the site, the shallow bedrock strata can be treated as an equivalent porous medium due to structural fabric of these rocks, characterised by significant weathering and fracturing. Site specific pumping tests have been carried out and indicative transmissivities determined. A representative range of associated hydraulic conductivity of between 1e<sup>-05</sup> and 1e<sup>-04</sup> m/s has been assigned to the saturated pathway.

A mixing zone thickness of between 5 and 10 metres has been assigned to the underlying aquifer which is judged to be appropriate for this setting and bedrock character for the pathway under consideration.

Shales are typically characterised by low porosity below 0.05. A nominal effective porosity range of 0.01 to 0.10 has been assigned to the Namurian strata to account for the likely presence of areas of negligible fracturing and more developed weathering related porosity within the bedrock.

#### 2.2.7 Attenuation Mechanisms

#### 2.2.7.1 **Dilution**

Both during and following management of the site, leachate strength will be diluted by infiltrating rainfall as contaminants are progressively flushed from the waste mass as modelled by LandSim as a declining source. Following the cessation of management controls and following recovery of leachate levels, leachate migrating from the site via leakage into groundwater will be subject to dilution in groundwater flowing beneath the site.

#### 2.2.7.2 Retardation

Retardation processes will occur in the mineral liner component of the composite liner and within the geological strata whereby organics and metals may be subject to sorption processes including adsorption, chemisorption, absorption and ion exchange.

Cation exchange processes will occur in the landfill liner but this is not included as an attenuation process in the software used for the assessment. This is considered a conservative approach to the assessment.

For organic compounds, Koc values were applied from the Environment Agency adopted sources. To calculate Kd values for organic compounds, LandSim requires the fraction of organic carbon of the pathway under consideration. Whilst elevated organic carbon can be expected to be present within Namurian strata beneath the site, a conservative low value of 0.001 has been assigned for the purposes of the assessment.

#### 2.2.7.3 Degradation

Degradation processes in the clay barrier and saturated zone may be limited by the likely presence of anaerobic conditions directly surrounding the landfill site

Anaerobic half-life values naphthalene (200 to 1000 days) are provided in the ConSim user manual. Degradation of these compounds may therefore occur under anaerobic conditions.

The National Groundwater and Contaminated Land Centre (NGWCLC) report NC/02/49 'Review of ammonium attenuation in soil and groundwater', provides tentative guideline half-life values for ammonium under aerobic conditions of 5 to 10 years, where there is a significant degree of fissuring.

# 2.3 Receptors

The key potential environmental receptors that could be impacted by the presence of the contaminant source on the site are summarised below:

- Receptor 1: Groundwater directly beneath the site (Hazardous Substances); and
- Receptor 2: Groundwater at the site boundary 60 metres down hydraulic gradient (Non-Hazardous Substances);

This assessment addresses both Receptors 1 and 2. **Table 2.4** summarises the Environmental Assessment Limits for the contaminants, which are employed in this assessment.

**Table 2.4: Contaminant Environmental Assessment Levels** 

Contaminant	Receptor	EAL* (mg/l)
Contaminant	1	2
Ammoniacal Nitrogen as N	-	0.39
Copper	-	0.001
Cadmium	0.0001	-
Naphthalene	0.0001	-

<sup>\*1 -</sup> Minimum Reporting Values (MRV) after Appendix 7 of EA HRA for Landfills (2003)

In the absence of a MRV for naphthalene, a concentration of 0.0001 mg/l has been adopted as a conservative precaution.

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Page 11

<sup>\*2 –</sup> UK Drinking Water Standards (DWS), or EQS Freshwater, whichever is the lowest.

## 3 HYDROGEOLOGICAL RISK ASSESSMENT

# 3.1 The Nature of the Hydrogeological Risk Assessment

A complex risk assessment methodology is used for the site for the following reasons;

- The classification of waste to be deposited at the site as non-hazardous;
- The probability that leachate in the landfill will contain hazardous and non-hazardous polluting substances; and
- The uncertainty associated with the pathway properties and the leachate quality.

# 3.2 The Proposed Assessment Scenarios

## 3.2.1 Lifecycle Phases

It is recognised that the hydrogeological risk assessment must assess the landfill installation compliance with the requirements of the Groundwater Regulations throughout the lifecycle of the landfill, i.e. from the start of the operational phases until the point at which the landfill no longer presents an environmental risk.

Infiltration to the site will vary throughout the lifecycle of the site from when the phases are open to incident rainfall during filling to when a low permeability cap is placed over the waste. This variation in infiltration is represented by the assessment.

The assessment assumes that site management control measures are in place in for a period of 25 years following the cessation of landfilling. The models therefore assume that leachate levels are controlled at or below the permitted level for this period of time, after which control measures will be removed.

Once management control ceases, the leachate level will vary according to the balance between inflows and outflows to the site. If inflows exceed outflows, leachate breakout at the surface may ultimately occur. The potential for leachate breakout is assessed by the LandSim model.

Three stages of the site lifecycle are therefore assessed;

- Active landfilling, with operational controls (Operational Period) used to predict leachate quality;
- Post filling and capping, with operational controls, i.e. leachate abstraction used to predict likely completion criteria after 25 years management; and
- Post filling and capping, without operational controls, i.e. no leachate abstraction used to predict advective impacts following equilibrium leachate levels.

#### 3.2.2 Source Term Decline

The change in leachate concentration of non-volatile species over time will be controlled by how rapidly the waste mass is flushed by infiltration and by how readily any non-volatile species are released from the solid to the aqueous phase. The rate of release from the solid to liquid phase is defined by the kappa value (LandSim V2.5). Default kappa values are presented in LandSim.

# 3.2.3 Engineered Barrier System Degradation

The properties of the geomembrane used in the cell lining system for the non-hazardous phases will change throughout the lifecycle of the site as a result of degradation. This degradation is modelled by LandSim.

The LandSim default values for defect values to the membrane liner following installation have been adopted. Six stages in the lifecycle of a membrane liner in terms of the generation of defects is accounted for within LandSim;

- Liner construction;
- During landfilling;

- A period after landfilling during which no defects are generated;
- · Liner degradation due to oxidation;
- · Further stress cracking during oxidation; and
- Continuing deterioration.

# 3.3 The Priority Contaminants to be Modelled

Due to the nature of the proposed waste, there is a potential for a range of hazardous and non-hazardous polluting substances to be present in the leachate generated. The substances selected as representative of the leachate for the purposes of the risk assessment are listed in **Table 3.1** and **Table 3.2** respectively.

**Table 3.1: Hazardous Contaminants** 

Substance	Properties
Cadmium	Low mobility metallic ion
Naphthalene	Hydrophobic organic chemical

**Table 3.2: Non-Hazardous Polluting Contaminants** 

Substance	Properties
Ammoniacal Nitrogen	Inorganic cation
Copper	Highly mobile metallic ion

Metals including cadmium and copper will be subject to retardation processes but will not degrade between the source and receptor. Organic compounds will be subject to retardation but will also be subject to biodegradation, which will serve to reduce the mass of these compounds. Ammoniacal nitrogen will be subject to retardation processes, including cation exchange reactions, but will also degrade by nitrification processes.

The following compliance points are used for the assessment:

- The base of the engineered barrier system post management period (hazardous substances); and
- Groundwater at the edge of the site boundary post management period (non-hazardous polluting substances).

# 3.3.1 Leachate Drainage Systems and Leachate Head Control

Leachate head within the landfill will be controlled to within 1 metre above the engineered cell bases. To this end the leachate within the waste will be monitored and pumping from the landfill can be initiated to maintain leachate levels within this range as required.

An assessment will be made to determine whether leachate breakout, that occurs when leachate depths exceed a level where containment is lost, is predicted for each phase of the landfill.

# 3.3.2 Capping

An engineered low permeability clay cap will be placed across the completed landfill in accordance with a CQA programme agreed with the Regulatory Authorities. The purpose of the cap is to minimise infiltration to the waste mass and therefore minimise the production of leachate. Routine inspections of the cap will be undertaken during the period of management control and repairs made as necessary.

In the event that the volumes of leachate produced at the site indicate that the cap is not performing as designed, the integrity of the cap will be checked and repairs made as necessary.

## 3.3.3 Basal Engineering Design

Placement of the lining system will be undertaken in accordance with permitted requirements agreed with the Regulatory Authorities. The purpose of the lining system is to facilitate the collection of leachate and to minimise the migration of leachate from the base of the site.

#### 3.3.4 Leachate Recirculation

No leachate recirculation to waste is proposed for the site.

## 3.3.5 Monitoring

Following the end of the management control period, groundwater and leachate monitoring will be continued to assess if the landfill is performing as designed. The appropriate control and trigger levels will be assigned to ensure performance is assessed to agreed limits.

# 3.4 Mathematical Modelling

#### 3.4.1 Justification

The conceptual model of the site has been developed according to a source-pathway-receptor methodology. The conceptual model development and risk assessment has been undertaken in accordance with regulatory guidance, and this has been implemented using LandSim Version 2.5.

LandSim software is used for the assessment, as it is applicable to the conceptual model for the site. LandSim is used to predict leachate concentrations and elevations during and following the management period of the site, including changes in infiltration, a declining source and degrading leachate control measures. The model accounts for the variability and uncertainty of the input parameters.

## 3.4.2 Modelling Approach

LandSim has been used to model the full lifecycle of the landfill, the degree of leakage through the cell bases during and following the management period and predict leachate concentrations at the specified compliance points. The model also predicts the likely head of leachate that develops following cessation of management controls.

The results of the model are assessed and reported using the 95% percentile. This is considered worst case is considered to represent reasonable worst case for a site where significant potential risk is present. The 50% percentile is also reported where this is useful as this provides the most likely outcome from the model, i.e. 50% of solutions were lower and 50% higher than the reported value.

#### 3.4.3 Water Balance Calculations

LandSim undertakes water balance calculations as part of the model. The model predicts the amount of leachate generated that can be extracted from the leachate drainage layer. LandSim assumes all infiltration enters waste over the total surface area of the site. For the uncapped scenarios, an effective rainfall figure of 758 mm/annum has been used (EIAR). Under capped conditions, the infiltration rate has been set at 23 mm/annum representing 3% of the annual effective rainfall of the site.

## 3.4.4 Model Parameterisation

**Table 3.3** to **Table 3.12** provide the model parameters used for the risk assessment. The scenarios were used to assess the potential impact on the groundwater at the base of the unsaturated zone beneath the site for hazardous substances and in groundwater 60 m down hydraulic gradient of the site for non-hazardous substances.

Table 3.3: Declining Source Term Parameters - Managed & Post Managed Scenarios

Decline in Contaminant Concentration in Leachate	Unit		Range		Justification
Kappa Values			С	т	
Ammoniacal Nitrogen	kg/l		0.59	0	LandSim default kappa values
Copper	kg/l		0.0664	-0.0488	
Cadmium	kg/l		0.1589	0.0823	
Naphthalene	kg/l		0.0298	0.2919	LandSim default kappa value for chloride (conservative)
Contaminant Half-liv	'es				
Unsaturated Pathway					
Ammoniacal Nitrogen	years	UNIFORM(5,10)			Naphthalene and half-life taken from the ConSim user manual suggested input parameters for an anaerobic pathway
Copper	years	SING(1e9)			
Cadmium	years	SING(1e9)			
Naphthalene	years	LOGUNIFORM(1, 10)			
Aquifer Pathway					
Ammoniacal Nitrogen	years	UNIFORM(5,10)			Based on Table 4.2 NGWCLC report NC/02/49 - maximum increased by an order of magnitude
Copper	years	SINGLE(1e9)			No degradation
Cadmium	years	SINGLE(1e9)			No degradation
Naphthalene	years	LOGUNIFORM(1, 10)			ConSim user manual

**Table 3.4 Aquifer Characteristics - Post Managed Scenarios** 

Aquifer Pathway	Units	Range	Justification
Pathway regional gradient	[1]	UNIFORM(0.004-0.006)	Representative of Namurian site measurements
Pathway hydraulic conductivity	m/s	LOGUNIFORM(1e-5,1e-4)	Hydrogeological Assessment Report
Retardation parameters for aquife	er		
Ammoniacal Nitrogen Kd	l/kg	UNIFORM(0.5,2)	EA recommended values
Copper Kd	l/kg	UNIFORM(127,295)	LandSim suggested values
Cadmium Kd	l/kg	LOGUNIFORM(1.6,1500)	LandSim suggested values
Naphthalene Koc	l/kg	SINGLE(1288)	LandSim suggested values
Fraction of Organic Carbon	fraction	UNIFORM(0.0001)	Conservative judgement for Namurian strata

**Table 3.5: Aquifer Pathway Properties** 

Aquifer pathway dimensions for phase	Unit	Range	Justification
Pathway length	m		Calculated by LandSim
Pathway width	m		Calculated by LandSim
Mixing Zone Thickness	m	UNIFORM(5,10)	Expected range for pathway
Conductivity	m/s	LOGUNIFORM (1e-005,0.0001)	Based on site measurements
Regional gradient	[1]	UNIFORM(0.04,0.06)	Based on site measurements
Pathway porosity	[1]	LOGUNIFORM(0.01,0.1)	Expected range for shale

**Table 3.6: Unsaturated Pathway Properties** 

Parameter	Unit	Range	Justification
Pathway length	m	UNIFORM(1,3)	From on-site monitoring
Moisture content	[1]	UNIFORM(0.005,0.05)	50% of aquifer porosity
Pathway Density	kg/l	UNIFORM(2.0,2.5)	Expected range for shale

**Table 3.7: Infiltration to Waste** 

Infiltration Information	Unit	Range	Justification
Cap design infiltration	mm/year	SINGLE(23)	3% average annual rainfall
Infiltration to open waste	mm/year	SINGLE(758)	100% average annual rainfall
Time Offset	Years	0 - 21 depending on phase	Phasing data from ESIR
End of filling	Years from start of waste deposit	1.2 - 6.9 depending on phase	Phasing data from ESIR
Duration of Management Period	Years from start of waste deposit	25	Management period set at 25 years after cessation of filling

**Table 3.8: Cell Dimensions and Waste Properties** 

Cell	Unit Value		Justification									
Cell		6	7	8	9	10	11	1	2		13	
Phase		6	7	8	9	10	11	12	13	14a	14b	15
Cell width	m	84	53	57	115	125	199	58	42	122	40	84
Cell length	m	71	134	160	163	113	63	118	114	43	72	71
Cell base area	ha	0.5964	0.7102	0.912	1.8745	1.4125	1.2537	0.6844	0.4788	0.5246	0.2880	0.5964
Number of Cells	[1]	1	1	1	1	1	1	1	1	1	1	1
Total base area	ha	0.5964	0.7102	0.912	1.8745	1.4125	1.2537	0.6844	0.4788	0.5246	0.2880	0.5964
Total top area	ha	5.7828	1.7898	1.9980	3.8805	4.1405	4.2714	4.7402	3.7800	2.8016	2.4012	5.7828
Final Waste Thickness	m	31	32	25	19	24	28	35	34	30	29	31
Head of leachate when surface water breakout occurs	m	11	21	21	11	11	11	11	11	11	11	11
Waste porosity	fraction	fraction SINGLE(0.3)										
Field capacity	fraction	raction SINGLE(0.0285)										
Waste density	kg/l	UNIFOR	RM(1.9)									_

Table 3.9: Source Concentrations - Inert Cells 6-8

Contaminant	Unit	Range	Justification
Ammoniacal Nitrogen	mg/l	LOGUNIFORM(2,20)	Conservative estimates for landfill
Copper	mg/l	LOGTRIANGULAR(1e-030,0.002,0.02)	LandSim suggested values
Cadmium	mg/l	LOGTRIANGULAR(1e-030,4e-006,4e-005)	LandSim suggested values
Naphthalene	mg/l	LOGTRIANGULAR(1e-030,0.031,3.1)	Conservative range
Treated Leachate Recirculated	m³/hr	SING(0)	No leachate recirculation

Table 3.10 Source Concentrations - Non-Hazardous Cells 9-13

Contaminant	Unit	Range	Justification
Ammoniacal Nitrogen	mg/l	LOGUNIFORM(5,50)	Conservative estimates for landfill
Copper	mg/l	LOGTRIANGULAR(1e-030,0.05,0.5)	LandSim suggested values
Cadmium	mg/l	LOGTRIANGULAR(1e-030,0.001,0.01)	LandSim suggested values
Naphthalene	mg/l	LOGTRIANGULAR(1e-030,0.31,31)	Conservative Range
Treated Leachate Recirculated	m3/hr	SING(0)	No leachate recirculation

Table 3.11: Engineered Barrier System (EBS) Parameters – Inert Cells 6-8

Criteria	Unit	Range	Justification
Head on EBS is given as:	m	UNIFORM(1)	Nominal managed leachate depth
Properties of EBS			
Hydraulic conductivity of EBS	S barrier (m/s)	LOGUNIFORM(5e-010,1e-009)	Half order of magnitude range with maximum of 10 <sup>-9</sup> m/s
Design thickness of EBS	m	SINGLE(1)	EIAR
Density of EBS	kg/l	UNIFORM(1.9,2.1)	Expected range for clay
Pathway moisture content	fraction	SINGLE(0.13)	EIAR
Pathway longitudinal dispersivity	m	SINGLE(0.1)	0.1 x pathway length
Retardation parameters for	EBS		
Ammoniacal Nitrogen Kd	l/kg	UNIFORM(0.5,2)	EA recommended values
Copper Kd	l/kg	UNIFORM(127,295)	EA recommended values
Cadmium Kd	l/kg	LOGUNIFORM(1.6,1500)	EA recommended values
Naphthalene Koc	l/kg	SING(1288)	EA recommended values
Fraction of Organic Carbon	fraction	SINGLE(0.001)	Estimated Conservative Values for Mercia Mudstone

Table 3.12: Engineered Barrier System (EBS) Parameters – Non-Hazardous Cells 9-13

Criteria	Unit	Range	Justification		
Head on EBS is given as:	m	SINGLE(1)	Nominal managed leachate depth		
Properties of EBS					
Hydraulic conductivity of compo	osite barrier (m/s)	LOGUNI(5e-10, 1e-9)	Half order of magnitude range with maximum of 10 <sup>-9</sup> m/s		
Design thickness of EBS	m	SINGLE(1)	EIAR		
Density of EBS	kg/l	UNIFORM(1.9,2.1)	Expected range for clay		
Pathway moisture content	fraction	SINGLE(0.13)	EIAR		
Pathway longitudinal dispersivity	/ m	SINGLE(0.1)	0.1 x pathway length		
Retardation parameters for EB	S				
Ammoniacal Nitrogen Kd	l/kg	UNIFORM(0.5,2)	EA recommended values		
Copper Kd	l/kg	UNIFORM(127,295)	LandSim suggested values		
Cadmium Kd	l/kg	LOGUNIFORM(1.6,1500)	LandSim suggested values		
Naphthalene Koc	l/kg	SINGLE(1288)	LandSim suggested values		
Properties of EBS					
Onset of FML degradation	Years since filling commenced	150	LandSim suggested values		
Time for area of defects to double	e Years	100	LandSim suggested values		
Membrane Defects (number pe	er hectare)				
Pin holes		UNIFORM(0, 750)	Default for fair quality		
Holes		UNIFORM(0, 150)			
Tears		TRIANGULAR(0, 5, 10)			

## 3.4.5 Sensitivity Analysis

The assessment uses a probabilistic approach therefore a sensitivity analysis is not required. The 95th%ile values are used as outputs from the model, which are representative of the worst-case performance of the landfill.

## 3.4.6 Calculated Hydraulics

A leachate head assessment is undertaken to investigate whether the leachate drainage system can maintain leachate levels below the permitted maximum. The results of this assessment are reported in **Table 3.13**.

Table 3.13: Calculated Post Management Leakage from Cell Specific EBS

Cell	Phase	Steady state leakage from EBS (I/day)	95 <sup>th</sup> %ile head on EBS (m)	50 <sup>th</sup> %ile flow to treatment plant (I/day)	95 <sup>th</sup> %ile flow to treatment plant (I/day)	95 <sup>th</sup> %ile Surface Breakout (I/day)
6	6	1,127	2.52	216.6	487.5	0
7	7	2,004	3.49	767.3	1,112.3	0
8	8	1,258	2.09	119.7	444.9	0
9	9	2,444	0.51	0	1,582.3	0
10	10	2,607	1.14	166.5	166.5	0
11	11	2,690	1.48	523.3	1,970.1	0
12	12	2,985	4.05	1,802.3	2,555.5	0
	13	2,380	4.75	1,552.9	2,042.9	0
13	14a	1,764	2.89	857.7	1,415.0	0
	14b	1,512	5.08	1,014.4	1,323.5	0
	15	3,641	6.07	2,610.9	3,320.6	0

The leachate heads predicted in the above table are only reported to demonstrate that the rate of leachate production post management is not sufficient to result in leachate breakout from the site. The Post Managed scenario model predicts that there is no surface breakout of leachate during lifecycle of the site at the expected values (50th%ile values) and the worst-case values (95th%ile values).

# 3.5 Accidents and their Consequences

The accidents and failure scenarios considered to be applicable to the site, with appropriate actions are summarised in **Table 3.14**.

**Table 3.14: Accidents and Consequences** 

Scenario	Likelihood of Occurring	Consequence	Action
Structural failure/compactor driver collision with wells/subsidence	Moderate		Minimise risk of potential leachate well damage by placement of concrete rings. Target pads to be installed for future leachate wells.
Stability failure/pore water pressure/subsidence	Low	Failure of side wall liner	Stability risk assessment undertaken to quantify risk design factor of safety.
Sub grade failure/stability failure/subsidence	Low	Failure of artificial sealing liner	Stability risk assessment undertaken to quantify risk and design factor of safety.
Failure of leachate abstraction system	Moderate	Recovery of leachate levels	The leachate management system will be designed to allow routine maintenance.  Leachate abstraction points will be replaced/added to if required.

In the event that the basal lining system for the site failed, the leakage of leachate from the base of the site would be ultimately controlled by the amount of water entering the landfill via infiltration through the landfill cap. The integrity of the cap therefore exerts a strong control on the level of impact resulting from liner failure.

The greatest risk of capping layer failure is during the early stage in the lifecycle of the site, during the period of highest rates of waste settlement and prior to the establishment of vegetation cover. This will be during the management phase of the site and any significant failure will be easily observed and fixed during this phase. The risk of impact from capping failure is therefore minimised.

## 3.6 Emissions to Groundwater

The models predict the concentrations of the priority contaminants at both the hazardous and non-hazardous compliance points as appropriate. Both the 50th%ile (most likely) and 95th%ile (worst case) concentrations are reported.

The input parameters for the LandSim model are included at Appendix A and the model outputs at Appendix B. The predicted 50th percentile and 95th percentile concentrations of hazardous substances at the base of the unsaturated zone and non-hazardous substances in groundwater at the compliance point, a distance of 60 m down gradient from the boundary of the landfill at the site ownership boundary, resulting from leachate migration from the landfill are shown in **Table 3.15** and **Table 3.16** respectively.

Table 3.15: Model Results - 50<sup>th</sup>%ile (most likely)

Determinent		e at Compliance oint	Predicted 50 <sup>th</sup> % Concentrations, C, at base of unsaturated zone (hazardous) and at 60m from edge of waste (non-hazardous) (mg/l) at time, t, during 20,000 years					
Determinant	Determinant Hazardous		Max	imum	Time exce	Time exceeding EAL		
	Base of EBS (MRV)	Aquifer 60m down-gradient	C (mg/l)	t (years)	C (mg/l)	t (years)		
Amm-N		0.39	3.11e-5	232	-	-		
Copper		0.001	0	-	-	-		
Cadmium	0.0001		0	-	-	-		
Naphthalene	0.0001		0	-	-	-		

Table 3.16: Model Results – 95<sup>th</sup>%ile (worst case)

Determinant Hazardo Base of E		e at Compliance oint	Predicted 95 <sup>th</sup> % Concentrations, C, at base of unsaturated zone (hazardous) and at 60m from edge of waste (non-hazardous) (mg/l) at time, t, during 20,000 years				
	Hazardous	Non-Hazardous	Max	imum	Time exc	Time exceeding EAL	
	(MRV)	Aquifer 60m down-gradient	C (mg/l)	t (years)	C (mg/l)	t (years)	
Amm-N		0.39	0.00033	233	-	-	
Copper		0.001	4.40e-7	20,000	-	-	
Cadmium	0.0001		0.00029	11,000	>0.0001	3,585-20,000	
Naphthalene	0.0001		1.47e-5	250	-	-	

The results of the assessment indicate that no exceedances of the EALs of non-hazardous substances are predicted resulting from leachate migration within groundwater. For the modelled hazardous substances, cadmium is predicted to be present at the base of the unsaturated zone only above the Minimum Reporting Value after c. 3,500 years.

The results of the assessment also indicate that the concentrations of non-hazardous polluting substances resulting from leachate migration will not cause any unacceptable deterioration in the quality of groundwater at the down gradient site boundary, 60 m from the boundary of the waste.

These results are interpreted as showing that the landfill is not likely to result in unacceptable impacts to the water environment including groundwater or surface water supported by such groundwater over the reasonable long term lifetime of the facility.

## 3.6.1 Predicted Boundary Monitoring Well Concentration

**Table 3.17** shows the maximum predicted concentrations of the determinants at the edge of the landfill 100 years following the cessation of management controls. This period of 100 years is considered appropriate as this represents the early lifetime of the site.

**Table 3.17: Predicted Cell Boundary Monitoring Well Concentrations** 

Determinant	Predicted Max Concentrations at Landfill Monitoring Well (Cell 13)		
	50th Percentile	95th Percentile	
Ammoniacal Nitrogen	0.0011	0.0121	
Copper	0	0	

Ammoniacal Nitrogen is predicted to be detectable in groundwater at the cell boundary at low concentrations an order of magnitude below the EAL of 0.39 mg/l as N. There is no predicted breakthrough of copper at the same location.

# 3.7 Hydrogeological Completion Criteria

Completion relating to hydrogeological risks will have been achieved when there are no further risks of pollution from the landfill, i.e. when the site can comply with the requirements of the Groundwater Directive, without the need for any active management.

The model undertaken represents the entire lifecycle of the site, including defects and the degradation of the lining system, and the predicted leachate quality and levels in the site following the cessation of management controls.

The predicted leachate quality and levels at the cessation of management controls are presented as preliminary completion criteria using ammoniacal nitrogen as the key leachate indicator. Future monitoring of leachate and groundwater of the site will be used to validate the model and completion criteria will be revised if required. The predicted range of ammoniacal nitrogen concentration in leachate 25 years following restoration (54 years following commencement of landfilling) is presented in **Table 3.18**.

**Table 3.18: Completion Criteria for Ammoniacal Nitrogen in Leachate** 

Determinant	Inert Cells		Non-Hazardous Cells	
	50 <sup>th</sup> %ile	95 <sup>th</sup> %ile	50 <sup>th</sup> %ile	95 <sup>th</sup> %ile
Ammoniacal Nitrogen	7.3 – 10.5	10.7 – 13.1	17.5 – 20.3	23.9 – 28.0

The maximum predicted leachate heads after the cessation of management controls are presented in **Table 3.19**.

Table 3.19: Completion Criteria for Leachate Heads in Cells

Cell	Phase	50 <sup>th</sup> %ile head on EBS (m)	95 <sup>th</sup> %ile head on EBS (m)
6	6	1.05	1.09
7	7	1.09	1.14
8	8	1.02	1.06
9	9	1.00	1.07
10	10	1.00	1.00
11	11	1.05	1.16
12	12	1.30	1.38
	13	1.35	1.49
13	14a	1.19	1.32
	14b	1.36	1.50
	15	1.44	1.56

# 4 CONCLUSIONS

# 4.1 Compliance with the Landfill Regulations

Due to the likely presence of hazardous and non-hazardous substances in leachate, the landfill has been engineered to include a leachate drainage and collection system as required by the Landfill Regulations (2002) for non-hazardous landfills. Leachate generated from the landfill will be collected.

# 4.2 Compliance with the Groundwater Regulations

The Groundwater Regulations 1998, amended apply to the site due to the non-hazardous classification of the waste deposited at the site and the likely presence of hazardous and non-hazardous substances in the landfill leachate, which could potentially discharge to groundwater.

Previous investigations at the site have been used to develop the conceptual understanding of the hydrogeological system, which has formed the basis of the risk assessment.

The engineering of the proposed landfill has been designed with the aim of preventing the discharge of hazardous substances and pollution by non-hazardous substances. The results of the risk assessments show that hazardous substances in leachate are highly likely to be prevented from discharging to groundwater directly surrounding the site and that non-hazardous substances released into groundwater will not lead to unacceptable impacts at the down gradient site boundary.

Technical precautions have been outlined for the site, including leachate control measures, construction and maintenance of a low permeability cap and lining system.

Requisite surveillance in the form of risk-based leachate and groundwater monitoring will be undertaken at the site, as part of an Environmental Monitoring Plan. This will ensure that any impact from the landfill will be detected and remedial action taken before any significant impact to groundwater can occur.

# Appendix A

**LandSim Model Input Parameters** 

#### **Calculation Settings**

Number of iterations: 201

Results calculated using sampled PDFs

**Full Calculation** 

Clay Liner:

Retarded values used for simulation

Biodegradation

Unsaturated Pathway:

Retarded values used for simulation

Biodegradation

Saturated Vertical Pathway:

No Vertical Pathway

Aquifer Pathway:

Retarded values used for simulation

Biodegradation

Timeslices at: 29, 54, 154, 1054

#### **Decline in Contaminant Concentration in Leachate**

 Cadmium
 Non-Volatile

 c (kg/l): 0.1589
 m (kg/l): 0.0823

Copper Non-Volatile c (kg/l): -0.0488 m (kg/l): 0.0664

Naphthalene Non-Volatile c (kg/l): 0.2919 m (kg/l): 0.0298

#### **Contaminant Half-lives (years)**

Unsaturated Pathway:

Ammoniacal\_NUNIFORM(5,10)CadmiumSINGLE(1e+009)CopperSINGLE(1e+009)NaphthaleneLOGUNIFORM(1,10)

Aquifer Pathway:

Ammoniacal\_NUNIFORM(5,10)CadmiumSINGLE(1e+009)CopperSINGLE(1e+009)NaphthaleneLOGUNIFORM(1,10)

#### **Background Concentrations of Contaminants**

Justification for Contaminant Properties Unjustified value

All units in milligrams per litre

#### Phase: Cell 6

#### **Infiltration Information**

Cap design infiltration (mm/year): SINGLE(23)
Infiltration to waste (mm/year): SINGLE(758)

End of filling (years from start of waste deposit):

Justification for Specified Infiltration

Unjustified value

Duration of management control (years from the start of waste disposal): 54

#### **Cell dimensions**

Cell width (m): 53 Cell length (m): 134 Cell top area (ha): 1.7898 Cell base area (ha): 0.7102 Number of cells: 1 Total base area (ha): 0.7102 Total top area (ha): 1.7898 Head of Leachate when surface water breakout occurs (m) SINGLE(21) Waste porosity (fraction) SINGLE(0.3) SINGLE(32) Final waste thickness (m): Field capacity (fraction): SINGLE(0.0285) Waste density (kg/l) SINGLE(1.9)

Justification for Landfill Geometry

Unjustified value

Source concentrations of contaminants

All units in milligrams per litre

Declining source term

Ammoniacal N LOGUNIFORM(2,20)

Data are spot measurements of Leachate Quality

Page 5 of 48

Cadmium LOGTRIANGULAR(1e-030,4e-006,4e-005)

Substance to be treated as List 1

CopperLOGTRIANGULAR(1e-030,0.002,0.02)NaphthaleneLOGTRIANGULAR(1e-030,0.031,0.31)

Substance to be treated as List 1

Justification for Species Concentration in Leachate

Unjustified value

**Drainage Information** 

Fixed Head.

Head on EBS is given as (m): SINGLE(1)

Justification for Specified Head

Unjustified value

**Barrier Information** 

There is a single clay barrier

Justification for Engineered Barrier Type

Unjustified value

Design thickness of clay (m): SINGLE(1)

Density of clay (kg/l): UNIFORM(1.9,2.1)

Pathway moisture content (fraction): SINGLE(0.13)

Justification for Clay: Liner Thickness

Unjustified value

Hydraulic conductivity of liner (m/s): LOGUNIFORM(5e-010,1e-009)

Pathway longitudinal dispersivity (m): SINGLE(0.1)

Justification for Clay: Hydraulics Properties

Unjustified value

190617 M JER1631 RG Hollywood IWMF v2.sim 16/07/2020 20:05:48

RECORD OF RISK ASSESSMENT MODEL

Project Number: 0001 Customer: IMS Hollywood

Retardation parameters for clay liner

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Liner Kd Values by Species

Unjustified value

#### Bedrock pathway parameters

Modelled as unsaturated pathway

Pathway length (m): TRIANGULAR(2,3,4)
Flow Model: porous medium

Pathway moisture content (fraction): SINGLE(0.2)
Pathway Density (kg/l): SINGLE(2.2)

Justification for Unsat Zone Geometry

Unjustified value

Pathway hydraulic conductivity values (m/s): LOGUNIFORM(1e-006,1e-005)

Justification for Unsat Zone Hydraulics Properties

Unjustified value

Pathway longitudinal dispersivity (m): UNIFORM(0.1,0.3)

Justification for Unsat Zone Dispersion Properties

Unjustified value

Retardation parameters for Bedrock pathway

Modelled as unsaturated pathway

Uncertainty in Kd (I/kg):

Project: Hollywood IWMF

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Kd Values by Species

Unjustified value

**Aquifer Pathway Dimensions for Phase** 

Pathway length (m): UNIFORM(1191.5,1348.5)

Pathway width (m): SINGLE(194)

Phase: Cell 7

### **Infiltration Information**

Cap design infiltration (mm/year): SINGLE(23)
Infiltration to waste (mm/year): SINGLE(758)

End of filling (years from start of waste deposit):

Justification for Specified Infiltration

Unjustified value

Duration of management control (years from the start of waste disposal): 52

#### **Cell dimensions**

Cell width (m): 150 Cell length (m): 67 Cell top area (ha): 3.1832 Cell base area (ha): 1.005 Number of cells: 1 Total base area (ha): 1.005 Total top area (ha): 3.1832 Head of Leachate when surface water breakout occurs (m) SINGLE(21) Waste porosity (fraction) SINGLE(0.3) SINGLE(25) Final waste thickness (m): Field capacity (fraction): SINGLE(0.0285) Waste density (kg/l) SINGLE(1.9)

Justification for Landfill Geometry

Source concentrations of contaminants

All units in milligrams per litre

Declining source term

Ammoniacal N UNIFORM(2,20)

Data are spot measurements of Leachate Quality

Page 9 of 48

Cadmium LOGTRIANGULAR(1e-030,4e-006,4e-005)

Substance to be treated as List 1

CopperLOGTRIANGULAR(1e-030,0.002,0.02)NaphthaleneLOGTRIANGULAR(1e-030,0.031,0.31)

Substance to be treated as List 1

Justification for Species Concentration in Leachate

Unjustified value

**Drainage Information** 

Fixed Head.

Head on EBS is given as (m): SINGLE(1)

Justification for Specified Head

Unjustified value

**Barrier Information** 

There is a single clay barrier

Justification for Engineered Barrier Type

Unjustified value

Design thickness of clay (m): SINGLE(1)

Density of clay (kg/l): UNIFORM(1.9,2.1)

Pathway moisture content (fraction): SINGLE(0.13)

Justification for Clay: Liner Thickness

Unjustified value

Hydraulic conductivity of liner (m/s): LOGUNIFORM(5e-010,1e-009)

Pathway longitudinal dispersivity (m): SINGLE(0.1)

Justification for Clay: Hydraulics Properties

Retardation parameters for clay liner

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Liner Kd Values by Species

Unjustified value

# Namurian pathway parameters

Modelled as unsaturated pathway

Pathway length (m): TRIANGULAR(2,3,4)
Flow Model: porous medium

Pathway moisture content (fraction): SINGLE(0.2)
Pathway Density (kg/l): SINGLE(2.2)

Justification for Unsat Zone Geometry

Unjustified value

Pathway hydraulic conductivity values (m/s): LOGUNIFORM(1e-006,1e-005)

Justification for Unsat Zone Hydraulics Properties

Unjustified value

Pathway longitudinal dispersivity (m): UNIFORM(0.1,0.3)

Justification for Unsat Zone Dispersion Properties

Retardation parameters for Namurian pathway

Modelled as unsaturated pathway

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Kd Values by Species

Unjustified value

**Aquifer Pathway Dimensions for Phase** 

Pathway length (m): UNIFORM(1194.5,1305.5)

Pathway width (m): SINGLE(211)

SINGLE(1.9)

Project Number: 0001 Customer: IMS Hollywood

Phase: Cell 8

### **Infiltration Information**

Cap design infiltration (mm/year): SINGLE(23)
Infiltration to waste (mm/year): SINGLE(758)

End of filling (years from start of waste deposit): 4

Justification for Specified Infiltration

Unjustified value

Duration of management control (years from the start of waste disposal): 48

#### **Cell dimensions**

Cell width (m): 57 Cell length (m): 160 Cell top area (ha): 1.998 0.912 Cell base area (ha): Number of cells: 1 Total base area (ha): 0.912 Total top area (ha): 1.998 Head of Leachate when surface water breakout occurs (m) SINGLE(21) Waste porosity (fraction) SINGLE(0.3) SINGLE(25) Final waste thickness (m): Field capacity (fraction): SINGLE(0.0285)

Justification for Landfill Geometry

Unjustified value

Waste density (kg/l)

Source concentrations of contaminants

All units in milligrams per litre

Declining source term

Ammoniacal N LOGUNIFORM(2,20)

Data are spot measurements of Leachate Quality

Page 13 of 48

Cadmium LOGTRIANGULAR(1e-030,4e-006,4e-005)

Substance to be treated as List 1

CopperLOGTRIANGULAR(1e-030,0.002,0.02)NaphthaleneLOGTRIANGULAR(1e-030,0.031,0.31)

Substance to be treated as List 1

Justification for Species Concentration in Leachate

Unjustified value

**Drainage Information** 

Fixed Head.

Head on EBS is given as (m): SINGLE(1)

Justification for Specified Head

Unjustified value

**Barrier Information** 

There is a single clay barrier

Justification for Engineered Barrier Type

Unjustified value

Design thickness of clay (m): SINGLE(1)

Density of clay (kg/l): UNIFORM(1.9,2.1)

Pathway moisture content (fraction): SINGLE(0.13)

Justification for Clay: Liner Thickness

Unjustified value

Hydraulic conductivity of liner (m/s): LOGUNIFORM(5e-010,1e-009)

Pathway longitudinal dispersivity (m): SINGLE(0.1)

Justification for Clay: Hydraulics Properties

Retardation parameters for clay liner

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Liner Kd Values by Species

Unjustified value

# Namurian pathway parameters

Modelled as unsaturated pathway

Pathway length (m): TRIANGULAR(2,3,4)
Flow Model: porous medium

Pathway moisture content (fraction): SINGLE(0.2)
Pathway Density (kg/l): SINGLE(2.2)

Justification for Unsat Zone Geometry

Unjustified value

Pathway hydraulic conductivity values (m/s): LOGUNIFORM(1e-006,1e-005)

Justification for Unsat Zone Hydraulics Properties

Unjustified value

Pathway longitudinal dispersivity (m): UNIFORM(0.1,0.3)

Justification for Unsat Zone Dispersion Properties

RECORD OF RISK ASSESSMENT MODEL

Project Number: 0001 Customer: IMS Hollywood

Retardation parameters for Namurian pathway

Modelled as unsaturated pathway

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Kd Values by Species

Unjustified value

**Aquifer Pathway Dimensions for Phase** 

Pathway length (m): UNIFORM(998,1182)

Pathway width (m): SINGLE(252)

### Phase: Cell 9

### **Infiltration Information**

Cap design infiltration (mm/year): SINGLE(23)
Infiltration to waste (mm/year): SINGLE(758)

End of filling (years from start of waste deposit): 3

Justification for Specified Infiltration

Unjustified value

Duration of management control (years from the start of waste disposal): 50

# **Cell dimensions**

Cell width (m): 115 Cell length (m): 163 Cell top area (ha): 3.8805 Cell base area (ha): 1.8745 Number of cells: 1 Total base area (ha): 1.8745 Total top area (ha): 3.8805 Head of Leachate when surface water breakout occurs (m) SINGLE(11) Waste porosity (fraction) SINGLE(0.3) SINGLE(19) Final waste thickness (m): Field capacity (fraction): SINGLE(0.0285) Waste density (kg/l) SINGLE(1.9)

Justification for Landfill Geometry

### Source concentrations of contaminants

All units in milligrams per litre

Declining source term

Ammoniacal\_N LOGUNIFORM(5,50)

Data are spot measurements of Leachate Quality

Cadmium LOGTRIANGULAR(1e-030,0.001,0.01)

Substance to be treated as List 1

Copper LOGTRIANGULAR(1e-030,0.05,0.5)
Naphthalene LOGTRIANGULAR(1e-030,0.31,3.1)

Substance to be treated as List 1

Justification for Species Concentration in Leachate

Unjustified value

Drainage Information

Fixed Head.

Head on EBS is given as (m):

SINGLE(1)

Justification for Specified Head

**Barrier Information** 

There is a composite barrier

Justification for Engineered Barrier Type

Unjustified value

Liner NOT installed under CQA

Design thickness of clay (m): SINGLE(1)

Density of clay (kg/l): UNIFORM(1.9,2.1)
Pathway moisture content (fraction): SINGLE(0.13)

Onset of FML degradation (years since filling commenced) 150

Pathway longitudinal dispersivity (m): SINGLE(0.1)

Time for area of defects to double (years) 100

Membrane defects (number per hectare):

Pin holes: Minimum 0, Maximum 750
Holes: Minimum 0, Maximum 150

Tears: Minimum 0, Most Likely 0.5, Maximum 10

The most likely value for the PDFs representing the density of pinholes and holes will move from the minimum value selected above to the maximum value selected above over the time period before FML degradation commences

Justification for Composite: Flexible Membrane Liner

Unjustified value

Hydraulic conductivity of mineral lower liner (m/s): SINGLE(1e-009)

Justification for Composite: Clay or BES Substrate Properties

Unjustified value

Retardation parameters for clay liner

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

Cadmium LOGUNIFORM(1.6,1500)
Copper UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Liner Kd Values by Species

Unjustified value

Page 18 of 48

Namurian pathway parameters

Modelled as unsaturated pathway

Pathway length (m): TRIANGULAR(2,3,4)

Flow Model: porous medium

Pathway moisture content (fraction): SINGLE(0.2)

Pathway Density (kg/l): SINGLE(2.2)

Justification for Unsat Zone Geometry

Unjustified value

Pathway hydraulic conductivity values (m/s): LOGUNIFORM(1e-006,1e-005)

Justification for Unsat Zone Hydraulics Properties

Unjustified value

Pathway longitudinal dispersivity (m): UNIFORM(0.1,0.3)

Justification for Unsat Zone Dispersion Properties

Unjustified value

Retardation parameters for Namurian pathway

Modelled as unsaturated pathway

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Kd Values by Species

Unjustified value

**Aquifer Pathway Dimensions for Phase** 

Pathway length (m): UNIFORM(573,727)

Pathway width (m): SINGLE(284)

### Phase: Cell 10

### **Infiltration Information**

Cap design infiltration (mm/year): SINGLE(23)
Infiltration to waste (mm/year): SINGLE(758)

End of filling (years from start of waste deposit): 3

Justification for Specified Infiltration

Unjustified value

Duration of management control (years from the start of waste disposal): 51

# **Cell dimensions**

Cell width (m): 125 Cell length (m): 113 Cell top area (ha): 4.1405 Cell base area (ha): 1.4125 Number of cells: 1 Total base area (ha): 1.4125 Total top area (ha): 4.1405 Head of Leachate when surface water breakout occurs (m) SINGLE(11) Waste porosity (fraction) SINGLE(0.3) SINGLE(24) Final waste thickness (m): Field capacity (fraction): SINGLE(0.0285) Waste density (kg/l) SINGLE(1.9)

Justification for Landfill Geometry

### Source concentrations of contaminants

All units in milligrams per litre

Declining source term

Ammoniacal\_N LOGUNIFORM(5,50)

Data are spot measurements of Leachate Quality

Cadmium LOGTRIANGULAR(1e-030,0.001,0.01)

Substance to be treated as List 1

 Copper
 LOGTRIANGULAR(1e-030,0.05,0.5)

 Naphthalene
 LOGTRIANGULAR(1e-030,0.31,3.1)

Substance to be treated as List 1

Justification for Species Concentration in Leachate

Unjustified value

**Drainage Information** 

Fixed Head.

Head on EBS is given as (m):

SINGLE(1)

Justification for Specified Head

**Barrier Information** 

There is a composite barrier

Justification for Engineered Barrier Type

Unjustified value

Liner NOT installed under CQA

Design thickness of clay (m): SINGLE(1)

Density of clay (kg/l): UNIFORM(1.9,2.1)
Pathway moisture content (fraction): SINGLE(0.13)

Onset of FML degradation (years since filling commenced) 150

Pathway longitudinal dispersivity (m): SINGLE(0.1)

Time for area of defects to double (years) 100

Membrane defects (number per hectare):

Pin holes: Minimum 0, Maximum 750
Holes: Minimum 0, Maximum 150

Tears: Minimum 0, Most Likely 0.5, Maximum 10

The most likely value for the PDFs representing the density of pinholes and holes will move from the minimum value selected above to the maximum value selected above over the time period before FML degradation commences

Justification for Composite: Flexible Membrane Liner

Unjustified value

Hydraulic conductivity of mineral lower liner (m/s): SINGLE(1e-009)

Justification for Composite: Clay or BES Substrate Properties

Unjustified value

Retardation parameters for clay liner

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Liner Kd Values by Species

RECORD OF RISK ASSESSMENT MODEL

Project Number: 0001 Customer: IMS Hollywood

Namurian pathway parameters

Modelled as unsaturated pathway

Pathway length (m): TRIANGULAR(2,3,4)

Flow Model: porous medium

Pathway moisture content (fraction): SINGLE(0.2)

Pathway Density (kg/l): SINGLE(2.2)

Justification for Unsat Zone Geometry

Unjustified value

Pathway hydraulic conductivity values (m/s): LOGUNIFORM(1e-006,1e-005)

Justification for Unsat Zone Hydraulics Properties

Unjustified value

Pathway longitudinal dispersivity (m): UNIFORM(0.1,0.3)

Justification for Unsat Zone Dispersion Properties

Unjustified value

Retardation parameters for Namurian pathway

Modelled as unsaturated pathway

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Kd Values by Species

Unjustified value

**Aquifer Pathway Dimensions for Phase** 

Pathway length (m): UNIFORM(558,802)

Pathway width (m): SINGLE(279)

### Phase: Cell 11

### **Infiltration Information**

Cap design infiltration (mm/year): SINGLE(23)
Infiltration to waste (mm/year): SINGLE(758)

End of filling (years from start of waste deposit): 3

Justification for Specified Infiltration

Unjustified value

Duration of management control (years from the start of waste disposal): 44

# **Cell dimensions**

Cell width (m): 199 Cell length (m): 63 Cell top area (ha): 4.2714 Cell base area (ha): 1.2537 Number of cells: 1 Total base area (ha): 1.2537 Total top area (ha): 4.2714 Head of Leachate when surface water breakout occurs (m) SINGLE(11) Waste porosity (fraction) SINGLE(0.3) SINGLE(28) Final waste thickness (m): Field capacity (fraction): SINGLE(0.0285) Waste density (kg/l) SINGLE(1.9)

Justification for Landfill Geometry

### Source concentrations of contaminants

All units in milligrams per litre

Declining source term

Ammoniacal\_N LOGUNIFORM(5,50)

Data are spot measurements of Leachate Quality

Cadmium LOGTRIANGULAR(1e-030,0.001,0.01)

Substance to be treated as List 1

Copper LOGTRIANGULAR(1e-030,0.05,0.5)
Naphthalene LOGTRIANGULAR(1e-030,0.31,3.1)

Substance to be treated as List 1

Justification for Species Concentration in Leachate

Unjustified value

**Drainage Information** 

Fixed Head.

Head on EBS is given as (m):

SINGLE(1)

Justification for Specified Head

**Barrier Information** 

There is a composite barrier

Justification for Engineered Barrier Type

Unjustified value

Liner NOT installed under CQA

Design thickness of clay (m): SINGLE(1)

Density of clay (kg/l): UNIFORM(1.9,2.1)
Pathway moisture content (fraction): SINGLE(0.13)

Onset of FML degradation (years since filling commenced) 150

Pathway longitudinal dispersivity (m): SINGLE(0.1)

Time for area of defects to double (years) 100

Membrane defects (number per hectare):

Pin holes: Minimum 0, Maximum 750
Holes: Minimum 0, Maximum 150

Tears: Minimum 0, Most Likely 0.5, Maximum 10

The most likely value for the PDFs representing the density of pinholes and holes will move from the minimum value selected above to the maximum value selected above over the time period before FML degradation commences

Justification for Composite: Flexible Membrane Liner

Unjustified value

Hydraulic conductivity of mineral lower liner (m/s): SINGLE(1e-009)

Justification for Composite: Clay or BES Substrate Properties

Unjustified value

Retardation parameters for clay liner

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Liner Kd Values by Species

Namurian pathway parameters

Modelled as unsaturated pathway

Pathway length (m): TRIANGULAR(2,3,4)

Flow Model: porous medium

Pathway moisture content (fraction): SINGLE(0.2)

Pathway Density (kg/l): SINGLE(2.2)

Justification for Unsat Zone Geometry

Unjustified value

Pathway hydraulic conductivity values (m/s): LOGUNIFORM(1e-006,1e-005)

Justification for Unsat Zone Hydraulics Properties

Unjustified value

Pathway longitudinal dispersivity (m): UNIFORM(0.1,0.3)

Justification for Unsat Zone Dispersion Properties

Unjustified value

Retardation parameters for Namurian pathway

Modelled as unsaturated pathway

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Kd Values by Species

Unjustified value

**Aquifer Pathway Dimensions for Phase** 

Pathway length (m): UNIFORM(582,918)

Pathway width (m): SINGLE(357)

### Phase: Cell 12

### **Infiltration Information**

Cap design infiltration (mm/year): SINGLE(23)
Infiltration to waste (mm/year): SINGLE(758)

End of filling (years from start of waste deposit): 3

Justification for Specified Infiltration

Unjustified value

Duration of management control (years from the start of waste disposal): 41

#### **Cell dimensions**

Cell width (m): 58 Cell length (m): 118 Cell top area (ha): 4.7402 Cell base area (ha): 0.6844 Number of cells: 1 Total base area (ha): 0.6844 4.7402 Total top area (ha): Head of Leachate when surface water breakout occurs (m) SINGLE(11) Waste porosity (fraction) SINGLE(0.3) SINGLE(35) Final waste thickness (m): Field capacity (fraction): SINGLE(0.0285) Waste density (kg/l) SINGLE(1.9)

Justification for Landfill Geometry

### Source concentrations of contaminants

All units in milligrams per litre

Declining source term

Ammoniacal\_N LOGUNIFORM(5,50)

Data are spot measurements of Leachate Quality

Cadmium LOGTRIANGULAR(1e-030,0.001,0.01)

Substance to be treated as List 1

Copper LOGTRIANGULAR(1e-030,0.05,0.5)
Naphthalene LOGTRIANGULAR(1e-030,0.31,3.1)

Substance to be treated as List 1

Justification for Species Concentration in Leachate

Unjustified value

**Drainage Information** 

Fixed Head.

Head on EBS is given as (m):

SINGLE(1)

Justification for Specified Head

**Barrier Information** 

There is a composite barrier

Justification for Engineered Barrier Type

Unjustified value

Liner NOT installed under CQA

Design thickness of clay (m): SINGLE(1)

Density of clay (kg/l): UNIFORM(1.9,2.1)
Pathway moisture content (fraction): SINGLE(0.13)

Onset of FML degradation (years since filling commenced) 150

Pathway longitudinal dispersivity (m): SINGLE(0.1)

Time for area of defects to double (years) 100

Membrane defects (number per hectare):

Pin holes: Minimum 0, Maximum 750
Holes: Minimum 0, Maximum 150

Tears: Minimum 0, Most Likely 0.5, Maximum 10

The most likely value for the PDFs representing the density of pinholes and holes will move from the minimum value selected above to the maximum value selected above over the time period before FML degradation commences

Justification for Composite: Flexible Membrane Liner

Unjustified value

Hydraulic conductivity of mineral lower liner (m/s): SINGLE(1e-009)

Justification for Composite: Clay or BES Substrate Properties

Unjustified value

Retardation parameters for clay liner

Uncertainty in Kd (I/kg):

 Ammoniacal\_N
 UNIFORM(0.5,2)

 Cadmium
 UNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Liner Kd Values by Species

Unjustified value

Page 30 of 48

Namurian pathway parameters

Modelled as unsaturated pathway

Pathway length (m): TRIANGULAR(2,3,4)

Flow Model: porous medium

Pathway moisture content (fraction): SINGLE(0.2)

Pathway Density (kg/l): SINGLE(2.2)

Justification for Unsat Zone Geometry

Unjustified value

Pathway hydraulic conductivity values (m/s): LOGUNIFORM(1e-006,1e-005)

Justification for Unsat Zone Hydraulics Properties

Unjustified value

Pathway longitudinal dispersivity (m): UNIFORM(0.1,0.3)

Justification for Unsat Zone Dispersion Properties

Unjustified value

Retardation parameters for Namurian pathway

Modelled as unsaturated pathway

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Kd Values by Species

Unjustified value

**Aquifer Pathway Dimensions for Phase** 

Pathway length (m): UNIFORM(1013.5,1186.5)

Pathway width (m): SINGLE(324)

42

SINGLE(1.9)

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 13

### **Infiltration Information**

Cap design infiltration (mm/year): SINGLE(23)
Infiltration to waste (mm/year): SINGLE(758)

End of filling (years from start of waste deposit):

Justification for Specified Infiltration

Unjustified value

Duration of management control (years from the start of waste disposal): 38

#### **Cell dimensions**

Cell width (m):

Cell length (m): 114 Cell top area (ha): 3.78 Cell base area (ha): 0.4788 Number of cells: 1 Total base area (ha): 0.4788 Total top area (ha): 3.78 Head of Leachate when surface water breakout occurs (m) SINGLE(11) Waste porosity (fraction) SINGLE(0.3) SINGLE(34) Final waste thickness (m): Field capacity (fraction): SINGLE(0.0285)

Justification for Landfill Geometry

Unjustified value

Waste density (kg/l)

### Source concentrations of contaminants

All units in milligrams per litre

Declining source term

LOGUNIFORM(5,50) Ammoniacal\_N

Data are spot measurements of Leachate Quality

Cadmium LOGTRIANGULAR(1e-030,0.001,0.01)

Substance to be treated as List 1

LOGTRIANGULAR(1e-030,0.05,0.5) Copper Naphthalene LOGTRIANGULAR(1e-030,0.31,3.1)

Substance to be treated as List 1

Justification for Species Concentration in Leachate

Unjustified value

**Drainage Information** 

Fixed Head.

Head on EBS is given as (m):

SINGLE(1)

Justification for Specified Head

**Barrier Information** 

There is a composite barrier

Justification for Engineered Barrier Type

Unjustified value

Liner NOT installed under CQA

Design thickness of clay (m): SINGLE(1)

Density of clay (kg/l): UNIFORM(1.9,2.1)
Pathway moisture content (fraction): SINGLE(0.13)

Onset of FML degradation (years since filling commenced) 150

Pathway longitudinal dispersivity (m): SINGLE(0.1)

Time for area of defects to double (years) 100

Membrane defects (number per hectare):

Pin holes: Minimum 0, Maximum 750
Holes: Minimum 0, Maximum 150

Tears: Minimum 0, Most Likely 0.5, Maximum 10

The most likely value for the PDFs representing the density of pinholes and holes will move from the minimum value selected above to the maximum value selected above over the time period before FML degradation commences

Justification for Composite: Flexible Membrane Liner

Unjustified value

Hydraulic conductivity of mineral lower liner (m/s): SINGLE(1e-009)

Justification for Composite: Clay or BES Substrate Properties

Unjustified value

Retardation parameters for clay liner

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Liner Kd Values by Species

Namurian pathway parameters

Modelled as unsaturated pathway

Pathway length (m): TRIANGULAR(2,3,4)

RECORD OF RISK ASSESSMENT MODEL

Flow Model: porous medium

Pathway moisture content (fraction): UNIFORM(0.005,0.05)
Pathway Density (kg/l): UNIFORM(2,2.5)

Justification for Unsat Zone Geometry

Unjustified value

Pathway hydraulic conductivity values (m/s): LOGUNIFORM(1e-006,1e-005)

Justification for Unsat Zone Hydraulics Properties

Unjustified value

Pathway longitudinal dispersivity (m): UNIFORM(0.1,0.3)

Justification for Unsat Zone Dispersion Properties

Unjustified value

Retardation parameters for Namurian pathway

Modelled as unsaturated pathway

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Kd Values by Species

Unjustified value

**Aquifer Pathway Dimensions for Phase** 

Pathway length (m): UNIFORM(960.5,999.5)

Pathway width (m): SINGLE(282)

### Phase: Cell 14a

### **Infiltration Information**

Cap design infiltration (mm/year): SINGLE(23)
Infiltration to waste (mm/year): SINGLE(758)

End of filling (years from start of waste deposit):

Justification for Specified Infiltration

Unjustified value

Duration of management control (years from the start of waste disposal): 36

# **Cell dimensions**

Cell width (m): 122 Cell length (m): 43 Cell top area (ha): 2.8016 Cell base area (ha): 0.5246 Number of cells: 1 Total base area (ha): 0.5246 Total top area (ha): 2.8016 Head of Leachate when surface water breakout occurs (m) SINGLE(11) Waste porosity (fraction) SINGLE(0.3) SINGLE(30) Final waste thickness (m): Field capacity (fraction): SINGLE(0.0285) Waste density (kg/l) SINGLE(1.9)

Justification for Landfill Geometry

### Source concentrations of contaminants

All units in milligrams per litre

Declining source term

Ammoniacal\_N LOGUNIFORM(5,50)

Data are spot measurements of Leachate Quality

Cadmium LOGTRIANGULAR(1e-030,0.001,0.01)

Substance to be treated as List 1

Copper LOGTRIANGULAR(1e-030,0.05,0.5)
Naphthalene LOGTRIANGULAR(1e-030,0.31,3.1)

LOGTRIANGULAR(1e-030,0.31,3.1) Substance to be treated as List 1

Justification for Species Concentration in Leachate

Unjustified value

**Drainage Information** 

Fixed Head.

Head on EBS is given as (m):

SINGLE(1)

Justification for Specified Head

**Barrier Information** 

There is a composite barrier

Justification for Engineered Barrier Type

Unjustified value

Liner NOT installed under CQA

Design thickness of clay (m): SINGLE(1)

Density of clay (kg/l): UNIFORM(1.9,2.1)
Pathway moisture content (fraction): SINGLE(0.13)

Onset of FML degradation (years since filling commenced) 150

Pathway longitudinal dispersivity (m): SINGLE(0.1)

Time for area of defects to double (years) 100

Membrane defects (number per hectare):

Pin holes: Minimum 0, Maximum 750
Holes: Minimum 0, Maximum 150

Tears: Minimum 0, Most Likely 0.5, Maximum 10

The most likely value for the PDFs representing the density of pinholes and holes will move from the minimum value selected above to the maximum value selected above over the time period before FML degradation commences

Justification for Composite: Flexible Membrane Liner

Unjustified value

Hydraulic conductivity of mineral lower liner (m/s): SINGLE(1e-009)

Justification for Composite: Clay or BES Substrate Properties

Unjustified value

Retardation parameters for clay liner

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Liner Kd Values by Species

Unjustified value

Page 38 of 48

Namurian pathway parameters

Modelled as unsaturated pathway

Pathway length (m): TRIANGULAR(2,3,4)

Flow Model: porous medium

Pathway moisture content (fraction): SINGLE(0.2)

Pathway Density (kg/l): SINGLE(2.2)

Justification for Unsat Zone Geometry

Unjustified value

Pathway hydraulic conductivity values (m/s): LOGUNIFORM(1e-006,1e-005)

Justification for Unsat Zone Hydraulics Properties

Unjustified value

Pathway longitudinal dispersivity (m): UNIFORM(0.1,0.3)

Justification for Unsat Zone Dispersion Properties

Unjustified value

Retardation parameters for Namurian pathway

Modelled as unsaturated pathway

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Kd Values by Species

Unjustified value

**Aquifer Pathway Dimensions for Phase** 

Pathway length (m): UNIFORM(602.5,857.5)

Pathway width (m): SINGLE(273)

Phase: Cell 15

### **Infiltration Information**

Cap design infiltration (mm/year): SINGLE(23)
Infiltration to waste (mm/year): SINGLE(758)

End of filling (years from start of waste deposit):

Justification for Specified Infiltration

Unjustified value

Duration of management control (years from the start of waste disposal): 33

#### **Cell dimensions**

Cell width (m): 84 Cell length (m): 71 Cell top area (ha): 5.7828 Cell base area (ha): 0.5964 Number of cells: 1 Total base area (ha): 0.5964 5.7828 Total top area (ha): Head of Leachate when surface water breakout occurs (m) SINGLE(11) Waste porosity (fraction) SINGLE(0.3) SINGLE(31) Final waste thickness (m): Field capacity (fraction): SINGLE(0.0285) Waste density (kg/l) SINGLE(1.9)

Justification for Landfill Geometry

### Source concentrations of contaminants

All units in milligrams per litre

Declining source term

Ammoniacal\_N LOGUNIFORM(5,50)

Data are spot measurements of Leachate Quality

Cadmium LOGTRIANGULAR(1e-030,0.001,0.01)

Substance to be treated as List 1

Copper LOGTRIANGULAR(1e-030,0.05,0.5)
Naphthalene LOGTRIANGULAR(1e-030,0.31,3.1)

Substance to be treated as List 1

Justification for Species Concentration in Leachate

Unjustified value

**Drainage Information** 

Fixed Head.

Head on EBS is given as (m):

SINGLE(1)

Justification for Specified Head

#### **Barrier Information**

There is a composite barrier

Justification for Engineered Barrier Type

Unjustified value

Liner NOT installed under CQA

Design thickness of clay (m): SINGLE(1)

Density of clay (kg/l): UNIFORM(1.9,2.1)
Pathway moisture content (fraction): SINGLE(0.13)

Onset of FML degradation (years since filling commenced) 150

Pathway longitudinal dispersivity (m): SINGLE(0.1)

Time for area of defects to double (years) 100

Membrane defects (number per hectare):

Pin holes: Minimum 0, Maximum 750
Holes: Minimum 0, Maximum 150

Tears: Minimum 0, Most Likely 0.5, Maximum 10

The most likely value for the PDFs representing the density of pinholes and holes will move from the minimum value selected above to the maximum value selected above over the time period before FML degradation commences

Justification for Composite: Flexible Membrane Liner

Unjustified value

Hydraulic conductivity of mineral lower liner (m/s): SINGLE(1e-009)

Justification for Composite: Clay or BES Substrate Properties

Unjustified value

Retardation parameters for clay liner

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Liner Kd Values by Species

RECORD OF RISK ASSESSMENT MODEL

Project Number: 0001 Customer: IMS Hollywood

Namurian pathway parameters

Modelled as unsaturated pathway

Pathway length (m): TRIANGULAR(2,3,4)

Flow Model: porous medium

Pathway moisture content (fraction): SINGLE(0.2)

Pathway Density (kg/l): SINGLE(2.2)

Justification for Unsat Zone Geometry

Unjustified value

Pathway hydraulic conductivity values (m/s): LOGUNIFORM(1e-006,1e-005)

Justification for Unsat Zone Hydraulics Properties

Unjustified value

Pathway longitudinal dispersivity (m): UNIFORM(0.1,0.3)

Justification for Unsat Zone Dispersion Properties

Unjustified value

Retardation parameters for Namurian pathway

Modelled as unsaturated pathway

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Kd Values by Species

Unjustified value

**Aquifer Pathway Dimensions for Phase** 

Pathway length (m): UNIFORM(711.5,948.5)

Pathway width (m): SINGLE(340)

### Phase: Cell 14b

### **Infiltration Information**

Cap design infiltration (mm/year): SINGLE(23)
Infiltration to waste (mm/year): SINGLE(758)

End of filling (years from start of waste deposit):

Justification for Specified Infiltration

Unjustified value

Duration of management control (years from the start of waste disposal): 36

### **Cell dimensions**

Cell width (m): 40 Cell length (m): 72 Cell top area (ha): 2.4012 Cell base area (ha): 0.288 Number of cells: 1 Total base area (ha): 0.288 Total top area (ha): 2.4012 Head of Leachate when surface water breakout occurs (m) SINGLE(11) Waste porosity (fraction) SINGLE(0.3) SINGLE(29) Final waste thickness (m): Field capacity (fraction): SINGLE(0.0285) Waste density (kg/l) SINGLE(1.9)

Justification for Landfill Geometry

Unjustified value

### Source concentrations of contaminants

All units in milligrams per litre

Declining source term

Ammoniacal\_N LOGUNIFORM(5,50)

Data are spot measurements of Leachate Quality

Cadmium LOGTRIANGULAR(1e-030,0.001,0.01)

Substance to be treated as List 1

Copper LOGTRIANGULAR(1e-030,0.05,0.5)
Naphthalene LOGTRIANGULAR(1e-030,0.31,3.1)

Substance to be treated as List 1

Justification for Species Concentration in Leachate

Unjustified value

Drainage Information

Fixed Head.

Head on EBS is given as (m):

SINGLE(1)

Justification for Specified Head

Unjustified value

#### **Barrier Information**

There is a composite barrier

Justification for Engineered Barrier Type

Unjustified value

Liner NOT installed under CQA

Design thickness of clay (m): SINGLE(1)

Density of clay (kg/l): UNIFORM(1.9,2.1)
Pathway moisture content (fraction): SINGLE(0.13)

Onset of FML degradation (years since filling commenced) 150

Pathway longitudinal dispersivity (m): SINGLE(0.1)

Time for area of defects to double (years) 100

Membrane defects (number per hectare):

Pin holes: Minimum 0, Maximum 750
Holes: Minimum 0, Maximum 150

Tears: Minimum 0, Most Likely 0.5, Maximum 10

The most likely value for the PDFs representing the density of pinholes and holes will move from the minimum value selected above to the maximum value selected above over the time period before FML degradation commences

Justification for Composite: Flexible Membrane Liner

Unjustified value

Hydraulic conductivity of mineral lower liner (m/s): SINGLE(1e-009)

Justification for Composite: Clay or BES Substrate Properties

Unjustified value

Retardation parameters for clay liner

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

Cadmium LOGUNIFORM(1.6,1500)
Copper UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Liner Kd Values by Species

Unjustified value

Namurian pathway parameters

Modelled as unsaturated pathway

Pathway length (m): UNIFORM(1,3)
Flow Model: porous medium
Pathway moisture content (fraction): SINGLE(0.2)
Pathway Density (kg/l): SINGLE(2.2)

Justification for Unsat Zone Geometry

Unjustified value

Pathway hydraulic conductivity values (m/s): LOGUNIFORM(1e-006,1e-005)

Justification for Unsat Zone Hydraulics Properties

Unjustified value

Pathway longitudinal dispersivity (m): UNIFORM(0.1,0.3)

Justification for Unsat Zone Dispersion Properties

Unjustified value

Retardation parameters for Namurian pathway

Modelled as unsaturated pathway

Uncertainty in Kd (I/kg):

Ammoniacal\_N UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Kd Values by Species

Unjustified value

**Aquifer Pathway Dimensions for Phase** 

Pathway length (m): UNIFORM(599.5,700.5)

Pathway width (m): SINGLE(230)

pathway parameters

No Vertical Pathway

Bedrock pathway parameters

Modelled as aquifer pathway.

UNIFORM(5,10)

UNIFORM(0.04,0.06)

Justification for Aquifer Geometry

Unjustified value

Mixing zone (m):

Pathway regional gradient (-):

Pathway hydraulic conductivity values (m/s): LOGUNIFORM(1e-005,0.0001)

Pathway porosity (fraction): LOGUNIFORM(0.01,0.1)

Justification for Aquifer Hydraulics Properties

Unjustified value

Pathway longitudinal dispersivity (m): SINGLE(10)
Pathway transverse dispersivity (m): SINGLE(1)

Justification for Aquifer Dispersion Details

Unjustified value

Retardation parameters for Bedrock pathway

Modelled as aquifer pathway.

Uncertainty in Kd (I/kg):

Ammoniacal\_N: Calculated kd

Partition to Organic Carbon ml/g UNIFORM(0.5,2)

 Cadmium
 LOGUNIFORM(1.6,1500)

 Copper
 UNIFORM(127,295)

Naphthalene: Calculated kd

Partition to Organic Carbon ml/g SINGLE(1288)

Fraction of Organic Carbon (fraction) SINGLE(0.001)

Justification for Aquifer Kd Values by Species

Unjustified value

Pathway Density (kg/l): UNIFORM(2,2.5)

# Appendix B

**LandSim Model Results** 

Concentration of Ammoniacal\_N in groundwater [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.40617E-016

95% of values less than 2.378E-015

Minimum 0 Maximum 3.31773E-010

Mean 1.79228E-012 Std. Dev. 2.34552E-011 Variance 5.50147E-022

At 54 years

05% of values less than 1.11986E-014

10% of values less than 1.69905E-013

50% of values less than 1.47668E-009

90% of values less than 4.11675E-007

95% of values less than 1.31736E-006

Minimum 3.0694E-017

Maximum 5.38538E-005

Mean 5.87768E-007 Std. Dev. 4.24458E-006 Variance 1.80165E-011

At 154 years

05% of values less than 3.65941E-007

10% of values less than 8.91544E-007

50% of values less than 1.7469E-005

90% of values less than 0.000192729

95% of values less than 0.000300181

Minimum 2.83236E-008

Maximum 0.000579192

Mean 6.39619E-005 Std. Dev. 0.000104968 Variance 1.10183E-008

At 1054 years

05% of values less than 8.7832E-007

10% of values less than 1.65799E-006

50% of values less than 2.58286E-005

90% of values less than 0.000228749

95% of values less than 0.000291277

Minimum 4.89114E-008 Maximum 0.0006668

Mean 7.24945E-005 Std. Dev. 0.000114313 Variance 1.30676E-008

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 7.06887E-018

90% of values less than 7.16374E-015

95% of values less than 1.05388E-013

Minimum 0 Maximum 1.61049E-005

Mean 8.06635E-008 Std. Dev. 1.13594E-006 Variance 1.29036E-012

Project Number: 0001 Customer: IMS Hollywood

Concentration of Cadmium in groundwater [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.58045E-017

95% of values less than 5.61519E-012

Minimum 0 Maximum 5.7231E-007

Mean 4.42664E-009 Std. Dev. 4.41024E-008 Variance 1.94502E-015

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 4.02364E-012

90% of values less than 3.19405E-007

95% of values less than  $6.93835 \hbox{E-}007$ 

Minimum 0 Maximum 3.95014E-006

Mean 1.29223E-007 Std. Dev. 4.39896E-007 Variance 1.93508E-013

Project Number: 0001 Customer: IMS Hollywood

Concentration of Copper in groundwater [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.40184E-011

90% of values less than 4.33393E-007

95% of values less than 2.21796E-006

Minimum 0 Maximum 1.52078E-005

Mean 4.0641E-007 Std. Dev. 1.66502E-006 Variance 2.77231E-012

Project Number: 0001 Customer: IMS Hollywood

Concentration of Naphthalene in groundwater [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 1.63843E-018

Mean 8.7531E-021 Std. Dev. 1.15683E-019 Variance 1.33825E-038

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.50015E-014

95% of values less than 8.61209E-014

Minimum 0 Maximum 5.02426E-011

Mean 8.81716E-013 Std. Dev. 5.72429E-012 Variance 3.27674E-023

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.91756E-014

95% of values less than 1.9346E-013

Minimum 0 Maximum 4.99277E-010

Mean 5.22353E-012 Std. Dev. 4.3711E-011 Variance 1.91065E-021

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 2.27551E-017

Minimum 0 Maximum 9.12779E-015

Mean 7.23276E-017 Std. Dev. 7.02785E-016 Variance 4.93907E-031

Approx. time to Peak Conc. Ammoniacal\_N at Offsite Compliance Point [years]

05% of values less than 210

10% of values less than 232

50% of values less than 256

90% of values less than 282

95% of values less than 282

Minimum 210 Maximum 344

Mean 248.119 Std. Dev. 22.056 Variance 486.466

Approx. time to Peak Conc. Cadmium at Offsite Compliance Point [years]

05% of values less than 0

10% of values less than 0

50% of values less than 20000

90% of values less than 20000

95% of values less than 20000

Minimum 0 Maximum 20000

Mean 14888.4 Std. Dev. 8134.46 Variance 6.61695E+007

Approx. time to Peak Conc. Copper at Offsite Compliance Point [years]

05% of values less than 0

10% of values less than 0

50% of values less than 20000

90% of values less than 20000

95% of values less than 20000

Minimum 0 Maximum 20000

Mean 17114.4 Std. Dev. 7044.99 Variance 4.96318E+007

Approx. time to Peak Conc. Naphthalene at Offsite Compliance Point [years]

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 312

95% of values less than 344

Minimum 0 Maximum 2050

Mean 129.95 Std. Dev. 229.712 Variance 52767.5

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

### Source Concentration of Ammoniacal\_N [mg/l]

### At 29 years

05% of values less than 4.86603

10% of values less than 5.36987

50% of values less than 7.37227

90% of values less than 9.96959

95% of values less than 10.7662

Minimum 3.46357

Maximum 15.1583

Mean 7.53581 Std. Dev. 1.85639 Variance 3.44617

### At 54 years

05% of values less than 4.82781

10% of values less than 5.32753

50% of values less than 7.31551

90% of values less than 9.89118

95% of values less than 10.6833

Minimum 3.43613 Maximum 15.0393

Mean 7.47678 Std. Dev. 1.84194 Variance 3.39275

#### At 154 years

05% of values less than 4.67808

10% of values less than 5.1615

50% of values less than 7.08955

90% of values less than 9.5839

95% of values less than 10.367

Minimum 3.3285

Maximum 14.5734

Mean 7.24675 Std. Dev. 1.7859 Variance 3.18943

### At 1054 years

05% of values less than 3.50879

10% of values less than 3.87138

50% of values less than 5.31751

90% of values less than 7.1884

95% of values less than 7.77582

Minimum 2.49654 Maximum 10.9308

Mean 5.43543 Std. Dev. 1.33951 Variance 1.79429

## At infinity

05% of values less than 0.00823494

10% of values less than 0.00908593

50% of values less than 0.0124799

90% of values less than 0.0168708

95% of values less than 0.0182494

Minimum 0.00585924

Maximum 0.025654

Mean 0.0127567 Std. Dev. 0.00314377 Variance 9.88327E-006

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

Source Concentration of Cadmium [mg/l]

At 29 years

05% of values less than 2.66017E-025

10% of values less than 1.51379E-022

50% of values less than 2.48551E-013

90% of values less than 5.21491E-007

95% of values less than 2.01957E-006

Minimum 2.52003E-028

Maximum 1.58451E-005

Mean 3.92529E-007 Std. Dev. 1.64389E-006

Variance 2.70239E-012

At 54 years

05% of values less than 2.66017E-025

10% of values less than 1.51379E-022

50% of values less than 2.48551E-013

90% of values less than 5.21491E-007

95% of values less than 2.01957E-006

Minimum 2.52003E-028

Maximum 1.58451E-005

Mean 3.92529E-007 Std. Dev. 1.64389E-006

Variance 2.70239E-012

At 154 years

05% of values less than 2.66017E-025

10% of values less than 1.51379E-022

50% of values less than 2.48551E-013

90% of values less than 5.21491E-007

95% of values less than 2.01957E-006

Minimum 2.52003E-028

Maximum 1.58451E-005

Mean 3.92529E-007 Std. Dev. 1.64389E-006 Variance 2.70239E-012

At 1054 years

05% of values less than 2.66017E-025

10% of values less than 1.51379E-022

50% of values less than 2.48551E-013

90% of values less than 5.21491E-007

95% of values less than 2.01957E-006

Minimum 2.52003E-028

Maximum 1.58451E-005

Mean 3.92529E-007 Std. Dev. 1.64389E-006 Variance 2.70239E-012

At infinity

05% of values less than 2.66017E-025

10% of values less than 1.51379E-022

50% of values less than 2.48551E-013

90% of values less than 5.21491E-007

95% of values less than 2.01957E-006

Minimum 2.52003E-028

Maximum 1.58451E-005

Mean 3.92529E-007 Std. Dev. 1.64389E-006 Variance 2.70239E-012

#### Phase: Cell 6

### Source Concentration of Copper [mg/l]

### At 29 years

05% of values less than 2.27181E-023

10% of values less than 6.54462E-022

50% of values less than 3.16113E-010

90% of values less than 0.000178514

95% of values less than 0.00165654

Minimum 1.72991E-029

Maximum 0.0101306

Mean 0.000287752 Std. Dev. 0.00117229

Variance 1.37426E-006

Variance 1.37152E-006

### At 54 years

05% of values less than 2.27181E-023

10% of values less than 6.54462E-022

50% of values less than 3.16113E-010

90% of values less than 0.000178514

95% of values less than 0.00165654

Minimum 1.72991E-029

Maximum 0.0101163

Mean 0.000287556 Std. Dev. 0.00117112

### At 154 years

05% of values less than 2.27181E-023

10% of values less than 6.54462E-022

50% of values less than 3.16113E-010

90% of values less than 0.000178514

95% of values less than 0.00165654

Minimum 1.72991E-029

Maximum 0.0100594

Mean 0.000286779 Std. Dev. 0.00116648 Variance 1.36068E-006

### At 1054 years

05% of values less than 2.27181E-023

10% of values less than 6.54462E-022

50% of values less than 3.16113E-010

90% of values less than 0.000178514

95% of values less than 0.00165654

Minimum 1.72991E-029

Maximum 0.00955656

Mean 0.000279783 Std. Dev. 0.0011252 Variance 1.26607E-006

### At infinity

05% of values less than 2.27181E-023

10% of values less than 6.54462E-022

50% of values less than 3.16113E-010

90% of values less than 0.000178514

95% of values less than 0.00165654

Minimum 1.72991E-029 Maximum 0.0032473

Mean 0.000178907 Std. Dev. 0.000598295 Variance 3.57957E-007

#### Phase: Cell 6

### Source Concentration of Naphthalene [mg/l]

### At 29 years

05% of values less than 9.9566E-025

10% of values less than 3.19726E-021

50% of values less than 6.24131E-011

90% of values less than 0.00366854

95% of values less than 0.0301298

Minimum 4.14269E-029

Maximum 0.175775

Mean 0.00456333 Std. Dev. 0.0192802

Variance 0.000371727

### At 54 years

05% of values less than 9.9566E-025

10% of values less than 3.19726E-021

50% of values less than 6.24131E-011

90% of values less than 0.0036521

95% of values less than 0.0299699

Minimum 4.14269E-029

Maximum 0.174714

Mean 0.004538 Std. Dev. 0.0191685

Variance 0.000367433

#### At 154 years

05% of values less than 9.9566E-025

10% of values less than 3.19726E-021

50% of values less than 6.24131E-011

90% of values less than 0.00358712

95% of values less than 0.0293388

Minimum 4.14269E-029

Maximum 0.170536

Mean 0.00443837 Std. Dev. 0.0187291

Variance 0.000350777

### At 1054 years

05% of values less than 9.9566E-025

10% of values less than 3.19726E-021

50% of values less than 6.24131E-011

90% of values less than 0.00305266

95% of values less than 0.0242145

Minimum 4.14269E-029 Maximum 0.137187

Mean 0.00362444 Std. Dev. 0.0151709 Variance 0.000230157

## At infinity

05% of values less than 9.9566E-025

10% of values less than 3.19726E-021

50% of values less than 6.24131E-011

90% of values less than 0.000102251

95% of values less than 0.00042572

Minimum 4.14269E-029

Maximum 0.00140569

Mean 5.38234E-005 Std. Dev. 0.00018629 Vari

Variance 3.47038E-008

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

Concentration of Ammoniacal\_N at base of Clay Liner [mg/l]

At 29 years

05% of values less than 0.000932107

10% of values less than 0.00383076

50% of values less than 0.0447883

90% of values less than 0.544643

95% of values less than 0.748574

Minimum 0.000158012 Maximum 1.50776

Mean 0.17028 Std. Dev. 0.271837 Variance 0.0738953

At 54 years

05% of values less than 0.0121629

10% of values less than 0.0183738

50% of values less than 0.12227

90% of values less than 0.736922

95% of values less than 0.864114

Minimum 0.0019824 Maximum 1.84161

Mean 0.260164 Std. Dev. 0.320315 Variance 0.102602

At 154 years

05% of values less than 0.0190782

10% of values less than 0.0285687

50% of values less than 0.154643

90% of values less than 0.786709

95% of values less than 0.90788

Minimum 0.00475261 Maximum 2.03474

Mean 0.291242 Std. Dev. 0.328987 Variance 0.108233

At 1054 years

05% of values less than 0.00721433

10% of values less than 0.0120078

50% of values less than 0.0846565

90% of values less than 0.510797

95% of values less than 0.637184

Minimum 0.000301914 Maximum 1.257

Mean 0.183896 Std. Dev. 0.228764 Variance 0.0523329

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0.0315507

Minimum 0 Maximum 0.166341

Mean 0.00448839 Std. Dev. 0.0194558 Variance 0.000378529

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

### Concentration of Cadmium at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 1.91248E-016

Minimum 0 Maximum 2.65352E-007

Mean 1.3399E-009 Std. Dev. 1.87171E-008 Variance 3.50329E-016

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.41749E-015

95% of values less than 4.12257E-013

Minimum 0 Maximum 3.28781E-006

Mean 1.74089E-008 Std. Dev. 2.32102E-007 Variance 5.38714E-014

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.44558E-011

95% of values less than 1.86054E-009

Minimum 0 Maximum 8.90443E-006

Mean 6.80184E-008 Std. Dev. 6.56112E-007 Variance 4.30483E-013

### At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.4807E-009

95% of values less than 1.11699E-006

Minimum 0 Maximum 1.03449E-005

Mean 2.40931E-007 Std. Dev. 1.21408E-006 Variance 1.47398E-012

## At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.63366E-013

90% of values less than 2.61515E-007

95% of values less than 2.01957E-006

Minimum 0 Maximum 1.58451E-005

Mean 3.74437E-007 Std. Dev. 1.64118E-006 Variance 2.69347E-012

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

Concentration of Copper at base of Clay Liner [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.18766E-012

95% of values less than 5.89272E-011

Minimum 0 Maximum 5.59736E-010

Mean 1.2385E-011 Std. Dev. 5.831E-011 Variance 3.40006E-021

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.96593E-010

90% of values less than 0.000163464

95% of values less than 0.00152838

Minimum 0 Maximum 0.00533797

Mean 0.000203309 Std. Dev. 0.000731994 Variance 5.35816E-007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

### Concentration of Naphthalene at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 2.711E-014

90% of values less than 2.01858E-006

95% of values less than 5.90976E-005

Minimum 0 Maximum 0.00343271

Mean 2.6282E-005 Std. Dev. 0.000245864 Variance 6.04492E-008

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 3.95631E-014

90% of values less than 4.48189E-006

95% of values less than 8.53696E-005

Minimum 0 Maximum 0.00590843

Mean 4.86796E-005 Std. Dev. 0.000425298 Variance 1.80878E-007

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 4.18632E-014

90% of values less than 4.41108E-006

95% of values less than 9.25581E-005

Minimum 0 Maximum 0.00589625

Mean 5.20682E-005 Std. Dev. 0.000427642 Variance 1.82877E-007

### At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 3.57418E-014

90% of values less than 3.3776E-006

95% of values less than 6.10997E-005

Minimum 0 Maximum 0.00483003

Mean 3.92377E-005 Std. Dev. 0.000346817 Variance 1.20282E-007

## At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 7.37354E-011

95% of values less than 5.43939E-009

Minimum 0 Maximum 0.000341592

Mean 1.70902E-006 Std. Dev. 2.40934E-005 Variance 5.80494E-010

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

Concentration of Ammoniacal\_N at base of Unsaturated Zone [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.54483E-012

95% of values less than 3.81685E-010

Minimum 0 Maximum 1.46845E-007

Mean 2.21665E-009 Std. Dev. 1.38474E-008 Variance 1.91751E-016

At 54 years

05% of values less than 0

10% of values less than 7.57381E-016

50% of values less than 7.58456E-010

90% of values less than 5.56278E-006

95% of values less than 4.00367E-005

Minimum 0 Maximum 0.000510577

Mean 1.38224E-005 Std. Dev. 6.31514E-005 Variance 3.9881E-009

At 154 years

05% of values less than 4.53107E-008

10% of values less than 8.9783E-008

50% of values less than 1.45491E-005

90% of values less than 0.000585979

95% of values less than 0.00159393

Minimum 1.6139E-009

Maximum 0.00838829

Mean 0.000314729 Std. Dev. 0.000996235 Variance 9.92484E-007

At 1054 years

05% of values less than 7.01299E-008

10% of values less than 1.48059E-007

50% of values less than 1.54558E-005

90% of values less than 0.000638604

95% of values less than 0.00203009

Minimum 3.22941E-009

Maximum 0.00751591

Mean 0.000299071 Std. Dev. 0.000894832 Variance 8.00724E-007

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 9.96321E-009

95% of values less than 3.54257E-006

Minimum 0 Maximum 0.000369609

Mean 5.98799E-006 Std. Dev. 3.88506E-005 Variance 1.50937E-009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

### Concentration of Cadmium at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 4.32756E-013

Mean 2.15301E-015 Std. Dev. 3.05242E-014 Variance 9.31728E-028

### At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 4.22292E-015

95% of values less than 1.2168E-009

Minimum 0 Maximum 1.69151E-006

Mean 1.3957E-008 Std. Dev. 1.38119E-007 Variance 1.90768E-014

## At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 4.58103E-016

90% of values less than 1.12891E-007

95% of values less than 1.11699E-006

Minimum 0 Maximum 1.58449E-005

Mean 2.9784E-007 Std. Dev. 1.53554E-006 Variance 2.35788E-012

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

### Concentration of Copper at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.99581E-012

90% of values less than 2.65447E-006

95% of values less than 2.22271E-005

Minimum 0 Maximum 0.000845434

Mean 8.95142E-006 Std. Dev. 6.46407E-005 Variance 4.17842E-009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 1.40236E-015

Mean 6.97691E-018 Std. Dev. 9.89147E-017 Variance 9.78412E-033

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 1.81445E-014

Minimum 0 Maximum 4.27069E-010

Mean 2.26571E-012 Std. Dev. 3.01578E-011 Variance 9.09496E-022

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 7.39618E-014

95% of values less than 5.32448E-011

Minimum 0 Maximum 2.83353E-007

Mean 1.61866E-009 Std. Dev. 2.00626E-008 Variance 4.02509E-016

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 7.22081E-014

95% of values less than 6.24013E-011

Minimum 0 Maximum 2.83586E-007

Mean 1.69998E-009 Std. Dev. 2.01533E-008 Variance 4.06155E-016

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.66525E-016

95% of values less than 1.37262E-014

Minimum 0 Maximum 7.5242E-011

Mean 5.48556E-013 Std. Dev. 5.59475E-012 Variance 3.13012E-023

#### Phase: Cell 6

### Approx. time to Peak Conc. Ammoniacal\_N at Base of Unsaturated Zone [years]

05% of values less than 172 10% of values less than 210 50% of values less than 282 90% of values less than 312 95% of values less than 312

Minimum 156 Maximum 380
Mean 264.577 Std. Dev. 43.2725

Variance 1872.51

### Approx. time to Peak Conc. Cadmium at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 12189 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000
Mean 10071.8 Std. Dev. 9504.18

Variance 9.03294E+007

### Approx. time to Peak Conc. Copper at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 13333.3 Std. Dev. 9451.63

Variance 8.93333E+007

### Approx. time to Peak Conc. Naphthalene at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 256 95% of values less than 312

Minimum 0 Maximum 1523 Mean 97.3582 Std. Dev. 264.135

Variance 69767.1

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

### Concentration of Ammoniacal\_N at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 9.82235E-015

95% of values less than 8.4655E-013

Minimum 0 Maximum 4.3759E-010

Mean 7.52219E-012 Std. Dev. 4.94284E-011 Variance 2.44316E-021

### At 54 years

05% of values less than 0

10% of values less than 5.66596E-019

50% of values less than 1.76898E-012

90% of values less than 1.37505E-008

95% of values less than 2.49946E-007

Minimum 0 Maximum 4.37088E-006

Mean 7.69416E-008 Std. Dev. 4.3501E-007 Variance 1.89234E-013

#### At 154 years

05% of values less than 1.26641E-010

10% of values less than 4.45392E-010

50% of values less than 7.04843E-008

90% of values less than 3.14399E-006

95% of values less than 8.90964E-006

Minimum 9.55276E-012

Maximum 9.49717E-005

Mean 2.24925E-006 Std. Dev. 9.05277E-006 Variance 8.19527E-011

### At 1054 years

05% of values less than 6.50964E-010

10% of values less than 1.24432E-009

50% of values less than 1.04087E-007

90% of values less than 4.44006E-006

95% of values less than 1.11706E-005

Minimum 3.49497E-011 Maximum 9.32435E-005

Mean 2.34184E-006 Std. Dev. 8.80018E-006 Variance 7.74431E-011

## At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.80521E-010

95% of values less than 4.55762E-008

Minimum 0 Maximum 3.10173E-006

Mean 3.39588E-008 Std. Dev. 2.48278E-007 Variance 6.1642E-014

#### Phase: Cell 6

### Concentration of Cadmium at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 9.08985E-019

95% of values less than 3.51483E-014

Minimum 0 Maximum 4.80964E-009

Mean 2.49878E-011 Std. Dev. 3.39374E-010 Variance 1.15175E-019

## At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.99443E-018

90% of values less than 2.29311E-010

95% of values less than 4.31432E-009

Minimum 0 Maximum 2.18164E-007

Mean 2.55291E-009 Std. Dev. 1.80411E-008 Variance 3.25481E-016

#### Phase: Cell 6

### Concentration of Copper at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 3.24208E-015

90% of values less than 7.4848E-009

95% of values less than 5.29853E-008

Minimum 0 Maximum 7.03192E-006

Mean 4.89676E-008 Std. Dev. 5.01026E-007 Variance 2.51027E-013

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

### Concentration of Naphthalene at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 2.44051E-018

Minimum 0 Maximum 1.69621E-013

Mean 8.51919E-016 Std. Dev. 1.19637E-014 Variance 1.43131E-028

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.16801E-016

95% of values less than 3.55668E-014

Minimum 0 Maximum 8.59873E-011

Mean 1.01299E-012 Std. Dev. 8.57799E-012 Variance 7.3582E-023

### At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.98115E-016

95% of values less than 4.15525E-014

Minimum 0 Maximum 9.94509E-011

Mean 1.31219E-012 Std. Dev. 1.03716E-011 Variance 1.07571E-022

## At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 1.47837E-017

Minimum 0 Maximum 1.17182E-013

Mean 7.72097E-016 Std. Dev. 8.39519E-015 Variance 7.04792E-029

#### Phase: Cell 6

Approx. time to Peak Conc. Ammoniacal\_N at Phase Monitor Well [years]

05% of values less than 190 10% of values less than 232 50% of values less than 312 90% of values less than 344

95% of values less than 344

Minimum 156 Maximum 420

Mean 291.562 Std. Dev. 48.9535 Variance 2396.45

Approx. time to Peak Conc. Cadmium at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 13458 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 10227.5 Std. Dev. 9726.24

Mean 10227.5 Std. Dev. 9726.24 Variance 9.45997E+007

Approx. time to Peak Conc. Copper at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000

90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000

Maximum 20000

Std. Dev. 9583 36

Mean 12935.3 Std. Dev. 9583.36 Variance 9.18408E+007

Approx. time to Peak Conc. Naphthalene at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 282 95% of values less than 344

Minimum 0 Maximum 1681
Mean 97.2338 Std. Dev. 284.06

Variance 80690.3

#### Phase: Cell 6

Flow to Leachate Treatment Plant [I/day]

At 29 years

05% of values less than 0

10% of values less than 9.29515

50% of values less than 249.085

90% of values less than 450.681

95% of values less than 485.371

Minimum 0 Maximum 512.824

Mean 236.982 Std. Dev. 157.365 Variance 24763.7

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Maximum 0 Minimum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0

Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

Head on EBS [m]

At 29 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1

95% of values less than 1

Minimum 1 Maximum 1

Mean 1 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 1

10% of values less than 1.00168

50% of values less than 1.045

90% of values less than 1.08135

95% of values less than 1.0876

Minimum 1 Maximum 1.09254

Mean 1.0428 Std. Dev. 0.0284023 Variance 0.000806693

At 154 years

05% of values less than 0.936368

10% of values less than 1.01663

50% of values less than 1.56725

90% of values less than 2.32954

95% of values less than 2.50778

Minimum 0.851369

Maximum 2.66248

Mean 1.60772 Std. Dev. 0.488737 Variance 0.238864

At 1054 years

05% of values less than 0.936367

10% of values less than 1.01663

50% of values less than 1.56742

90% of values less than 2.33265

95% of values less than 2.51282

Minimum 0.851368 Maximum 2.66983

Mean 1.60863 Std. Dev. 0.490065 Variance 0.240164

At infinity

05% of values less than 0.936367

10% of values less than 1.01663

50% of values less than 1.56742

90% of values less than 2.33265

95% of values less than 2.51282

Minimum 0.851368 Maximum 2.66983

Mean 1.60863 Std. Dev. 0.490065 Variance 0.240164

#### Phase: Cell 6

Surface Breakout [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0

Std. Dev. 0

Maximum 0 Mean 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 6

### Leakage through EBS [I/day]

### At 29 years

05% of values less than 641.676

10% of values less than 676.367

50% of values less than 877.963

90% of values less than 1117.75

95% of values less than 1127.05

Minimum 614.223

Maximum 1127.05

Mean 890.066 Std. Dev. 157.365

Variance 24763.7

### At 54 years

05% of values less than 669.781

10% of values less than 703.877

50% of values less than 897.716

90% of values less than 1118.69

95% of values less than 1164.08

Minimum 642.644 Maximum 1217.53

Mean 911.161 Std. Dev. 155.138 Variance 24067.7

#### At 154 years

05% of values less than 1125.43

10% of values less than 1125.99

50% of values less than 1126.98

90% of values less than 1127.05

95% of values less than 1127.05

Minimum 1124.79

Maximum 1127.05

Mean 1126.74 Std. Dev. 0.511303 Variance 0.26143

### At 1054 years

05% of values less than 1127.05

10% of values less than 1127.05

50% of values less than 1127.05

90% of values less than 1127.05

95% of values less than 1127.05

Minimum 1127.05 Maximum 1127.05

Mean 1127.05 Std. Dev. 6.16094E-005 Variance -3.79572E-009

## At infinity

05% of values less than 1127.05

10% of values less than 1127.05

50% of values less than 1127.05

90% of values less than 1127.05

95% of values less than 1127.05

Minimum 1127.05 Maximum 1127.05

Mean 1127.05 Std. Dev. 6.16094E-005 Variance -3.79572E-009

#### Phase: Cell 6

Aquifer Flow [m³/year]

At 29 years

05% of values less than 21430.8

10% of values less than 25302.2

50% of values less than 66221.7

90% of values less than 184392

95% of values less than 207206

Minimum 0 Maximum 331201

Mean 85278.6 Std. Dev. 61309.1 Variance 3.7588E+009

At 54 years

05% of values less than 21430.8

10% of values less than 25302.2

50% of values less than 66221.7

90% of values less than 184392

95% of values less than 207206

Minimum 0 Maximum 331201

Mean 85278.6 Std. Dev. 61309.1 Variance 3.7588E+009

At 154 years

05% of values less than 21430.8

10% of values less than 25302.2

50% of values less than 66221.7

90% of values less than 184392

95% of values less than 207206

Minimum 0 Maximum 331201

Mean 85278.6 Std. Dev. 61309.1 Variance 3.7588E+009

At 1054 years

05% of values less than 21430.8

10% of values less than 25302.2

50% of values less than 66221.7

90% of values less than 184392

95% of values less than 207206

Minimum 0 Maximum 331201

Mean 85278.6 Std. Dev. 61309.1 Variance 3.7588E+009

At infinity

05% of values less than 21430.8

10% of values less than 25302.2

50% of values less than 66221.7

90% of values less than 184392

95% of values less than 207206

Minimum 0 Maximum 331201

Mean 85278.6 Std. Dev. 61309.1 Variance 3.7588E+009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

### Source Concentration of Ammoniacal\_N [mg/l]

### At 29 years

05% of values less than 7.55581

10% of values less than 8.18564

50% of values less than 10.6374

90% of values less than 12.8788

95% of values less than 13.2231

Minimum 4.63421 Maximum 13.7615

Mean 10.4703 Std. Dev. 1.78693 Variance 3.19311

### At 54 years

05% of values less than 7.47599

10% of values less than 8.10101

50% of values less than 10.5256

90% of values less than 12.7448

95% of values less than 13.0836

Minimum 4.58476 Maximum 13.6179

Mean 10.3602 Std. Dev. 1.76809 Variance 3.12613

#### At 154 years

05% of values less than 7.16221

10% of values less than 7.78671

50% of values less than 10.0931

90% of values less than 12.2348

95% of values less than 12.542

Minimum 4.39183

Maximum 13.0688

Mean 9.93597 Std. Dev. 1.69518 Variance 2.87364

### At 1054 years

05% of values less than 4.84517

10% of values less than 5.2678

50% of values less than 6.82788

90% of values less than 8.2768

95% of values less than 8.48452

Minimum 2.97103 Maximum 8.84092

Mean 6.72162 Std. Dev. 1.14678 Variance 1.31509

## At infinity

05% of values less than 0.00129459

10% of values less than 0.00140751

50% of values less than 0.00182435

90% of values less than 0.00221149

95% of values less than 0.00226699

Minimum 0.000793835

Maximum 0.00236222

Mean 0.00179596 Std. Dev. 0.000306408 Variance 9.38862E-008

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

Source Concentration of Cadmium [mg/l]

At 29 years

05% of values less than 5.21132E-023

10% of values less than 9.40724E-022

50% of values less than 2.61763E-012

90% of values less than 8.31407E-007

95% of values less than 2.82575E-006

Minimum 2.59364E-029

Maximum 2.018E-005

Mean 5.61197E-007 Std. Dev. 2.26711E-006

Variance 5.13981E-012

At 54 years

05% of values less than 5.21132E-023

10% of values less than 9.40724E-022

50% of values less than 2.61763E-012

90% of values less than 8.31407E-007

95% of values less than 2.82575E-006

Minimum 2.59364E-029

Maximum 2.018E-005

Mean 5.61197E-007 Std. Dev. 2.26711E-006

Variance 5.13981E-012

At 154 years

05% of values less than 5.21132E-023

10% of values less than 9.40724E-022

50% of values less than 2.61763E-012

90% of values less than 8.31407E-007

95% of values less than 2.82575E-006

Minimum 2.59364E-029

Maximum 2.018E-005

Mean 5.61197E-007 Std. Dev. 2.26711E-006

Variance 5.13981E-012

At 1054 years

05% of values less than 5.21132E-023

10% of values less than 9.40724E-022

50% of values less than 2.61763E-012

90% of values less than 8.31407E-007

95% of values less than 2.82575E-006

Minimum 2.59364E-029

Maximum 2.018E-005

Mean 5.61197E-007 Std. Dev. 2.26711E-006

Variance 5.13981E-012

At infinity

05% of values less than 5.21132E-023

10% of values less than 9.40724E-022

50% of values less than 2.61763E-012

90% of values less than  $8.31407 \hbox{E-}007$ 

95% of values less than 2.82575E-006

Minimum 2.59364E-029

Maximum 2.018E-005

Mean 5.61197E-007 Std. Dev. 2.26711E-006

Variance 5.13981E-012

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

## Source Concentration of Copper [mg/l]

## At 29 years

05% of values less than 3.1681E-023

10% of values less than 4.8702E-021

50% of values less than 4.83268E-011

90% of values less than 0.000630538

95% of values less than 0.00184845

Minimum 4.07877E-029

Maximum 0.0176167

Mean 0.00034024 Std. Dev. 0.00155809

Variance 2.42764E-006

## At 54 years

05% of values less than 3.1681E-023

10% of values less than 4.8702E-021

50% of values less than 4.83268E-011

90% of values less than 0.000630538

95% of values less than 0.00184845

Minimum 4.07877E-029

Maximum 0.0175725

Mean 0.000339861 Std. Dev. 0.00155493

Variance 2.4178E-006

#### At 154 years

05% of values less than 3.1681E-023

10% of values less than 4.8702E-021

50% of values less than 4.83268E-011

90% of values less than 0.000630538

95% of values less than 0.00184845

Minimum 4.07877E-029

Maximum 0.017404

Mean 0.000338387 Std. Dev. 0.00154276

Variance 2.38011E-006

## At 1054 years

05% of values less than 3.1681E-023

10% of values less than 4.8702E-021

50% of values less than 4.83268E-011

90% of values less than 0.000630538

95% of values less than 0.00184845

Minimum 4.07877E-029

Maximum 0.0158381

Mean 0.000324956 Std. Dev. 0.00143171

Variance 2.0498E-006

# At infinity

05% of values less than 3.1681E-023

10% of values less than 4.8702E-021

50% of values less than 4.83268E-011

90% of values less than 0.000630538

95% of values less than 0.00184845

Minimum 4.07877E-029

Maximum 0.00217618

Mean 0.000185067 Std. Dev. 0.00052402

Variance 2.74597E-007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

## Source Concentration of Naphthalene [mg/l]

## At 29 years

05% of values less than 2.79858E-025

10% of values less than 1.75834E-023

50% of values less than 2.05437E-011

90% of values less than 0.000430714

95% of values less than 0.00806773

Minimum 1.12221E-029

Maximum 0.136462

Mean 0.00224888 Std. Dev. 0.0119865

Variance 0.000143676

## At 54 years

05% of values less than 2.79858E-025

10% of values less than 1.75834E-023

50% of values less than 2.05437E-011

90% of values less than 0.000428624

95% of values less than 0.008017

Minimum 1.12221E-029

Maximum 0.135403

Mean 0.00223263 Std. Dev. 0.0118957

Variance 0.000141509

Variance 0.000133313

#### At 154 years

05% of values less than 2.79858E-025

10% of values less than 1.75834E-023

50% of values less than 2.05437E-011

90% of values less than 0.000420347

95% of values less than 0.00782096

Minimum 1.12221E-029

Maximum 0.131356

Mean 0.00216963 Std. Dev. 0.0115461

## At 1054 years

05% of values less than 2.79858E-025

10% of values less than 1.75834E-023

50% of values less than 2.05437E-011

90% of values less than 0.000352124

95% of values less than 0.00618268

Minimum 1.12221E-029

Maximum 0.0981913

Mean 0.00165858 Std. Dev. 0.00870513 Variance 7.57792E-005

# At infinity

05% of values less than 2.79858E-025

10% of values less than 1.75834E-023

50% of values less than 2.05437E-011

90% of values less than 8.46454E-006

95% of values less than  $4.38727\mbox{E-}005$ 

Minimum 1.12221E-029

Maximum 0.000214604

Mean 6.63734E-006 Std. Dev. 2.50043E-005 Variance 6.25213E-010

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Concentration of Ammoniacal\_N at base of Clay Liner [mg/l]

# At 29 years

05% of values less than 0.00117723

10% of values less than 0.00292597

50% of values less than 0.0930237

90% of values less than 0.922402

95% of values less than 1.47221

Minimum 0.000127558 Maximum 2.73001

Mean 0.298957 Std. Dev. 0.478518 Variance 0.228979

# At 54 years

05% of values less than 0.014957

10% of values less than 0.021395

50% of values less than 0.241748

90% of values less than 1.05774

95% of values less than 1.57245

Minimum 0.00387893 Maximum 2.89409

Mean 0.435905 Std. Dev. 0.524703 Variance 0.275314

#### At 154 years

05% of values less than 0.0535488

10% of values less than 0.0811115

50% of values less than 0.39459

90% of values less than 1.24912

95% of values less than 1.62036

Minimum 0.0184822 Maximum 2.84799

Mean 0.535431 Std. Dev. 0.53369 Variance 0.284825

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0.112447

90% of values less than 0.55649

95% of values less than 0.858002

Minimum 0 Maximum 1.7241

Mean 0.227901 Std. Dev. 0.302453 Variance 0.0914779

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0 Minimum 0

Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Concentration of Cadmium at base of Clay Liner [mg/l]

# At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.71129E-016

95% of values less than 2.75522E-013

Minimum 0 Maximum 9.00904E-008

Mean 4.50083E-010 Std. Dev. 6.35437E-009 Variance 4.03781E-017

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.74917E-012

95% of values less than 3.06512E-010

Minimum 0 Maximum 3.33319E-006

Mean 1.70162E-008 Std. Dev. 2.35102E-007 Variance 5.5273E-014

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.93121E-009

95% of values less than 3.11877E-008

Minimum 0 Maximum 1.78311E-005

Mean 1.12669E-007 Std. Dev. 1.26399E-006 Variance 1.59766E-012

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.0799E-015

90% of values less than 8.06442E-008

95% of values less than 6.41866E-007

Minimum 0 Maximum 2.018E-005

Mean 3.45676E-007 Std. Dev. 2.03593E-006 Variance 4.14502E-012

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.18506E-012

90% of values less than 5.60035E-007

95% of values less than 2.13413E-006

Minimum 0 Maximum 2.018E-005

Mean 4.81695E-007 Std. Dev. 2.19361E-006 Variance 4.81194E-012

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Concentration of Copper at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 9.08938E-017

Mean 4.52208E-019 Std. Dev. 6.41115E-018 Variance 4.11029E-035

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.87168E-010

95% of values less than 1.6521E-009

Minimum 0 Maximum 2.37658E-007

Mean 2.14678E-009 Std. Dev. 1.82725E-008 Variance 3.33883E-016

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 4.30411E-011

90% of values less than 0.000626872

95% of values less than 0.00184448

Minimum 0 Maximum 0.00364466

Mean 0.000207404 Std. Dev. 0.000631421 Variance 3.98693E-007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Concentration of Naphthalene at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 8.40328E-015 90% of values less than 5.65625E-008

95% of values less than 2.89455E-006

Minimum 0 Maximum 0.00142413

Mean 8.42009E-006 Std. Dev. 0.000100959 Variance 1.01928E-008

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.05394E-014 90% of values less than 8.74581E-008

95% of values less than 3.46681E-006

Minimum 0 Maximum 0.00311445

Mean 1.77921E-005 Std. Dev. 0.000220487 Variance 4.86147E-008

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 3.68926E-014

90% of values less than 9.22313E-007

95% of values less than 8.05454E-006

Minimum 0 Maximum 0.00332361

Mean 2.03287E-005 Std. Dev. 0.000235967 Variance 5.56807E-008

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 6.55539E-015 90% of values less than 6.77939E-008

95% of values less than 2.18129E-006

Minimum 0 Maximum 0.00222493

Mean 1.23544E-005 Std. Dev. 0.00015735 Variance 2.47589E-008

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.52061E-012 95% of values less than 2.73405E-011

Minimum 0 Maximum 4.37612E-009

Mean 3.06868E-011 Std. Dev. 3.12428E-010 Variance 9.76111E-020

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

Concentration of Ammoniacal\_N at base of Unsaturated Zone [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 9.48254E-016

90% of values less than 4.70999E-009

95% of values less than 2.11863E-007

Minimum 0 Maximum 4.81744E-005

Mean 5.0196E-007 Std. Dev. 4.03173E-006 Variance 1.62548E-011

At 54 years

05% of values less than 5.31509E-015

10% of values less than 2.44962E-013

50% of values less than 8.57359E-008

90% of values less than 0.000179006

95% of values less than 0.00113828

Minimum 0 Maximum 0.0212566

Mean 0.000328142 Std. Dev. 0.00189042 Variance 3.57369E-006

At 154 years

05% of values less than 5.72334E-007

10% of values less than 1.3604E-006

50% of values less than 9.72039E-005

90% of values less than 0.0035322

95% of values less than 0.0123141

Minimum 2.81191E-010 Maximum 0.0619986

Mean 0.00205871 Std. Dev. 0.00681336 Variance 4.64219E-005

At 1054 years

05% of values less than 7.51647E-007

10% of values less than 2.93863E-006

50% of values less than 0.000114704

90% of values less than 0.00339649

95% of values less than 0.00962318

Minimum 6.92796E-009 Maximum 0.0480401

Mean 0.0017755 Std. Dev. 0.00559352 Variance 3.12875E-005

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.33631E-016

95% of values less than 1.30432E-015

Minimum 0 Maximum 2.9207E-012

Mean 1.51647E-014 Std. Dev. 2.06034E-013 Variance 4.24499E-026

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Concentration of Cadmium at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 1.75823E-016

Minimum 0 Maximum 2.90148E-010

Mean 1.55576E-012 Std. Dev. 2.04888E-011 Variance 4.19791E-022

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.20579E-011

95% of values less than 7.07092E-009

Minimum 0 Maximum 7.93822E-006

Mean 9.69271E-008 Std. Dev. 7.73319E-007 Variance 5.98022E-013

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 4.43073E-014

90% of values less than 1.37339E-007

95% of values less than 5.11295E-007

Minimum 0 Maximum 8.18124E-006

Mean 2.07133E-007 Std. Dev. 1.02679E-006 Variance 1.0543E-012

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Concentration of Copper at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 4.51745E-012

90% of values less than 4.39513E-005

95% of values less than 0.000275194

Minimum 0 Maximum 0.0025883

Mean 4.02602E-005 Std. Dev. 0.00020827 Variance 4.33764E-008

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 9.86778E-015

Mean 4.98369E-017 Std. Dev. 6.96047E-016 Variance 4.84481E-031

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.74486E-015

95% of values less than 4.57709E-014

Minimum 0 Maximum 2.8807E-010

Mean 1.71693E-012 Std. Dev. 2.04256E-011 Variance 4.17206E-022

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.81769E-013

95% of values less than 8.28919E-012

Minimum 0 Maximum 1.67578E-008

Mean 1.19897E-010 Std. Dev. 1.22087E-009 Variance 1.49053E-018

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.05296E-012

95% of values less than 1.30022E-011

Minimum 0 Maximum 3.04415E-008

Mean 1.86372E-010 Std. Dev. 2.15949E-009 Variance 4.6634E-018

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 2.00959E-016

Minimum 0 Maximum 7.42539E-013

Mean 5.58392E-015 Std. Dev. 5.46825E-014 Variance 2.99018E-027

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Approx. time to Peak Conc. Ammoniacal\_N at Base of Unsaturated Zone [years]

05% of values less than 210 10% of values less than 232 50% of values less than 256 90% of values less than 312 95% of values less than 312

Minimum 190 Maximum 380
Mean 260.498 Std. Dev. 30.117

Variance 907.031

## Approx. time to Peak Conc. Cadmium at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 14859 90% of values less than 20000 95% of values less than 20000

 Minimum 0
 Maximum 20000

 Mean 11514.1
 Std. Dev. 9123.11

Variance 8.32311E+007

## Approx. time to Peak Conc. Copper at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 14228.9 Std. Dev. 9084.46

Variance 8.25274E+007

# Approx. time to Peak Conc. Naphthalene at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 282 95% of values less than 344

Minimum 0 Maximum 12189
Mean 161.164 Std. Dev. 886.666

Variance 786177

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

Concentration of Ammoniacal\_N at Phase Monitor Well [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 7.53096E-019

90% of values less than 1.561E-011

95% of values less than 7.19087E-010

Minimum 0 Maximum 2.60408E-007

Mean 2.06979E-009 Std. Dev. 1.93075E-008 Variance 3.72779E-016

At 54 years

05% of values less than 8.37997E-018

10% of values less than 1.23227E-015

50% of values less than 3.33829E-010

90% of values less than 1.25346E-006

95% of values less than 6.21595E-006

Minimum 0 Maximum 0.000150711

Mean 1.88043E-006 Std. Dev. 1.21159E-005 Variance 1.46795E-010

At 154 years

05% of values less than 3.97851E-009

10% of values less than 1.21598E-008

50% of values less than 8.67706E-007

90% of values less than 4.05401E-005

95% of values less than 9.33211E-005

Minimum 2.16773E-012 Maximum 0.000553123

Mean 1.84374E-005 Std. Dev. 6.26312E-005 Variance 3.92267E-009

At 1054 years

05% of values less than 9.74454E-009

10% of values less than 3.49695E-008

50% of values less than 1.28852E-006

90% of values less than 5.20959E-005

95% of values less than 9.57422E-005

Minimum 8.10746E-011 Maximum 0.000566693

Mean 1.97993E-005 Std. Dev. 6.24559E-005 Variance 3.90074E-009

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 9.83517E-018

95% of values less than 3.45655E-017

Minimum 0 Maximum 2.83697E-012

Mean 1.4142E-014 Std. Dev. 2.00102E-013 Variance 4.00409E-026

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Concentration of Cadmium at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 3.66157E-014

Mean 1.82475E-016 Std. Dev. 2.58265E-015 Variance 6.67009E-030

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 8.68274E-015

95% of values less than 3.87188E-012

Minimum 0 Maximum 6.66611E-008

Mean 4.84106E-010 Std. Dev. 4.91611E-009 Variance 2.41681E-017

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.08331E-016

90% of values less than 1.19946E-009

95% of values less than 7.59277E-009

Minimum 0 Maximum 1.21631E-007

Mean 2.30484E-009 Std. Dev. 1.19221E-008 Variance 1.42135E-016

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Concentration of Copper at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.22579E-014

90% of values less than 2.54711E-007

95% of values less than 1.1529E-006

Minimum 0 Maximum 1.03227E-005

Mean 2.60059E-007 Std. Dev. 1.20857E-006 Variance 1.46064E-012

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Concentration of Naphthalene at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 3.0771E-018

Mean 1.5309E-020 Std. Dev. 2.17042E-019 Variance 4.71073E-038

# At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.03953E-018

95% of values less than 1.78871E-017

Minimum 0 Maximum 3.85714E-013

Mean 2.1984E-015 Std. Dev. 2.72817E-014 Variance 7.44289E-028

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.02358E-015

95% of values less than 1.43745E-014

Minimum 0 Maximum 3.88871E-011

Mean 2.74703E-013 Std. Dev. 2.82476E-012 Variance 7.97926E-024

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than  $3.39916\mbox{E-}015$ 

95% of values less than 4.72939E-014

Minimum 0 Maximum 1.10882E-010

Mean 6.59982E-013 Std. Dev. 7.85569E-012 Variance 6.17119E-023

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 1.89016E-018

Minimum 0 Maximum 3.39165E-015

Mean 3.41771E-017 Std. Dev. 2.92895E-016 Variance 8.57873E-032

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Approx. time to Peak Conc. Ammoniacal\_N at Phase Monitor Well [years]

05% of values less than 232 10% of values less than 256 50% of values less than 282

90% of values less than 344

95% of values less than 344

Minimum 210 Maximum 420 Mean 286.697 Std. Dev. 33.759

Variance 1139.67

# Approx. time to Peak Conc. Cadmium at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 16406 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 11424.9 Std. Dev. 9246.15

Variance 8.54912E+007

# Approx. time to Peak Conc. Copper at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000

95% of values less than 20000

Minimum 0 Maximum 20000 Mean 13930.3 Std. Dev. 9218.2

Variance 8.49751E+007

# Approx. time to Peak Conc. Naphthalene at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 312 95% of values less than 380

Minimum 0 Maximum 1523 Mean 113.731 Std. Dev. 272.075

Variance 74024.9

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

Flow to Leachate Treatment Plant [I/day]

At 29 years

05% of values less than 307.567

10% of values less than 350.905

50% of values less than 683.784

90% of values less than 1070.58

95% of values less than 1113.31

Minimum 272.828

Maximum 1133.55

Mean 705.688 Std. Dev. 257.27 Variance 66187.8

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0

Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

Phase: Cell 7

Head on EBS [m]

At 29 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1

95% of values less than 1

Minimum 1 Maximum 1

Mean 1 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 1.03783

10% of values less than 1.04315

50% of values less than 1.08395

90% of values less than 1.13119

95% of values less than 1.1364

Minimum 1.03356 Maximum 1.13886

Mean 1.08659 Std. Dev. 0.0314725 Variance 0.000990521

At 154 years

05% of values less than 1.3625

10% of values less than 1.42441

50% of values less than 2.03513

90% of values less than 3.27995

95% of values less than 3.47993

Minimum 1.3151 Maximum 3.58084

Mean 2.21402 Variance 0.448059 Std. Dev. 0.669372

At 1054 years

05% of values less than 1.3625

10% of values less than 1.42442

50% of values less than 2.03549

90% of values less than 3.2927

95% of values less than 3.49852

Minimum 1.31511 Maximum 3.60307

Mean 2.21734 Std. Dev. 0.674322 Variance 0.45471

At infinity

05% of values less than 1.3625

10% of values less than 1.42442

50% of values less than 2.03549

90% of values less than 3.2927

95% of values less than 3.49852

Minimum 1.31511 Maximum 3.60307

Mean 2.21734 Std. Dev. 0.674322 Variance 0.45471 Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

Surface Breakout [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 7

# Leakage through EBS [I/day]

# At 29 years

05% of values less than 891.172

10% of values less than 933.902

50% of values less than 1320.7

90% of values less than 1653.57

95% of values less than 1696.91

Minimum 870.932

Maximum 1731.65

Mean 1298.79 Std. Dev. 257.27 Variance 66187.8

## At 54 years

05% of values less than 951.948

10% of values less than 995.161

50% of values less than 1376.13

90% of values less than 1689.25

95% of values less than 1729.01

Minimum 931.402 Maximum 1760.71

Mean 1350.99 Std. Dev. 248.109 Variance 61557.9

#### At 154 years

05% of values less than 1996.19

10% of values less than 1998.53

50% of values less than 2004.24

90% of values less than 2004.47

95% of values less than 2004.47

Minimum 1994.8

Maximum 2004.48

Mean 2002.89 Std. Dev. 2.57372 Variance 6.62406

## At 1054 years

05% of values less than 2004.48

10% of values less than 2004.48

50% of values less than 2004.48

90% of values less than 2004.48

95% of values less than 2004.48

Minimum 2004.48 Maximum 2004.48

Mean 2004.48 Std. Dev. 0.000145794 Variance 2.1256E-008

# At infinity

05% of values less than 2004.48

10% of values less than 2004.48

50% of values less than 2004.48

90% of values less than 2004.48

95% of values less than 2004.48

Minimum 2004.48 Maximum 2004.48

Mean 2004.48 Std. Dev. 0.000145794 Variance 2.1256E-008 Project Number: 0001 Customer: IMS Hollywood

Phase: Cell 7

Aquifer Flow [m³/year]

At 29 years

05% of values less than 23308.7

10% of values less than 27519.4

50% of values less than 72024.6

90% of values less than 200551

95% of values less than 225363

Minimum 0 Maximum 360224

Mean 92751.5 Std. Dev. 66681.5 Variance 4.44642E+009

At 54 years

05% of values less than 23308.7

10% of values less than 27519.4

50% of values less than 72024.6

90% of values less than 200551

95% of values less than 225363

Minimum 0 Maximum 360224

Mean 92751.5 Std. Dev. 66681.5 Variance 4.44642E+009

At 154 years

05% of values less than 23308.7

10% of values less than 27519.4

50% of values less than 72024.6

90% of values less than 200551

95% of values less than 225363

Minimum 0 Maximum 360224

Mean 92751.5 Std. Dev. 66681.5 Variance 4.44642E+009

At 1054 years

05% of values less than 23308.7  $\,$ 

10% of values less than 27519.4

50% of values less than 72024.6

90% of values less than 200551

95% of values less than 225363

Minimum 0 Maximum 360224

Mean 92751.5 Std. Dev. 66681.5 Variance 4.44642E+009

At infinity

05% of values less than 23308.7

10% of values less than 27519.4

50% of values less than 72024.6

90% of values less than 200551

95% of values less than 225363

Minimum 0 Maximum 360224

Mean 92751.5 Std. Dev. 66681.5 Variance 4.44642E+009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

# Source Concentration of Ammoniacal\_N [mg/l]

## At 29 years

05% of values less than 4.62392

10% of values less than 4.90844

50% of values less than 7.52527

90% of values less than 9.85459

95% of values less than 10.8028

Minimum 3.15179

Maximum 11.6542

Mean 7.4461 Std. Dev. 1.86356

Variance 3.47286

## At 54 years

05% of values less than 4.57975

10% of values less than 4.86164

50% of values less than 7.45261

90% of values less than 9.76026

95% of values less than 10.698

Minimum 3.12087

Mean 7.37399 Std. Dev. 1.84557 Variance 3.40614

Maximum 11.5435

#### At 154 years

05% of values less than 4.40923

10% of values less than 4.68152

50% of values less than 7.1696

90% of values less than 9.39791

95% of values less than 10.2893

Minimum 3.00026

Maximum 11.1209

Mean 7.09411 Std. Dev. 1.77587 Variance 3.15371

## At 1054 years

05% of values less than 3.09761

10% of values less than 3.2889

50% of values less than 5.03685

90% of values less than 6.60232

95% of values less than 7.22853

Minimum 2.10776 Maximum 7.8128

Mean 4.98382 Std. Dev. 1.2476 Variance 1.5565

# At infinity

05% of values less than 0.00183283

10% of values less than 0.00194602

50% of values less than 0.00298027

90% of values less than 0.00390654

95% of values less than 0.00427707

Minimum 0.00124715

Maximum 0.00462277

Mean 0.00294889 Std. Dev. 0.000738195 Variance 5.44932E-007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

Source Concentration of Cadmium [mg/l]

At 29 years

05% of values less than 2.11237E-025

10% of values less than 6.04565E-023

50% of values less than 1.19453E-011

90% of values less than 1.13878E-006

95% of values less than 3.82696E-006

Minimum 9.34365E-030

Mean 6.16759E-007 Std. Dev. 2.22062E-006

At 54 years

05% of values less than 2.11237E-025

10% of values less than 6.04565E-023

50% of values less than 1.19453E-011

90% of values less than 1.13878E-006

95% of values less than 3.82696E-006

Minimum 9.34365E-030

Maximum 1.56354E-005

Mean 6.16759E-007 Std. Dev. 2.22062E-006 Variance 4.93117E-012

Maximum 1.56354E-005

Variance 4.93117E-012

At 154 years

05% of values less than 2.11237E-025

10% of values less than 6.04565E-023

50% of values less than 1.19453E-011

90% of values less than 1.13878E-006

95% of values less than 3.82696E-006

Minimum 9.34365E-030

Maximum 1.56354E-005 Mean 6.16759E-007 Std. Dev. 2.22062E-006 Variance 4.93117E-012

At 1054 years

05% of values less than 2.11237E-025

10% of values less than 6.04565E-023

50% of values less than 1.19453E-011

90% of values less than 1.13878E-006

95% of values less than 3.82696E-006

Minimum 9.34365E-030

Maximum 1.56354E-005

Mean 6.16759E-007 Std. Dev. 2.22062E-006 Variance 4.93117E-012

At infinity

05% of values less than 2.11237E-025

10% of values less than 6.04565E-023

50% of values less than 1.19453E-011

90% of values less than 1.13878E-006

95% of values less than 3.82696E-006

Minimum 9.34365E-030

Mean 6.16759E-007

Maximum 1.56354E-005

Std. Dev. 2.22062E-006 Variance 4.93117E-012 Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

## Source Concentration of Copper [mg/l]

## At 29 years

05% of values less than 7.05731E-026

10% of values less than 1.03961E-021

50% of values less than 1.1229E-010

90% of values less than 0.000250107

95% of values less than 0.00184661

Minimum 2.86272E-029

Maximum 0.00710744

Mean 0.000252611 Std. Dev. 0.000966806

Variance 9.34713E-007

## At 54 years

05% of values less than 7.05731E-026

10% of values less than 1.03961E-021

50% of values less than 1.1229E-010

90% of values less than 0.000250107

95% of values less than 0.00184661

Minimum 2.86272E-029

Maximum 0.00709791

Mean 0.000252448 Std. Dev. 0.000965895

Variance 9.32954E-007

#### At 154 years

05% of values less than 7.05731E-026

10% of values less than 1.03961E-021

50% of values less than 1.1229E-010

90% of values less than 0.000250107

95% of values less than 0.00184661

Minimum 2.86272E-029

Maximum 0.00706015

Mean 0.0002518 Std. Dev. 0.000962277 Variance 9.25978E-007

## At 1054 years

05% of values less than 7.05731E-026

10% of values less than 1.03961E-021

50% of values less than 1.1229E-010

90% of values less than 0.000250107

95% of values less than 0.00184661

Minimum 2.86272E-029

Maximum 0.00672217

Mean 0.000246054 Std. Dev. 0.000930396 Variance 8.65637E-007

# At infinity

05% of values less than 7.05731E-026

10% of values less than 1.03961E-021

50% of values less than  $1.1229\mbox{E-}010$ 

90% of values less than 0.000250107

95% of values less than 0.00184661 Minimum 2.86272E-029

Maximum 0.00239353

Mean 0.000163601 Std. Dev. 0.000526505 Variance 2.77207E-007

190617 M JER1631 RG Hollywood IWMF v2.sim 16/07/2020 20:05:48 Page 54 of 258

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

## Source Concentration of Naphthalene [mg/l]

## At 29 years

05% of values less than 2.86566E-024

10% of values less than 1.31716E-022

50% of values less than 1.48295E-009

90% of values less than 0.00586811

95% of values less than 0.0188366

Minimum 1.41326E-027

Maximum 0.106982

Mean 0.00317312 Std. Dev. 0.0117879

Variance 0.000138955

## At 54 years

05% of values less than 2.86566E-024

10% of values less than 1.31716E-022

50% of values less than 1.48295E-009

90% of values less than 0.00583506

95% of values less than 0.0187184

Minimum 1.41326E-027

Maximum 0.106209

Mean 0.00315242 Std. Dev. 0.0117069

Variance 0.000137052

#### At 154 years

05% of values less than 2.86566E-024

10% of values less than 1.31716E-022

50% of values less than 1.48295E-009

90% of values less than 0.00570559

95% of values less than 0.0182534

Minimum 1.41326E-027

Maximum 0.103177

Mean 0.00307147 Std. Dev. 0.01139 Variance 0.000129732

## At 1054 years

05% of values less than 2.86566E-024

10% of values less than 1.31716E-022

50% of values less than 1.48295E-009

90% of values less than 0.0046394

95% of values less than 0.014536

Minimum 1.41326E-027

Maximum 0.0796513

Mean 0.00242223 Std. Dev. 0.00887579 Variance 7.87797E-005

## At infinity

05% of values less than 2.86566E-024

10% of values less than 1.31716E-022

50% of values less than 1.48295E-009

90% of values less than 5.9601E-005

95% of values less than 0.000120368

Minimum 1.41326E-027

Maximum 0.000342939

Mean 1.79563E-005 Std. Dev. 4.98091E-005 Variance 2.48094E-009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

# Concentration of Ammoniacal\_N at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0.000115139

10% of values less than 0.000320802

50% of values less than 0.0272773

90% of values less than 0.543234

95% of values less than 0.80715

Minimum 1.24229E-005 Maximum 2.18524

Mean 0.168435 Std. Dev. 0.34627 Variance 0.119903

## At 54 years

05% of values less than 0.00519946

10% of values less than 0.00975381

50% of values less than 0.123557

90% of values less than 0.830828

95% of values less than 1.04048

Minimum 0.000783522 Maximum 2.46477

Mean 0.297983 Std. Dev. 0.407872 Variance 0.166359

#### At 154 years

05% of values less than 0.0108211

10% of values less than 0.0165316

50% of values less than 0.148869

90% of values less than 0.83913

95% of values less than 1.01613

Minimum 0.001465

Maximum 2.4226

Mean 0.314712 Std. Dev. 0.4023 Variance 0.161845

## At 1054 years

05% of values less than 0.000803127

10% of values less than 0.00363275

50% of values less than 0.0921137

90% of values less than 0.612886

95% of values less than 0.732935

Minimum 0 Maximum 1.94746

Mean 0.214201 Std. Dev. 0.307744 Variance 0.0947063

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0.136897

95% of values less than 0.25404

Minimum 0 Maximum 0.849032

Mean 0.0411529 Std. Dev. 0.110289 Variance 0.0121636

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

# Concentration of Cadmium at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 1.2357E-013

Minimum 0 Maximum 2.45934E-009

Mean 1.89507E-011 Std. Dev. 1.87931E-010 Variance 3.53181E-020

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.27415E-013

95% of values less than 1.37778E-010

Minimum 0 Maximum 2.99607E-007

Mean 3.29677E-009 Std. Dev. 2.83428E-008 Variance 8.03313E-016

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.18531E-010

95% of values less than 1.04307E-007

Minimum 0 Maximum 9.08837E-006

Mean 9.24743E-008 Std. Dev. 7.60832E-007 Variance 5.78865E-013

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.53379E-008

95% of values less than 7.33001E-007

Minimum 0 Maximum 1.22722E-005

Mean 2.63138E-007 Std. Dev. 1.49011E-006 Variance 2.22043E-012

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 6.97445E-012

90% of values less than 8.13181E-007

95% of values less than 2.28965E-006

Minimum 0 Maximum 1.5559E-005

Mean 5.33085E-007 Std. Dev. 2.10634E-006 Variance 4.43667E-012

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

# Concentration of Copper at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.3562E-012

95% of values less than 8.42412E-011

Minimum 0 Maximum 5.6394E-007

Mean 4.197E-009 Std. Dev. 4.16762E-008 Variance 1.73691E-015

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.07244E-010

90% of values less than 0.0002461

95% of values less than 0.00184677

Minimum 0 Maximum 0.00398603

Mean 0.000191178 Std. Dev. 0.000657058 Variance 4.31726E-007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

Concentration of Naphthalene at base of Clay Liner [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 6.37361E-013 90% of values less than 2.9383E-007

95% of values less than 1.15565E-005

Minimum 0

Maximum 0.000240862

Mean 4.18277E-006 Std. Dev. 2.29986E-005 Variance 5.28938E-010

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.33519E-012

90% of values less than 1.62556E-006

95% of values less than 4.51206E-005

Minimum 0 Maximum 0.000584526

Mean 1.13435E-005 Std. Dev. 5.65549E-005 Variance 3.19846E-009

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.44323E-012

90% of values less than 1.71484E-006

95% of values less than 4.4928E-005

Minimum 0 Maximum 0.00059214

Mean 1.27088E-005 Variance 3.7677E-009 Std. Dev. 6.13816E-005

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 2.77762E-013

90% of values less than 1.47178E-006

95% of values less than 3.26845E-005

Minimum 0 Maximum 0.000500382

Mean 9.7333E-006 Std. Dev. 4.89341E-005 Variance 2.39454E-009

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.22222E-009

95% of values less than 2.28336E-007

Minimum 0 Maximum 0.000153318

Mean 2.67326E-006 Std. Dev. 1.73866E-005 Variance 3.02295E-010

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

# Concentration of Ammoniacal\_N at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.91795E-015

95% of values less than 1.55075E-012

Minimum 0 Maximum 9.33802E-008

Mean 4.80478E-010 Std. Dev. 6.58857E-009 Variance 4.34093E-017

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 4.29513E-012

90% of values less than 5.76449E-007

95% of values less than 1.95623E-005

Minimum 0 Maximum 0.0022998

Mean 1.6837E-005 Std. Dev. 0.000165567 Variance 2.74124E-008

#### At 154 years

05% of values less than 7.88756E-009

10% of values less than 3.61105E-008

50% of values less than 5.43755E-006

90% of values less than 0.000627833

95% of values less than 0.00211186

Minimum 4.7286E-011

Maximum 0.0203899

Mean 0.000533178 Std. Dev. 0.00228575 Variance 5.22463E-006

## At 1054 years

05% of values less than 1.7419E-008

10% of values less than 5.20438E-008

50% of values less than 5.86563E-006

90% of values less than 0.000626086

95% of values less than 0.00171854

Minimum 8.50455E-011

Maximum 0.017568

Mean 0.000458424 Std. Dev. 0.00194043 Variance 3.76526E-006

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.51064E-005

95% of values less than 0.000249758

Minimum 0 Maximum 0.00649607

Mean 9.17075E-005 Std. Dev. 0.00054171 Variance 2.93449E-007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

# Concentration of Cadmium at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 7.47769E-015

Mean 3.89171E-017 Std. Dev. 5.27874E-016 Variance 2.78651E-031

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.44716E-014

95% of values less than 1.59658E-009

Minimum 0 Maximum 4.52946E-006

Mean 2.59847E-008 Std. Dev. 3.2091E-007 Variance 1.02984E-013

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 7.41656E-015

90% of values less than 2.42492E-007

95% of values less than 9.7816E-007

Minimum 0 Maximum 1.43698E-005

Mean 3.04612E-007 Std. Dev. 1.6207E-006 Variance 2.62667E-012

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

# Concentration of Copper at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 3.88121E-013

90% of values less than 1.41685E-006

95% of values less than 1.55719E-005

Minimum 0 Maximum 0.000302259

Mean 7.29064E-006 Std. Dev. 3.76245E-005 Variance 1.4156E-009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 4.56782E-016

Minimum 0 Maximum 6.95166E-013

Mean 3.89509E-015 Std. Dev. 4.90803E-014 Variance 2.40888E-027

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.29842E-013

95% of values less than 4.43401E-012

Minimum 0 Maximum 5.5767E-009

Mean 5.5266E-011 Std. Dev. 4.88377E-010 Variance 2.38512E-019

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.91712E-013

95% of values less than 4.02468E-012

Minimum 0 Maximum 7.76227E-009

Mean 6.83593E-011 Std. Dev. 6.26762E-010 Variance 3.92831E-019

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.04022E-016

95% of values less than 1.76841E-014

Minimum 0 Maximum 2.08495E-009

Mean 1.41115E-011 Std. Dev. 1.51396E-010 Variance 2.29208E-020

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

# Approx. time to Peak Conc. Ammoniacal\_N at Base of Unsaturated Zone [years]

05% of values less than 172 10% of values less than 172 50% of values less than 256 90% of values less than 312 95% of values less than 312

Minimum 156 Maximum 380

Mean 252.766 Std. Dev. 46.8255 Variance 2192.63

## Approx. time to Peak Conc. Cadmium at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 16406 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000

Mean 11178.1 Std. Dev. 9417.54

ev. 9417.54 Variance 8.869E+007

## Approx. time to Peak Conc. Copper at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 13731.3 Std. Dev. 9300.94

Std. Dev. 9300.94 Variance 8.65075E+007

# Approx. time to Peak Conc. Naphthalene at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 282 95% of values less than 312

Minimum 0 Maximum 1523 Mean 92.8408 Std. Dev. 221.783

Variance 49187.6

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 8

Concentration of Ammoniacal\_N at Phase Monitor Well [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 4.25368E-018

95% of values less than 1.09875E-015

Minimum 0 Maximum 2.10658E-010

Variance 2.20789E-022 Mean 1.06418E-012 Std. Dev. 1.4859E-011

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 5.29151E-015

90% of values less than 1.96574E-009

95% of values less than 5.62827E-008

Minimum 0 Maximum 7.11622E-006

Mean 5.81341E-008 Std. Dev. 5.25198E-007 Variance 2.75833E-013

At 154 years

05% of values less than 2.21439E-011

10% of values less than 9.17967E-011

50% of values less than 2.43073E-008

90% of values less than 3.07423E-006

95% of values less than 1.28287E-005

Minimum 1.43515E-013

Maximum 0.000242508

Mean 3.44705E-006 Std. Dev. 1.92853E-005 Variance 3.71922E-010

At 1054 years

05% of values less than 7.86271E-011

10% of values less than 4.44952E-010

50% of values less than 3.20891E-008

90% of values less than 3.01765E-006

95% of values less than 1.11682E-005

Minimum 5.18395E-013 Maximum 0.000232064

Mean 3.18453E-006 Std. Dev. 1.80581E-005 Variance 3.26096E-010

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 3.71579E-019

90% of values less than 3.48391E-007

95% of values less than 1.20276E-006

Minimum 0 Maximum 2.3261E-005

Mean 4.46275E-007 Std. Dev. 2.35271E-006 Variance 5.53525E-012

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 8

# Concentration of Cadmium at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 1.06935E-013

Minimum 0 Maximum 3.07044E-008

Mean 1.79224E-010 Std. Dev. 2.19331E-009 Variance 4.81062E-018

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.87504E-017

90% of values less than 4.56117E-010

95% of values less than 4.67675E-009

Minimum 0 Maximum 1.21464E-007

Mean 2.00288E-009 Std. Dev. 1.17966E-008 Variance 1.39159E-016

### Phase: Cell 8

# Concentration of Copper at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 6.76218E-016

90% of values less than 2.5344E-009

95% of values less than 2.35084E-008

Minimum 0 Maximum 1.29167E-006

Mean 2.09233E-008 Std. Dev. 1.21285E-007 Variance 1.47101E-014

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 8

# Concentration of Naphthalene at Phase Monitor Well [mg/l]

# At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 1.80086E-016

Mean 9.21946E-019 Std. Dev. 1.27016E-017 Variance 1.61329E-034

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.67126E-016

95% of values less than 3.68142E-015

Minimum 0 Maximum 1.53494E-011

Mean 1.19163E-013 Std. Dev. 1.19247E-012 Variance 1.42199E-024

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 7.79313E-016

95% of values less than 3.27586E-015

Minimum 0 Maximum 1.98217E-011

Mean 1.75013E-013 Std. Dev. 1.66678E-012 Variance 2.77815E-024

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.60862E-019

95% of values less than 9.74174E-017

Minimum 0 Maximum 9.77278E-012

Mean 5.25574E-014 Std. Dev. 6.89926E-013 Variance 4.75997E-025

### Phase: Cell 8

Approx. time to Peak Conc. Ammoniacal\_N at Phase Monitor Well [years]

05% of values less than 190 10% of values less than 190 50% of values less than 282 90% of values less than 344 95% of values less than 344

Minimum 154 Maximum 380
Mean 278.338 Std. Dev. 51.8934

Variance 2692.92

Approx. time to Peak Conc. Cadmium at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 18114 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000
Mean 10886.8 Std. Dev. 9657.89

Variance 9.32749E+007

Approx. time to Peak Conc. Copper at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 13432.8 Std. Dev. 9415.73

Std. Dev. 9415.77 Variance 8.86567E+007

Approx. time to Peak Conc. Naphthalene at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 312 95% of values less than 344

Minimum 0 Maximum 1681
Mean 90.01 Std. Dev. 226.915

Variance 51490.4

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 8

Flow to Leachate Treatment Plant [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 142.299

90% of values less than 422.244

95% of values less than 446.499

Minimum 0 Maximum 466.358

Mean 174.814 Std. Dev. 161.227 Variance 25994

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

Phase: Cell 8

Head on EBS [m]

At 29 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1

95% of values less than 1

Minimum 1 Maximum 1

Mean 1 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 1

10% of values less than 1

50% of values less than 1.02003

90% of values less than 1.05937

95% of values less than 1.06278

Minimum 1 Maximum 1.06557

Mean 1.02459 Std. Dev. 0.0226719 Variance 0.000514014

At 154 years

05% of values less than 0.673091

10% of values less than 0.712516

50% of values less than 1.25498

90% of values less than 2.00748

95% of values less than 2.09654

Minimum 0.599175

Maximum 2.17336 Mean 1.31538 Variance 0.206655 Std. Dev. 0.454593

At 1054 years

05% of values less than 0.673087

10% of values less than 0.712511

50% of values less than 1.25505

90% of values less than 2.01026

95% of values less than 2.10022

Minimum 0.599172 Maximum 2.17798

Mean 1.31607 Std. Dev. 0.455569 Variance 0.207544

At infinity

05% of values less than 0.673087

10% of values less than 0.712511

50% of values less than 1.25505

90% of values less than 2.01026

95% of values less than 2.10022

Minimum 0.599172 Maximum 2.17798

Mean 1.31607 Std. Dev. 0.455569 Variance 0.207544

### Phase: Cell 8

Surface Breakout [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 8

# Leakage through EBS [I/day]

### At 29 years

05% of values less than 811.653

10% of values less than 835.908

50% of values less than 1115.85

90% of values less than 1258.15

95% of values less than 1258.15

Minimum 791.794

Maximum 1258.15

Mean 1083.34 Std. Dev. 161.227

Variance 25994

### At 54 years

05% of values less than 837.131

10% of values less than 860.724

50% of values less than 1127.03

90% of values less than 1469.36

95% of values less than 1503.99

Minimum 817.752

Maximum 1573.5

Mean 1140.9 Std. Dev. 213.914 Variance 45759.1

### At 154 years

05% of values less than 1256.66

10% of values less than 1256.99

50% of values less than 1258.11

90% of values less than 1258.16

95% of values less than 1258.16

Minimum 1256.33 Maximum 1258.16

Mean 1257.85 Variance 0.231783 Std. Dev. 0.481438

# At 1054 years

05% of values less than 1258.15

10% of values less than 1258.15

50% of values less than 1258.15

90% of values less than 1258.15

95% of values less than 1258.15

Minimum 1258.15 Maximum 1258.15

Mean 1258.15 Std. Dev. 4.13288E-005 Variance 1.70807E-009

# At infinity

05% of values less than 1258.15

10% of values less than 1258.15

50% of values less than 1258.15

90% of values less than 1258.15

95% of values less than 1258.15

Minimum 1258.15 Maximum 1258.15

Mean 1258.15 Std. Dev. 4.13288E-005 Variance 1.70807E-009

Phase: Cell 8

Aquifer Flow [m³/year]

At 29 years

05% of values less than 27837.9

10% of values less than 32866.7

50% of values less than 86019.9

90% of values less than 239520

95% of values less than 269154

Minimum 0

Maximum 430220

Mean 110774 Std. Dev. 79638.6

Variance 6.3423E+009

At 54 years

05% of values less than 27837.9

10% of values less than 32866.7

50% of values less than 86019.9

90% of values less than 239520

95% of values less than 269154

Minimum 0 Maximum 430220

Mean 110774 Std. Dev. 79638.6 Variance 6.3423E+009

At 154 years

05% of values less than 27837.9

10% of values less than 32866.7

50% of values less than 86019.9

90% of values less than 239520

95% of values less than 269154

Minimum 0 Maximum 430220

Mean 110774 Std. Dev. 79638.6 Variance 6.3423E+009

At 1054 years

05% of values less than 27837.9

10% of values less than 32866.7

50% of values less than 86019.9

90% of values less than 239520

95% of values less than 269154

Minimum 0 Maximum 430220

Mean 110774 Std. Dev. 79638.6 Variance 6.3423E+009

At infinity

05% of values less than 27837.9

10% of values less than 32866.7

50% of values less than 86019.9

90% of values less than 239520

95% of values less than 269154

Minimum 0 Maximum 430220

Mean 110774 Std. Dev. 79638.6 Variance 6.3423E+009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

# Source Concentration of Ammoniacal\_N [mg/l]

### At 29 years

05% of values less than 11.1395

10% of values less than 12.9584

50% of values less than 18.0455

90% of values less than 24.0617

95% of values less than 25.7635

Minimum 7.7977 Maximum 33.1929

Mean 18.3419 Std. Dev. 4.46935 Variance 19.9751

### At 54 years

05% of values less than 10.9956

10% of values less than 12.791

50% of values less than 17.8124

90% of values less than 23.7509

95% of values less than 25.4306

Minimum 7.69696 Maximum 32.7641

Mean 18.1066 Std. Dev. 4.41165 Variance 19.4626

### At 154 years

05% of values less than 10.4419

10% of values less than 12.1469

50% of values less than 16.9154

90% of values less than 22.5549

95% of values less than 24.1501

Minimum 7.30938 Maximum 31.1196

Mean 17.1954 Std. Dev. 4.18943 Variance 17.5513

# At 1054 years

05% of values less than 6.61669

10% of values less than 7.69708

50% of values less than 10.7187

90% of values less than 14.2923

95% of values less than 15.3031

Minimum 4.6317 Maximum 19.7194

Mean 10.8947 Std. Dev. 2.65466 Variance 7.04723

# At infinity

05% of values less than 0.000446249

10% of values less than 0.000519113

50% of values less than 0.000722902

90% of values less than 0.00095967

95% of values less than 0.00103208

Minimum 0.000312375

Maximum 0.00132993

Mean 0.000733885 Std. Dev. 0.00017912 Variance 3.20841E-008

### Phase: Cell 9

Source Concentration of Cadmium [mg/l]

At 29 years

05% of values less than 1.60891E-022

10% of values less than 3.63056E-019

50% of values less than 1.35941E-010

90% of values less than 0.00017827

95% of values less than 0.000602241

Minimum 2.35869E-028

Mean 0.000126997

Maximum 0.00455818

Std. Dev. 0.000560125

Variance 3.1374E-007

At 54 years

05% of values less than 1.60891E-022

10% of values less than 3.63056E-019

50% of values less than 1.35941E-010

90% of values less than 0.000178203

95% of values less than 0.000600686

Minimum 2.35869E-028

Maximum 0.00452952

Mean 0.000126412 Std. Dev. 0.000556928 Variance 3.10169E-007

At 154 years

05% of values less than 1.60891E-022

10% of values less than 3.63056E-019

50% of values less than 1.35941E-010

90% of values less than 0.000177936

95% of values less than 0.000594507

Minimum 2.35869E-028

Maximum 0.0044174

Mean 0.000124104 Std. Dev. 0.000544387 Variance 2.96358E-007

At 1054 years

05% of values less than 1.60891E-022

10% of values less than 3.63056E-019

50% of values less than 1.35941E-010

90% of values less than 0.000175595

95% of values less than 0.00054258

Minimum 2.35869E-028 Maximum 0.00354034

Mean 0.000105724 Std. Dev. 0.00044574 Variance 1.98684E-007

At infinity

05% of values less than 1.60891E-022

10% of values less than 3.63056E-019

50% of values less than 1.35941E-010

90% of values less than 4.41593E-005

95% of values less than 0.000102856

Minimum 2.35869E-028

Maximum 0.000136024

Mean 1.23744E-005 Std. Dev. 3.14414E-005 Variance 9.88565E-010

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

### Source Concentration of Copper [mg/l]

### At 29 years

05% of values less than 1.04473E-023

10% of values less than 3.03445E-020

50% of values less than 3.56361E-010

90% of values less than 0.00331627

95% of values less than 0.0222646

Minimum 3.67574E-028

8 Maximum 0.115645

Mean 0.00405251 Std. Dev. 0.0159512 Variance 0.00025444

### At 54 years

05% of values less than 1.04473E-023

10% of values less than 3.03445E-020

50% of values less than 3.56361E-010

90% of values less than 0.00331401

95% of values less than 0.022187

Minimum 3.67574E-028

Maximum 0.114963

Mean 0.00403359 Std. Dev. 0.0158651 Variance 0.000251702

### At 154 years

05% of values less than 1.04473E-023

10% of values less than 3.03445E-020

50% of values less than 3.56361E-010

90% of values less than 0.00330502

95% of values less than 0.0218814

Minimum 3.67574E-028

Maximum 0.112291

Mean 0.00395927 Std. Dev. 0.0155279 Variance 0.000241116

# At 1054 years

05% of values less than 1.04473E-023

10% of values less than 3.03445E-020

50% of values less than 3.56361E-010

90% of values less than 0.00322668

95% of values less than 0.0193596

Minimum 3.67574E-028

Maximum 0.0912369

Mean 0.0033641 Std. Dev. 0.0128518 Variance 0.00016517

# At infinity

05% of values less than 1.04473E-023

10% of values less than 3.03445E-020

50% of values less than 3.56361E-010

90% of values less than 0.00139087

95% of values less than 0.00161615

Minimum 3.67574E-028

Maximum 0.00208008

Mean 0.000269177 Std. Dev. 0.000573847 Variance 3.29301E-007

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

### Source Concentration of Naphthalene [mg/l]

### At 29 years

05% of values less than 4.11113E-024

10% of values less than 2.29554E-021

50% of values less than 1.58232E-009

90% of values less than 0.0480322

95% of values less than 0.230451

Minimum 5.46331E-029

Maximum 1.52533

Mean 0.0378727 Std. Dev. 0.155001 Variance 0.0240253

### At 54 years

05% of values less than 4.11113E-024

10% of values less than 2.29554E-021

50% of values less than 1.58232E-009

90% of values less than 0.0476016

95% of values less than 0.228149

Minimum 5.46331E-029

Mean 0.0374814 Std. Dev. 0.153325

Variance 0.0235085

Maximum 1.50821

### At 154 years

05% of values less than 4.11113E-024

10% of values less than 2.29554E-021

50% of values less than 1.58232E-009

90% of values less than 0.0459286

95% of values less than 0.219228

Minimum 5.46331E-029

Maximum 1.44217

Mean 0.0359565 Std. Dev. 0.146814 Variance 0.0215542

# At 1054 years

05% of values less than 4.11113E-024

10% of values less than 2.29554E-021

50% of values less than 1.58232E-009

90% of values less than 0.0334867

95% of values less than 0.15415

Minimum 5.46331E-029 Maximum 0.970715

Mean 0.0248914 Std. Dev. 0.100001 Variance 0.0100001

# At infinity

05% of values less than 4.11113E-024

10% of values less than 2.29554E-021

50% of values less than 1.58232E-009

90% of values less than 4.32955E-005

95% of values less than 9.29171E-005

Minimum 5.46331E-029

Maximum 0.00023327

Mean 1.32371E-005 Std. Dev. 3.49247E-005 Variance 1.21974E-009

### Phase: Cell 9

Concentration of Ammoniacal\_N at base of Clay Liner [mg/l]

At 29 years

05% of values less than 0.0193412

10% of values less than 0.0441244

50% of values less than 0.421337

90% of values less than 2.7492

95% of values less than 3.87188

Minimum 0.000227469

Maximum 6.42927

Mean 1.00574 Std. Dev. 1.32159 Variance 1.74659

At 54 years

05% of values less than 0.059639

10% of values less than 0.115291

50% of values less than 0.755784

90% of values less than 3.09653

95% of values less than 4.14613

Minimum 0.00536456 Maximum 6.79177

Mean 1.2353 Std. Dev. 1.35156 Variance 1.82671

At 154 years

05% of values less than 0.124896

10% of values less than 0.192041

50% of values less than 0.954475

90% of values less than 3.43182

95% of values less than 4.40062

Minimum 0.0292462

Maximum 6.96004 Mean 1.4455 Std. Dev. 1.41728 Variance 2.00868

At 1054 years

05% of values less than 0.071653

10% of values less than 0.163437

50% of values less than 0.809687

90% of values less than 2.69058

95% of values less than 3.53909

Minimum 0 Maximum 5.50924

Mean 1.17699 Std. Dev. 1.12629 Variance 1.26853

At infinity

05% of values less than 0

10% of values less than 0.0642722

50% of values less than 0.491669

90% of values less than 1.52387

95% of values less than 2.04599

Minimum 0 Maximum 3.50811

Mean 0.700436 Std. Dev. 0.651625 Variance 0.424615

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

# Concentration of Cadmium at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.49005E-014

95% of values less than 1.92047E-012

Minimum 0 Maximum 2.51782E-006

Mean 1.32891E-008 Std. Dev. 1.77689E-007 Variance 3.15734E-014

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than  $3.54309\mbox{E-}012$ 

95% of values less than 1.34622E-008

Minimum 0 Maximum 0.000197587

Mean 1.01636E-006 Std. Dev. 1.39363E-005 Variance 1.94221E-010

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.71019E-008

95% of values less than 2.28467E-006

Minimum 0 Maximum 0.00356391

Mean 2.01918E-005 Std. Dev. 0.000251883 Variance 6.34449E-008

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 6.55178E-015

90% of values less than 4.35308E-006

95% of values less than 0.000161256

Minimum 0 Maximum 0.0038399

Mean 6.43192E-005 Std. Dev. 0.000399899 Variance 1.59919E-007

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 8.90837E-011

90% of values less than 7.66358E-005

95% of values less than 0.000131869

Minimum 0 Maximum 0.000431469

Mean 1.86361E-005 Std. Dev. 5.40901E-005 Variance 2.92573E-009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

# Concentration of Copper at base of Clay Liner [mg/l]

# At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 1.71295E-016

Minimum 0 Maximum 3.12861E-015

Mean 6.14977E-017 Std. Dev. 3.37241E-016 Variance 1.13732E-031

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 3.69777E-015

90% of values less than 2.49138E-008

95% of values less than 6.7924E-007

Minimum 0 Maximum 6.46146E-005

Mean 5.135E-007 Std. Dev. 4.71951E-006 Variance 2.22738E-011

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $3.54658\mbox{E-}010$ 

90% of values less than 0.00266718

95% of values less than 0.0047051

Minimum 0 Maximum 0.0206071

Mean 0.000853791 Std. Dev. 0.0026576 Variance 7.06286E-006

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

# Concentration of Naphthalene at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.17945E-012 90% of values less than 2.76095E-005

95% of values less than 0.000681032

Minimum 0 Maximum 0.0233741

Mean 0.000387658 Std. Dev. 0.00236198 Variance 5.57895E-006

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.18218E-012

90% of values less than 4.12025E-005

95% of values less than 0.000362399

Minimum 0 Maximum 0.0458432

Mean 0.000650653 Std. Dev. 0.00440798 Variance 1.94302E-005

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.98206E-012

90% of values less than 6.13851E-005

95% of values less than 0.000960212

Minimum 0 Maximum 0.0503975

Mean 0.000944011 Std. Dev. 0.00544418 Variance 2.96391E-005

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.38988E-012

90% of values less than 4.36569E-005

95% of values less than 0.000899436

Minimum 0 Maximum 0.0451034

Mean 0.00077409 Std. Dev. 0.0046157 Variance 2.13046E-005

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.93106E-013

90% of values less than 2.1157E-005 95% of values less than 0.000258724

Minimum 0 Maximum 0.0331002

Mean 0.000441455 Std. Dev. 0.00310481 Variance 9.63982E-006

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

Concentration of Ammoniacal\_N at base of Unsaturated Zone [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 7.66904E-012

95% of values less than 2.31976E-010

Minimum 0 Maximum 1.52119E-007

Mean 1.12686E-009 Std. Dev. 1.10485E-008 Variance 1.22069E-016

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 3.94517E-011

90% of values less than 2.07722E-005

95% of values less than 0.000121254

Minimum 0 Maximum 0.00325546

Mean 5.52688E-005 Std. Dev. 0.000319473 Variance 1.02063E-007

At 154 years

05% of values less than 1.46529E-008

10% of values less than 5.61592E-008

50% of values less than 2.38484E-005

90% of values less than 0.00347173

95% of values less than 0.00852806

Minimum 1.45103E-010

Mean 0.00190606 Std. Dev. 0.00805205 Variance 6.48354E-005

Maximum 0.0915929

At 1054 years

05% of values less than 4.75834E-008

10% of values less than 1.64278E-007

50% of values less than 2.90608E-005

90% of values less than 0.0032528

95% of values less than 0.00717047

Minimum 4.73278E-010

Maximum 0.0754477

Mean 0.00166813 Std. Dev. 0.0067254 Variance 4.5231E-005

At infinity

05% of values less than 8.75967E-014

10% of values less than 1.31166E-008

50% of values less than 1.58117E-005

90% of values less than 0.0017551

95% of values less than 0.00438507

Minimum 0 Maximum 0.039408

Mean 0.000946304 Std. Dev. 0.00369176 Variance 1.36291E-005

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

# Concentration of Cadmium at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 1.85167E-011

Mean 9.27504E-014 Std. Dev. 1.30604E-012 Variance 1.70575E-024

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.32597E-011

95% of values less than 9.04968E-009

Minimum 0 Maximum 0.00417676

Mean 3.76925E-005 Std. Dev. 0.000372849 Variance 1.39016E-007

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 9.69017E-013

90% of values less than 3.18537E-005

95% of values less than 0.000151764

Minimum 0 Maximum 0.000457754

Mean 1.66316E-005 Std. Dev. 5.93511E-005 Variance 3.52255E-009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

# Concentration of Copper at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 3.84802E-012

90% of values less than 3.82804E-005

95% of values less than 0.000289125

Minimum 0 Maximum 0.00988056

Mean 0.000111405 Std. Dev. 0.000762269 Variance 5.81053E-007

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

# Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.74798E-016

95% of values less than 1.84873E-014

Minimum 0 Maximum 5.44634E-012

Mean 4.01605E-014 Std. Dev. 4.04764E-013 Variance 1.63834E-025

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.13301E-012

95% of values less than 1.59277E-010

Minimum 0 Maximum 2.97202E-009

Mean 5.73583E-011 Std. Dev. 3.22724E-010 Variance 1.04151E-019

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.1694E-012

95% of values less than 1.58574E-010

Minimum 0 Maximum 4.51842E-009

Mean 7.42268E-011 Std. Dev. 4.30848E-010 Variance 1.8563E-019

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 8.30092E-013

95% of values less than 1.32865E-010

Minimum 0 Maximum 1.9695E-009

Mean 4.53623E-011 Std. Dev. 2.38698E-010 Variance 5.69767E-020

### Phase: Cell 9

# Approx. time to Peak Conc. Ammoniacal\_N at Base of Unsaturated Zone [years]

05% of values less than 172 10% of values less than 172 50% of values less than 210 90% of values less than 282 95% of values less than 312

Minimum 156 Maximum 380
Mean 225.821 Std. Dev. 47.6949

Variance 2274.81

### Approx. time to Peak Conc. Cadmium at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000
Mean 13074.7 Std. Dev. 8841.61

Variance 7.8174E+007

### Approx. time to Peak Conc. Copper at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 14726.4 Std. Dev. 8834.58

Variance 7.80498E+007

# Approx. time to Peak Conc. Naphthalene at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 210 95% of values less than 232

Minimum 0 Maximum 312
Mean 53.3532 Std. Dev. 93.7411

Variance 8787.4

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

Concentration of Ammoniacal\_N at Phase Monitor Well [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.87242E-014

95% of values less than 1.11008E-012

Minimum 0 Maximum 7.59652E-010

Mean 5.02431E-012 Std. Dev. 5.41856E-011 Variance 2.93608E-021

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.25196E-013

90% of values less than 1.62301E-007

95% of values less than 7.61236E-007

Minimum 0 Maximum 2.3586E-005

Mean 4.34784E-007 Std. Dev. 2.44813E-006 Variance 5.99333E-012

At 154 years

05% of values less than 5.92626E-011

10% of values less than 3.68579E-010

50% of values less than 1.89519E-007

90% of values less than 2.90357E-005

95% of values less than 7.26703E-005

Minimum 5.25558E-013

Mean 2.11683E-005 Std. Dev. 9.35699E-005

Variance 8.75532E-009

Maximum 0.000926047

At 1054 years

05% of values less than 3.01384E-010

10% of values less than 1.00293E-009

50% of values less than 3.14548E-007

90% of values less than 3.12772E-005

95% of values less than 6.6076E-005

Minimum 5.34665E-012

Maximum 0.000783669

Mean 1.93811E-005 Std. Dev. 8.16379E-005 Variance 6.66475E-009

At infinity

05% of values less than 4.40662E-015

10% of values less than 1.2641E-010

50% of values less than 1.74628E-007

90% of values less than 1.77342E-005

95% of values less than 4.26391E-005

Minimum 0 Maximum 0.000404843

Mean 1.11482E-005 Std. Dev. 4.56203E-005 Variance 2.08121E-009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

Concentration of Cadmium at Phase Monitor Well [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 8.59227E-016

Mean 4.27476E-018 Std. Dev. 6.06052E-017 Variance 3.67299E-033

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.69655E-017

95% of values less than 3.50458E-013

Minimum 0 Maximum 1.11891E-005

Mean 5.58464E-008 Std. Dev. 7.89206E-007 Variance 6.22846E-013

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 6.44464E-015

90% of values less than 7.68523E-008

95% of values less than 9.62993E-007

Minimum 0 Maximum 5.63171E-005

Mean 4.3977E-007 Std. Dev. 4.03361E-006 Variance 1.627E-011

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

# Concentration of Copper at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.39793E-014

90% of values less than 1.44739E-007

95% of values less than 1.15496E-006

Minimum 0 Maximum 4.50591E-005

Mean 4.53651E-007 Std. Dev. 3.43411E-006 Variance 1.17931E-011

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 9

# Concentration of Naphthalene at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 1.08549E-018

Minimum 0 Maximum 1.27581E-015

Mean 1.29283E-017 Std. Dev. 1.17565E-016 Variance 1.38216E-032

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.58342E-015

95% of values less than  $4.72645\hbox{E-}013$ 

Minimum 0 Maximum 1.29704E-011

Mean 1.49523E-013 Std. Dev. 1.04207E-012 Variance 1.0859E-024

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.41147E-015

95% of values less than 5.38012E-013

Minimum 0 Maximum 2.70871E-011

Mean 2.45698E-013 Std. Dev. 2.00525E-012 Variance 4.02105E-024

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.51003E-015

95% of values less than 3.90791E-013

Minimum 0 Maximum 9.41004E-012

Mean 1.32584E-013 Std. Dev. 8.26812E-013 Variance 6.83618E-025

### Phase: Cell 9

Approx. time to Peak Conc. Ammoniacal\_N at Phase Monitor Well [years]

05% of values less than 190 10% of values less than 190 50% of values less than 232

90% of values less than 312 95% of values less than 344

Minimum 154 Maximum 420
Mean 248.07 Std. Dev. 52.1388

Variance 2718.46

Approx. time to Peak Conc. Cadmium at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000

Mean 13063 Std. Dev. 9015.04

Variance 8.1271E+007

Approx. time to Peak Conc. Copper at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000

Mean 14328.4

95% of values less than 20000
Minimum 0 Maximum 20000

Std. Dev. 9037.24 Variance 8.16716E+007

Approx. time to Peak Conc. Naphthalene at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 232 95% of values less than 256

Minimum 0 Maximum 344
Mean 55.7512 Std. Dev. 101.912

Variance 10386.1

### Phase: Cell 9

Flow to Leachate Treatment Plant [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1652.98

95% of values less than 1929.12

Minimum 0 Maximum 2259.16

Mean 377.666 Std. Dev. 674.307 Variance 454690

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### Phase: Cell 9

Head on EBS [m]

At 29 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1

95% of values less than 1

Minimum 1 Maximum 1

Mean 1 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1.04366

95% of values less than 1.06842

Minimum 1 Maximum 1.11836

Mean 1.00853 Std. Dev. 0.0248038 Variance 0.00061523

At 154 years

05% of values less than 0.508784

10% of values less than 0.508784

50% of values less than 0.508784

90% of values less than 0.693349

95% of values less than 1.05048

Minimum 0.508784

Maximum 1.64744

Mean 0.574901 Std. Dev. 0.204839 Variance 0.0419592

At 1054 years

05% of values less than 0.508781

10% of values less than 0.508781

50% of values less than 0.508781

90% of values less than 0.508781

95% of values less than 0.508781

Minimum 0.508781 Maximum 0.90174

Mean 0.517417 Std. Dev. 0.0476472 Variance 0.00227025

At infinity

05% of values less than 0.508781

10% of values less than 0.508781

50% of values less than 0.508781

90% of values less than 0.508781

95% of values less than 0.508781

Minimum 0.508781 Maximum 0.90174

Mean 0.517417 Std. Dev. 0.0476472 Variance 0.00227025

### Phase: Cell 9

Surface Breakout [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### Phase: Cell 9

Leakage through EBS [I/day]

At 29 years

05% of values less than 514.449

10% of values less than 790.589

50% of values less than 2443.57

90% of values less than 2443.57

95% of values less than 2443.57

Minimum 184.415

Maximum 2443.57

Mean 2065.91 Std. Dev. 674.307

Variance 454690

At 54 years

05% of values less than 1531.78

10% of values less than 1877.88

50% of values less than 3239.14

90% of values less than 3239.14

95% of values less than 3239.14

Minimum 777.58

Maximum 3239.14

Mean 3006.16 Std. Dev. 590.439 Variance 348618

At 154 years

05% of values less than 2443.58

10% of values less than 2443.58

50% of values less than 2443.58

90% of values less than 2513.72

95% of values less than 2676.78

Minimum 2443.58

Maximum 3738.2 Mean 2481.05 Std. Dev. 150.566 Variance 22670

At 1054 years

05% of values less than 2443.57

10% of values less than 2443.57

50% of values less than 2443.57

90% of values less than 2443.57

95% of values less than 2443.57

Minimum 2443.57 Maximum 2452.95

Mean 2443.9 Std. Dev. 1.5428 Variance 2.38024

At infinity

05% of values less than 2443.57

10% of values less than 2443.57

50% of values less than 2443.57

90% of values less than 2443.57

95% of values less than 2443.57

Minimum 2443.57 Maximum 2452.95

Mean 2443.9 Std. Dev. 1.5428 Variance 2.38024

Phase: Cell 9

Aquifer Flow [m³/year]

At 29 years

05% of values less than 31372.9

10% of values less than 37040.3

50% of values less than 96943.1

90% of values less than 269935

95% of values less than 303332

Minimum 0 Maximum 484852

Mean 124841 Std. Dev. 89751.4 Variance 8.05532E+009

At 54 years

05% of values less than 31372.9

10% of values less than 37040.3

50% of values less than 96943.1

90% of values less than 269935

95% of values less than 303332

Minimum 0 Maximum 484852

Mean 124841 Std. Dev. 89751.4 Variance 8.05532E+009

At 154 years

05% of values less than 31372.9

10% of values less than 37040.3

50% of values less than 96943.1

90% of values less than 269935

95% of values less than 303332

Minimum 0 Maximum 484852

Mean 124841 Std. Dev. 89751.4 Variance 8.05532E+009

At 1054 years

05% of values less than 31372.9

10% of values less than 37040.3

50% of values less than 96943.1

90% of values less than 269935

95% of values less than 303332

Minimum 0 Maximum 484852

Mean 124841 Std. Dev. 89751.4 Variance 8.05532E+009

At infinity

05% of values less than 31372.9

10% of values less than 37040.3

50% of values less than 96943.1

90% of values less than 269935

95% of values less than 303332

Minimum 0 Maximum 484852

Mean 124841 Std. Dev. 89751.4 Variance 8.05532E+009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 10

# Source Concentration of Ammoniacal\_N [mg/l]

### At 29 years

05% of values less than 11.2773

10% of values less than 12.6377

50% of values less than 18.5747

90% of values less than 24.457

95% of values less than 25.7938

Minimum 9.0644 Maximum 32.8433

Mean 18.5934 Std. Dev. 4.56957 Variance 20.881

### At 54 years

05% of values less than 11.1529

10% of values less than 12.4983

50% of values less than 18.3697

90% of values less than 24.1871

95% of values less than 25.5092

Minimum 8.96439 Maximum 32.4809

Mean 18.3883 Std. Dev. 4.51916 Variance 20.4228

### At 154 years

05% of values less than 10.6707

10% of values less than 11.9579

50% of values less than 17.5755

90% of values less than 23.1371

95% of values less than 24.4595

Minimum 8.57678 Maximum 31.0765

Mean 17.5937 Std. Dev. 4.32367 Variance 18.6941

# At 1054 years

05% of values less than 7.15702

10% of values less than 8.02039

50% of values less than 11.7882

90% of values less than 15.5185

95% of values less than 16.3818

Minimum 5.75262 Maximum 20.8436

Mean 11.7996 Std. Dev. 2.8998 Variance 8.40885

# At infinity

05% of values less than 0.00159671

10% of values less than 0.00178933

50% of values less than 0.00262992

90% of values less than 0.00346214

95% of values less than 0.00365473

Minimum 0.00128339

Maximum 0.00465015

Mean 0.00263165 Std. Dev. 0.000647862 Variance 4.19725E-007

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 10

Source Concentration of Cadmium [mg/l]

At 29 years

05% of values less than 1.69424E-023

10% of values less than 6.40218E-021

50% of values less than 3.98382E-011

90% of values less than 9.97355E-005

95% of values less than 0.000432966

Minimum 6.36431E-030

Mean 9.71321E-005 Std. Dev. 0.000425578 Variance 1.81117E-007

Maximum 0.00427293

At 54 years

05% of values less than 1.69424E-023

10% of values less than 6.40218E-021

50% of values less than 3.98382E-011

90% of values less than 9.97355E-005

95% of values less than 0.000432228

Minimum 6.36431E-030

Maximum 0.00425045

Mean 9.67929E-005 Std. Dev. 0.000423655 Variance 1.79484E-007

At 154 years

05% of values less than 1.69424E-023

10% of values less than 6.40218E-021

50% of values less than 3.98382E-011

90% of values less than 9.97355E-005

95% of values less than 0.000429301

Minimum 6.36431E-030

Maximum 0.00416204

Mean 9.54509E-005 Std. Dev. 0.000416067 Variance 1.73112E-007

At 1054 years

05% of values less than 1.69424E-023

10% of values less than 6.40218E-021

50% of values less than 3.98382E-011

90% of values less than 9.97355E-005

95% of values less than 0.000403736

Minimum 6.36431E-030

Maximum 0.0034421

Mean 8.43086E-005 Std. Dev. 0.000353957 Variance 1.25285E-007

At infinity

05% of values less than 1.69424E-023

10% of values less than 6.40218E-021

50% of values less than 3.98382E-011

90% of values less than 7.46948E-005

95% of values less than 0.000109895

Minimum 6.36431E-030

Mean 1.37341E-005

Maximum 0.00013027

Std. Dev. 3.35695E-005 Variance 1.12691E-009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 10

### Source Concentration of Copper [mg/l]

### At 29 years

05% of values less than 1.14238E-023

10% of values less than 4.27668E-021

50% of values less than 3.42837E-011

90% of values less than 0.00218004

95% of values less than 0.0295757

Minimum 8.44294E-030

Maximum 0.152336

Mean 0.00445623 Std. Dev. 0.0179573 Variance 0.000322466

### At 54 years

05% of values less than 1.14238E-023

10% of values less than 4.27668E-021

50% of values less than 3.42837E-011

90% of values less than 0.00217991

95% of values less than 0.0294773

Minimum 8.44294E-030

Maximum 0.151517

Mean 0.00443741 Variance 0.00031941 Std. Dev. 0.017872

### At 154 years

05% of values less than 1.14238E-023

10% of values less than 4.27668E-021

50% of values less than 3.42837E-011

90% of values less than 0.00217943

95% of values less than 0.0290819

Minimum 8.44294E-030

Maximum 0.148297

Mean 0.00436323 Variance 0.000307521 Std. Dev. 0.0175363

# At 1054 years

05% of values less than 1.14238E-023

10% of values less than 4.27668E-021

50% of values less than 3.42837E-011

90% of values less than 0.00217506

95% of values less than 0.0257914

Minimum 8.44294E-030 Maximum 0.122137

Mean 0.00375 Std. Dev. 0.0147825 Variance 0.000218524

# At infinity

05% of values less than 1.14238E-023

10% of values less than 4.27668E-021

50% of values less than 3.42837E-011

90% of values less than 0.00205362

95% of values less than 0.00206508

Minimum 8.44294E-030 Maximum 0.00208503

Mean 0.000282047 Std. Dev. 0.000662749 Variance 4.39237E-007

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 10

### Source Concentration of Naphthalene [mg/l]

### At 29 years

05% of values less than 5.448E-025

10% of values less than 1.43339E-021

50% of values less than 3.17684E-009

90% of values less than 0.0100148

95% of values less than 0.0785048

Minimum 9.72566E-029

Maximum 1.09063

Mean 0.0199124 Std. Dev. 0.106106 Variance 0.0112585

### At 54 years

05% of values less than 5.448E-025

10% of values less than 1.43339E-021

50% of values less than 3.17684E-009

90% of values less than 0.00994695

95% of values less than 0.0778827

Minimum 9.72566E-029

Maximum 1.08039

Mean 0.0197375 Std. Dev. 0.105129 Variance 0.011052

### At 154 years

05% of values less than 5.448E-025

10% of values less than 1.43339E-021

50% of values less than 3.17684E-009

90% of values less than 0.00968114

95% of values less than 0.0754529

Minimum 9.72566E-029

Maximum 1.04054

Mean 0.0190564 Std. Dev. 0.101324 Variance 0.0102665

# At 1054 years

05% of values less than 5.448E-025

10% of values less than 1.43339E-021

50% of values less than 3.17684E-009

90% of values less than 0.0075793

95% of values less than 0.0566618

Minimum 9.72566E-029

Maximum 0.740888

Mean 0.0138737 Std. Dev. 0.0726217 Variance 0.0052739

# At infinity

05% of values less than 5.448E-025

10% of values less than 1.43339E-021

50% of values less than 3.17684E-009

90% of values less than 4.3849E-005

95% of values less than 0.000136406 Minimum 9.72566E-029

Maximum 0.000581603

Mean 2.10168E-005 Std. Dev. 7.17684E-005 Variance 5.15071E-009

### Phase: Cell 10

# Concentration of Ammoniacal\_N at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0.0265757

10% of values less than 0.048431

50% of values less than 0.370751

90% of values less than 2.59134

95% of values less than 3.97746

Minimum 1.49404E-005 Maximum 4.715

Mean 0.886574 Std. Dev. 1.17423 Variance 1.37882

## At 54 years

05% of values less than 0.0752215

10% of values less than 0.112834

50% of values less than 0.593542

90% of values less than 2.6813

95% of values less than 4.20332

Minimum 0.00290978 Maximum 5.06822

Mean 1.10054 Std. Dev. 1.22093 Variance 1.49067

### At 154 years

05% of values less than 0.136302

10% of values less than 0.202404

50% of values less than 0.828512

90% of values less than 2.85912

95% of values less than 4.15963

Minimum 0.0751755 Maximum 6.05249

Mean 1.29443 Std. Dev. 1.23226 Variance 1.51847

## At 1054 years

05% of values less than 0.065586

10% of values less than 0.105543

50% of values less than 0.482186

90% of values less than 1.75368

95% of values less than 2.6885

Minimum 0 Maximum 3.77533

Mean 0.791908 Std. Dev. 0.788868 Variance 0.622313

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0

Maximum 0.547662

Mean 0.00382594 Std. Dev. 0.0409131 Variance 0.00167389

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 10

# Concentration of Cadmium at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 4.85374E-012

Minimum 0 Maximum 3.45084E-005

Mean 1.72522E-007 Std. Dev. 2.434E-006 Variance 5.92434E-012

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 4.63556E-015

95% of values less than 4.80409E-010

Minimum 0 Maximum 0.000391465

Mean 1.97559E-006 Std. Dev. 2.76106E-005 Variance 7.62344E-010

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.67922E-009

95% of values less than 6.60811E-008

Minimum 0 Maximum 0.000834837

Mean 5.14402E-006 Std. Dev. 5.95868E-005 Variance 3.55059E-009

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.42353E-016

90% of values less than 9.23436E-007

95% of values less than 4.91665E-005

Minimum 0 Maximum 0.0010457

Mean 1.52092E-005 Std. Dev. 9.68984E-005 Variance 9.38929E-009

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 3.25383E-011

90% of values less than 7.66881E-005

95% of values less than 0.00013027

Minimum 0 Maximum 0.000423526

Mean 1.91476E-005 Std. Dev. 5.7923E-005 Variance 3.35507E-009

### Phase: Cell 10

# Concentration of Copper at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 2.44797E-016

Minimum 0 Maximum 1.54769E-015

Mean 2.88759E-017 Std. Dev. 1.39229E-016 Variance 1.93848E-032

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 6.07898E-017

90% of values less than 1.01835E-008

95% of values less than 7.17271E-008

Minimum 0 Maximum 1.34287E-005

Mean 1.39675E-007 Std. Dev. 1.1559E-006 Variance 1.33611E-012

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $3.40678\mbox{E-}011$ 

90% of values less than 0.00210566

95% of values less than 0.00517946

Minimum 0 Maximum 0.0167008

Mean 0.000670039 Std. Dev. 0.00207923 Variance 4.32321E-006

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 10

# Concentration of Naphthalene at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.82813E-012 90% of values less than 5.68397E-006

95% of values less than 0.000169869

Minimum 0 Maximum 0.0364967

Mean 0.00033203 Std. Dev. 0.00293661 Variance 8.62365E-006

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.85202E-012 90% of values less than 8.42291E-006

95% of values less than 0.000209637

Minimum 0 Maximum 0.0844785

Mean 0.000699274 Std. Dev. 0.00654389 Variance 4.28225E-005

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.88998E-012

90% of values less than 1.26252E-005

95% of values less than 0.000363395

Minimum 0 Maximum 0.0853645

Mean 0.000736571 Std. Dev. 0.00660135 Variance 4.35778E-005

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.89E-012

90% of values less than 7.2801E-006

95% of values less than 0.000254306

Minimum 0 Maximum 0.0580863

Mean 0.000498242 Std. Dev. 0.00448383 Variance 2.01048E-005

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.89709E-011 95% of values less than 3.31089E-010

Minimum 0 Maximum 0.000444936

Mean 2.21386E-006 Std. Dev. 3.13833E-005 Variance 9.84914E-010

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 10

## Concentration of Ammoniacal\_N at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.75166E-009 95% of values less than 1.4118E-007

Minimum 0 Maximum 6.26059E-005

Mean 4.11012E-007 Std. Dev. 4.45811E-006 Variance 1.98748E-011

# At 54 years

05% of values less than 3.20981E-016

10% of values less than 2.15856E-013

50% of values less than 2.44705E-008

90% of values less than 0.00036247

95% of values less than 0.00152468

Minimum 0 Maximum 0.0347367

Mean 0.000607755 Std. Dev. 0.00318245 Variance 1.0128E-005

### At 154 years

05% of values less than 1.94842E-007

10% of values less than 1.71869E-006

50% of values less than 0.000127533

90% of values less than 0.00874867

95% of values less than 0.0148646

Minimum 1.38678E-010 Maximum 0.117179

Mean 0.00489334 Std. Dev. 0.0147006 Variance 0.000216108

## At 1054 years

05% of values less than 7.12642E-007

10% of values less than 2.47786E-006

50% of values less than 0.000154175

90% of values less than 0.00845456

95% of values less than 0.0131998

Minimum 1.53734E-009 Maximum 0.0919577

Mean 0.00394828 Std. Dev. 0.0114658 Variance 0.000131465

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.33178E-015

90% of values less than 8.14166E-011

95% of values less than 2.54888E-010

Minimum 0 Maximum 0.000696593

Mean 3.80283E-006 Std. Dev. 4.92254E-005 Variance 2.42314E-009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 10

# Concentration of Cadmium at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 4.13532E-007

Mean 2.37243E-009 Std. Dev. 2.94795E-008 Variance 8.6904E-016

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 7.40392E-012

95% of values less than 1.80744E-008

Minimum 0 Maximum 0.000808605

Mean 4.97533E-006 Std. Dev. 5.82467E-005 Variance 3.39268E-009

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 3.3041E-013

90% of values less than 9.71757E-006

95% of values less than 9.85196E-005

Minimum 0 Maximum 0.0012045

Mean 1.72183E-005 Std. Dev. 9.53919E-005 Variance 9.09962E-009

### Phase: Cell 10

# Concentration of Copper at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $2.7302\mbox{E-}012$ 

90% of values less than 0.000265025

95% of values less than 0.00220934

Minimum 0 Maximum 0.0122914

Mean 0.00035257 Std. Dev. 0.00150663 Variance 2.26993E-006

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 10

# Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 4.00044E-014

Mean 1.99915E-016 Std. Dev. 2.82166E-015 Variance 7.96175E-030

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.24649E-014

95% of values less than 2.67476E-013

Minimum 0 Maximum 1.54495E-007

Mean 7.80924E-010 Std. Dev. 1.08971E-008 Variance 1.18746E-016

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.0894E-012

95% of values less than 2.29288E-010

Minimum 0 Maximum 5.17573E-005

Mean 2.6245E-007 Std. Dev. 3.65083E-006 Variance 1.33285E-011

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 8.18984E-012

95% of values less than 2.08581E-010

Minimum 0 Maximum 4.63367E-005

Mean 2.35504E-007 Std. Dev. 3.26841E-006 Variance 1.06825E-011

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.31441E-015

95% of values less than 3.18746E-014

Minimum 0 Maximum 8.984E-008

Mean 4.47018E-010 Std. Dev. 6.33682E-009 Variance 4.01553E-017

### Phase: Cell 10

# Approx. time to Peak Conc. Ammoniacal\_N at Base of Unsaturated Zone [years]

05% of values less than 190 10% of values less than 190 50% of values less than 232 90% of values less than 282 95% of values less than 282

Minimum 95 Maximum 344
Mean 229.587 Std. Dev. 32.424

Variance 1051.31

## Approx. time to Peak Conc. Cadmium at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 16406 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000

Mean 11550.5 Std. Dev. 9223.64

Variance 8.50755E+007

## Approx. time to Peak Conc. Copper at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 14328.4 Std. Dev. 9037.24

Variance 8.16716E+007

# Approx. time to Peak Conc. Naphthalene at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 256 95% of values less than 312

Minimum 0 Maximum 1681
Mean 143.493 Std. Dev. 306.753

Variance 94097.7

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 10

# Concentration of Ammoniacal\_N at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 4.08238E-012

95% of values less than 7.13833E-010

Minimum 0 Maximum 5.61865E-007

Mean 3.22607E-009 Std. Dev. 3.97392E-008 Variance 1.5792E-015

## At 54 years

05% of values less than 0

10% of values less than 2.61768E-016

50% of values less than 1.0188E-010

90% of values less than 2.5E-006

95% of values less than 1.18865E-005

Minimum 0 Maximum 0.000613847

Mean 6.39378E-006 Std. Dev. 4.61265E-005 Variance 2.12765E-009

### At 154 years

05% of values less than 1.33162E-009

10% of values less than 1.14313E-008

50% of values less than 1.35133E-006

90% of values less than 0.000127862

95% of values less than 0.00026385

Minimum 6.32177E-013

Maximum 0.00201826

Mean 6.04129E-005 Std. Dev. 0.000202947 Variance 4.11876E-008

## At 1054 years

05% of values less than 6.70644E-009

10% of values less than 3.16306E-008

50% of values less than 1.87966E-006

90% of values less than 0.000110993

95% of values less than 0.000219351

Minimum 1.03665E-011

Maximum 0.00163522

Mean 5.19653E-005 Std. Dev. 0.000165878 Variance 2.75154E-008

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.99913E-015

90% of values less than 1.52464E-012

95% of values less than 3.78775E-012

Minimum 0 Maximum 2.66172E-005

Mean 1.34672E-007 Std. Dev. 1.8774E-006 Variance 3.52464E-012

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 10

# Concentration of Cadmium at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 3.22679E-012

Mean 1.8723E-014 Std. Dev. 2.28983E-013 Variance 5.24332E-026

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.97107E-016

95% of values less than 3.46356E-012

Minimum 0 Maximum 2.83075E-006

Mean 2.12625E-008 Std. Dev. 2.15647E-007 Variance 4.65037E-014

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 7.48172E-016

90% of values less than 3.98013E-008

95% of values less than 7.68797E-007

Minimum 0 Maximum 1.06159E-005

Mean 1.67186E-007 Std. Dev. 9.38211E-007 Variance 8.8024E-013

### Phase: Cell 10

# Concentration of Copper at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.05983E-014

90% of values less than 9.65496E-007

95% of values less than 6.42522E-006

Minimum 0 Maximum 4.96434E-005

Mean 1.35728E-006 Std. Dev. 5.92231E-006 Variance 3.50738E-011

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 10

# Concentration of Naphthalene at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.96525E-018

95% of values less than 1.56679E-017

Minimum 0 Maximum 5.94872E-011

Mean 2.97839E-013 Std. Dev. 4.19583E-012 Variance 1.7605E-023

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.56584E-014

95% of values less than 3.08668E-013

Minimum 0 Maximum 2.87104E-007

Mean 1.43263E-009 Std. Dev. 2.02505E-008 Variance 4.10082E-016

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.78265E-014

95% of values less than 3.84125E-013

Minimum 0 Maximum 2.89395E-007

Mean 1.44422E-009 Std. Dev. 2.0412E-008 Variance 4.16651E-016

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.362E-018

95% of values less than 1.73089E-016

Minimum 0 Maximum 5.58094E-011

Mean 2.77849E-013 Std. Dev. 3.93648E-012 Variance 1.54959E-023

### Phase: Cell 10

# Approx. time to Peak Conc. Ammoniacal\_N at Phase Monitor Well [years]

05% of values less than 210 10% of values less than 210 50% of values less than 256

90% of values less than 312

95% of values less than 312

Minimum 190 Maximum 380
Mean 253.134 Std. Dev. 33.2966

Variance 1108.67

# Approx. time to Peak Conc. Cadmium at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 18114 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 11563.7 Std. Dev. 9413.24

Variance 8.86092E+007

# Approx. time to Peak Conc. Copper at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000

95% of values less than 20000

Minimum 0 Maximum 20000 Mean 14029.9 Std. Dev. 9174.92

Variance 8.41791E+007

# Approx. time to Peak Conc. Naphthalene at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 282 95% of values less than 344

Minimum 0 Maximum 1523 Mean 139.861 Std. Dev. 308.968

Variance 95461.5

### Phase: Cell 10

Flow to Leachate Treatment Plant [I/day]

At 29 years

05% of values less than 166.496

10% of values less than 166.496

50% of values less than 166.496

90% of values less than 1879.09

95% of values less than 2137.61

Minimum 166.496

Maximum 2451.8

Mean 632.946 Std. Dev. 703.977 Variance 495583

At 54 years

05% of values less than 166.496

10% of values less than 166.496

50% of values less than 166.496

90% of values less than 915.792

95% of values less than 1360.52

Minimum 166.496

Maximum 2366.32

Mean 322.084 Std. Dev. 411.514 Variance 169344

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Maximum 0 Minimum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Phase: Cell 10

Head on EBS [m]

At 29 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1

95% of values less than 1

Minimum 1 Maximum 1

Mean 1 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1

95% of values less than 1

Minimum 1 Maximum 1

Mean 1 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 1.13643

10% of values less than 1.13643

50% of values less than 1.13643

90% of values less than 1.13801

95% of values less than 1.34971

Minimum 1.13643

Maximum 3.04868

Mean 1.1836 Variance 0.0504637 Std. Dev. 0.224641

At 1054 years

05% of values less than 1.13643

10% of values less than 1.13643

50% of values less than 1.13643

90% of values less than 1.13643

95% of values less than 1.13643

Minimum 1.13643 Maximum 1.75255

Mean 1.14231 Std. Dev. 0.0588923 Variance 0.0034683

At infinity

05% of values less than 1.13643

10% of values less than 1.13643

50% of values less than 1.13643

90% of values less than 1.13643

95% of values less than 1.13643

Minimum 1.13643

Mean 1.14231 Std. Dev. 0.0588923 Variance 0.0034683

Maximum 1.75255

190617 M JER1631 RG Hollywood IWMF v2.sim 16/07/2020 20:05:48 Page 117 of 258

Phase:	Cell	10

Surface Breakout [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Phase: Cell 10

Leakage through EBS [I/day]

At 29 years

05% of values less than 469.689

10% of values less than 728.21

50% of values less than 2440.8

90% of values less than 2440.8

95% of values less than 2440.8

Minimum 155.501

Maximum 2440.8

Mean 1974.35 Std. Dev. 703.977 Variance 495583

At 54 years

05% of values less than 1246.77

10% of values less than 1691.5

50% of values less than 2440.8

90% of values less than 2440.8

95% of values less than 2440.8

Minimum 240.981 Maximum 2440.8

Mean 2285.21 Std. Dev. 411.514 Variance 169344

At 154 years

05% of values less than 2607.29

10% of values less than 2607.29

50% of values less than 2607.29

90% of values less than 2609.23

95% of values less than 2615.75

Minimum 2607.29

Maximum 3618.8

Mean 2622.18 Std. Dev. 96.595 Variance 9330.59

At 1054 years

05% of values less than 2607.3

10% of values less than 2607.3

50% of values less than 2607.3

90% of values less than 2607.3

95% of values less than 2607.3

Minimum 2607.3 Maximum 2621.38

Mean 2607.43 Std. Dev. 1.38151 Variance 1.90857

At infinity

05% of values less than 2607.3

10% of values less than 2607.3

50% of values less than 2607.3

90% of values less than 2607.3

95% of values less than 2607.3

Minimum 2607.3 Maximum 2621.38

Mean 2607.43 Std. Dev. 1.38151 Variance 1.90857

Phase: Cell 10

Aquifer Flow [m³/year]

At 29 years

05% of values less than 30820.6

10% of values less than 36388.2

50% of values less than 95236.3

90% of values less than 265183

95% of values less than 297992

Minimum 0 **Maximum 476315** 

Mean 122643 Std. Dev. 88171.3 Variance 7.77417E+009

At 54 years

05% of values less than 30820.6

10% of values less than 36388.2

50% of values less than 95236.3

90% of values less than 265183

95% of values less than 297992

Minimum 0 **Maximum 476315** 

Mean 122643 Std. Dev. 88171.3 Variance 7.77417E+009

At 154 years

05% of values less than 30820.6

10% of values less than 36388.2

50% of values less than 95236.3

90% of values less than 265183

95% of values less than 297992

Minimum 0 **Maximum 476315** 

Mean 122643 Std. Dev. 88171.3 Variance 7.77417E+009

At 1054 years

05% of values less than 30820.6

10% of values less than 36388.2

50% of values less than 95236.3

90% of values less than 265183

95% of values less than 297992

Minimum 0 **Maximum 476315** 

Mean 122643 Std. Dev. 88171.3 Variance 7.77417E+009

At infinity

05% of values less than 30820.6

10% of values less than 36388.2

50% of values less than 95236.3

90% of values less than 265183

95% of values less than 297992

Minimum 0 **Maximum 476315** 

Mean 122643 Std. Dev. 88171.3 Variance 7.77417E+009

### Phase: Cell 11

# Source Concentration of Ammoniacal\_N [mg/l]

## At 29 years

05% of values less than 11.3527

10% of values less than 13.4556

50% of values less than 18.3921

90% of values less than 25.4845

95% of values less than 27.1536

Minimum 9.86875 Maximum 32.8227

Mean 18.9031 Std. Dev. 4.56984 Variance 20.8835

# At 54 years

05% of values less than 11.2428

10% of values less than 13.3278

50% of values less than 18.2141

90% of values less than 25.2379

95% of values less than 26.8908

Minimum 9.77326 Maximum 32.5052

Mean 18.7209 Std. Dev. 4.52547 Variance 20.4799

### At 154 years

05% of values less than 10.8128

10% of values less than 12.8149

50% of values less than 17.5174

90% of values less than 24.2726

95% of values less than 25.8623

Minimum 9.39946 Maximum 31.2619

Mean 18.0052 Std. Dev. 4.35209 Variance 18.9407

## At 1054 years

05% of values less than 7.58202

10% of values less than 8.98587

50% of values less than 12.2833

90% of values less than 17.0201

95% of values less than 18.1348

Minimum 6.59096 Maximum 21.9211

Mean 12.6248 Std. Dev. 3.05197 Variance 9.31453

# At infinity

05% of values less than 0.00431191

10% of values less than 0.00511028

50% of values less than 0.00698556

90% of values less than 0.00967938

95% of values less than 0.0103133

Minimum 0.00374829 Maximum 0.0124665

Mean 0.00717882 Std. Dev. 0.0017361 Variance 3.01404E-006

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

Source Concentration of Cadmium [mg/l]

At 29 years

05% of values less than 5.35473E-023

10% of values less than 2.62238E-021

50% of values less than 2.97405E-011

90% of values less than 0.000161313

95% of values less than 0.000745033

Minimum 3.48084E-028

Mean 0.000119574

Maximum 0.00583597

Std. Dev. 0.000522859

Variance 2.73382E-007

At 54 years

05% of values less than 5.35473E-023

10% of values less than 2.62238E-021

50% of values less than 2.97405E-011

90% of values less than 0.000161289

95% of values less than 0.000743403

Minimum 3.48084E-028

Mean 0.000119195

Maximum 0.00580778

Std. Dev. 0.000520645

Variance 2.71071E-007

At 154 years

05% of values less than 5.35473E-023

10% of values less than 2.62238E-021

50% of values less than 2.97405E-011

90% of values less than 0.000161196

95% of values less than 0.000736743

Minimum 3.48084E-028

Mean 0.000117678

Maximum 0.00569445

Std. Dev. 0.000511773

Variance 2.61911E-007

At 1054 years

05% of values less than 5.35473E-023

10% of values less than 2.62238E-021

50% of values less than 2.97405E-011

90% of values less than 0.000160345

95% of values less than 0.000679148

Minimum 3.48084E-028

Mean 0.000104757

Maximum 0.0047362

Std. Dev. 0.000436983

Variance 1.90954E-007

At infinity

05% of values less than 5.35473E-023

10% of values less than 2.62238E-021

50% of values less than 2.97405E-011

90% of values less than 0.000107371 95% of values less than 0.00012276

Minimum 3.48084E-028

Mean 1.73755E-005

Maximum 0.000144505

Std. Dev. 4.04374E-005

Variance 1.63518E-009

### Phase: Cell 11

## Source Concentration of Copper [mg/l]

## At 29 years

05% of values less than 3.23204E-024

10% of values less than 4.87852E-022

50% of values less than 1.96753E-011

90% of values less than 0.0103615

95% of values less than 0.0377746

Minimum 8.61752E-029

Maximum 0.292175

Mean 0.00755392 Std. Dev. 0.0332739

Variance 0.00110715

## At 54 years

05% of values less than 3.23204E-024

10% of values less than 4.87852E-022

50% of values less than 1.96753E-011

90% of values less than 0.0103433

95% of values less than 0.0376546

Minimum 8.61752E-029

Maximum 0.290617

Mean 0.00752197 Std. Dev. 0.0331075

Variance 0.00109611

### At 154 years

05% of values less than 3.23204E-024

10% of values less than 4.87852E-022

50% of values less than 1.96753E-011

90% of values less than 0.0102705

95% of values less than 0.0371771

Minimum 8.61752E-029

Maximum 0.284341

Mean 0.00739446 Std. Dev. 0.032443

Variance 0.00105255

## At 1054 years

05% of values less than 3.23204E-024

10% of values less than 4.87852E-022

50% of values less than 1.96753E-011

90% of values less than 0.00963105

95% of values less than 0.0331003

Minimum 8.61752E-029

Maximum 0.233223

Mean 0.00633637 Std. Dev. 0.0269945

Variance 0.000728705

# At infinity

05% of values less than 3.23204E-024

10% of values less than 4.87852E-022

50% of values less than 1.96753E-011

90% of values less than 0.00248868

95% of values less than 0.0028703 Minimum 8.61752E-029

Maximum 0.00359734

Mean 0.000451161 Std. Dev. 0.000990842 Variance 9.81768E-007

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

## Source Concentration of Naphthalene [mg/l]

## At 29 years

05% of values less than 4.07203E-024

10% of values less than 1.12423E-021

50% of values less than 2.41868E-010

90% of values less than 0.0156271

95% of values less than 0.181276

Minimum 1.15768E-027

Maximum 1.6066

Mean 0.0361871 Std. Dev. 0.177409

Variance 0.0314741

## At 54 years

05% of values less than 4.07203E-024

10% of values less than 1.12423E-021

50% of values less than 2.41868E-010

90% of values less than 0.0155309

95% of values less than 0.179944

Minimum 1.15768E-027

Maximum 1.59308

Mean 0.0359005 Std. Dev. 0.175947

Variance 0.0309575

### At 154 years

05% of values less than 4.07203E-024

10% of values less than 1.12423E-021

50% of values less than 2.41868E-010

90% of values less than 0.0151512

95% of values less than 0.174698

Minimum 1.15768E-027

Maximum 1.53999

Mean 0.0347698 Std. Dev. 0.170187 Variance 0.0289636

## At 1054 years

05% of values less than 4.07203E-024

10% of values less than 1.12423E-021

50% of values less than 2.41868E-010

90% of values less than 0.0120952

95% of values less than 0.133455

Minimum 1.15768E-027 Maximum 1.13122

Mean 0.0259867 Std. Dev. 0.12573 Variance 0.0158081

# At infinity

05% of values less than 4.07203E-024

10% of values less than 1.12423E-021

50% of values less than 2.41868E-010

90% of values less than 0.000105451 95% of values less than 0.000460637

Minimum 1.15768E-027

Maximum 0.00171139

Mean 6.38981E-005 Std. Dev. 0.000227498 Variance 5.17552E-008

### Phase: Cell 11

# Concentration of Ammoniacal\_N at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0.00311356

10% of values less than 0.0119961

50% of values less than 0.140002

90% of values less than 2.35483

95% of values less than 2.97913

Minimum 1.1225E-005 Maximum 4.53106

Mean 0.639326 Std. Dev. 1.00268 Variance 1.00537

## At 54 years

05% of values less than 0.0719275

10% of values less than 0.135118

50% of values less than 0.743297

90% of values less than 2.98191

95% of values less than 4.43702

Minimum 0.00652434 Maximum 6.27233

Mean 1.18109 Std. Dev. 1.27135 Variance 1.61633

### At 154 years

05% of values less than 0.188012

10% of values less than 0.248755

50% of values less than 0.942104

90% of values less than 3.09829

95% of values less than 4.43518

Minimum 0.0676711 Maximum 6.21906

Mean 1.4112 Std. Dev. 1.28536 Variance 1.65216

## At 1054 years

05% of values less than 0.0643618

10% of values less than 0.0932252

50% of values less than 0.496421

90% of values less than 1.90606

95% of values less than 2.75348

Minimum 0.0187084 Maximum 3.90933

Mean 0.808677 Std. Dev. 0.812565 Variance 0.660262

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0

Maximum 0.336397

Mean 0.00167362 Std. Dev. 0.0237276

Variance 0.000563001

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

# Concentration of Cadmium at base of Clay Liner [mg/l]

# At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.54165E-016

95% of values less than 9.12362E-014

Minimum 0 Maximum 3.07907E-009

Mean 2.10253E-011 Std. Dev. 2.22557E-010 Variance 4.95318E-020

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 4.38823E-011

95% of values less than 1.36473E-009

Minimum 0 Maximum 1.03736E-005

Mean 1.03021E-007 Std. Dev. 8.87374E-007 Variance 7.87433E-013

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.03746E-007

95% of values less than 5.60682E-006

Minimum 0 Maximum 0.000759517

Mean 1.19176E-005 Std. Dev. 7.53091E-005 Variance 5.67145E-009

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 8.62526E-014

90% of values less than 3.49599E-005

95% of values less than 0.000303925

Minimum 0 Maximum 0.00230706

Mean 5.64401E-005 Std. Dev. 0.000254673 Variance 6.48584E-008

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.27764E-011

90% of values less than 9.72197E-005

95% of values less than 0.000145179

Minimum 0 Maximum 0.000197429

Mean 1.87564E-005 Std. Dev. 4.68494E-005 Variance 2.19487E-009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

# Concentration of Copper at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.23771E-017

95% of values less than 1.42556E-016

Minimum 0 Maximum 6.53006E-015

Mean 1.16863E-016 Std. Dev. 6.70278E-016 Variance 4.49273E-031

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 5.08648E-017

90% of values less than 2.77784E-008

95% of values less than 8.43614E-007

Minimum 0 Maximum 7.8468E-005

Mean 1.41941E-006 Std. Dev. 8.99968E-006 Variance 8.09942E-011

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.95553E-011

90% of values less than 0.00389567

95% of values less than 0.00567229

Minimum 0 Maximum 0.0145517

Mean 0.000899728 Std. Dev. 0.00232065 Variance 5.3854E-006

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

# Concentration of Naphthalene at base of Clay Liner [mg/l]

# At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 4.29051E-014 90% of values less than 3.13461E-005

95% of values less than 0.000141485

Minimum 0 Maximum 0.00712022

Mean 6.87138E-005 Std. Dev. 0.000528276 Variance 2.79076E-007

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.05151E-013 90% of values less than 9.61087E-005

95% of values less than 0.000469252

Minimum 0 Maximum 0.0699411

Mean 0.000452619 Std. Dev. 0.00494883 Variance 2.44909E-005

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 4.1341E-013

90% of values less than 0.000105146

95% of values less than 0.000729755

Minimum 0 Maximum 0.0948863

Mean 0.000635158 Std. Dev. 0.00674972 Variance 4.55587E-005

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 3.17268E-013 90% of values less than 7.08432E-005

95% of values less than 0.000280949

Minimum 0 Maximum 0.0513597

Mean 0.000357305 Std. Dev. 0.00368554 Variance 1.35832E-005

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.22433E-012 95% of values less than 2.27511E-010

Minimum 0 Maximum 9.22488E-009

Mean 1.86917E-010 Std. Dev. 1.07775E-009 Variance 1.16154E-018

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

# Concentration of Ammoniacal\_N at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.01738E-012 95% of values less than 2.00837E-011

Minimum 0 Maximum 4.8792E-007

Mean 3.8668E-009 Std. Dev. 3.91885E-008 Variance 1.53574E-015

## At 54 years

05% of values less than 3.58504E-015

10% of values less than 7.81103E-014

50% of values less than 2.76868E-008

90% of values less than 0.000138822

95% of values less than 0.00055452

Minimum 0 Maximum 0.0160313

Mean 0.000279939 Std. Dev. 0.00161827 Variance 2.61879E-006

### At 154 years

05% of values less than 4.15898E-006

10% of values less than 1.08009E-005

50% of values less than 0.000594149

90% of values less than 0.0169524

95% of values less than 0.0311642

Minimum 1.25821E-008 Maximum 0.0940759

Mean 0.00589515 Std. Dev. 0.0145702 Variance 0.000212291

## At 1054 years

05% of values less than 5.46708E-006

10% of values less than 1.71603E-005

50% of values less than 0.000635501

90% of values less than 0.0136551

95% of values less than 0.0243638

Minimum 3.14797E-008 Maximum 0.0780863

Mean 0.00497958 Std. Dev. 0.0116481 Variance 0.000135677

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 4.24295E-017

90% of values less than 1.35349E-014

95% of values less than 1.39329E-013

Minimum 0 Maximum 0.00198545

Mean 9.87786E-006 Std. Dev. 0.000140043 Variance 1.96119E-008

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

# Concentration of Cadmium at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 5.62594E-010

Mean 2.9313E-012 Std. Dev. 3.97063E-011 Variance 1.57659E-021

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 4.31491E-012

95% of values less than 5.96832E-009

Minimum 0 Maximum 0.000750791

Mean 4.24634E-006 Std. Dev. 5.31443E-005 Variance 2.82432E-009

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.08099E-012

90% of values less than 4.66048E-005

95% of values less than 0.000166473

Minimum 0 Maximum 0.000789252

Mean 2.8244E-005 Std. Dev. 9.96913E-005 Variance 9.93836E-009

### Phase: Cell 11

# Concentration of Copper at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $3.34228\mbox{E-}012$ 

90% of values less than 0.000912189

95% of values less than 0.00303323

Minimum 0 Maximum 0.0219093

Mean 0.000653207 Std. Dev. 0.00273201 Variance 7.4639E-006

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

# Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.02297E-013

95% of values less than 7.9142E-012

Minimum 0 Maximum 5.37895E-010

Mean 8.67E-012 Std. Dev. 4.93702E-011 Variance 2.43741E-021

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.68888E-010

95% of values less than 1.21712E-008

Minimum 0 Maximum 2.60142E-007

Mean 3.38811E-009 Std. Dev. 2.12604E-008 Variance 4.52006E-016

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.66118E-010

95% of values less than 8.5601E-009

Minimum 0 Maximum 2.60154E-007

Mean 3.56501E-009 Std. Dev. 2.17488E-008 Variance 4.73009E-016

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.82817E-016

95% of values less than 1.70353E-014

Minimum 0 Maximum 1.43011E-010

Mean 8.49245E-013 Std. Dev. 1.01871E-011 Variance 1.03776E-022

### Phase: Cell 11

# Approx. time to Peak Conc. Ammoniacal\_N at Base of Unsaturated Zone [years]

05% of values less than 210 10% of values less than 210 50% of values less than 232 90% of values less than 282

95% of values less than 282

Minimum 190 Maximum 344
Mean 236.756 Std. Dev. 26.9211

Variance 724.745

## Approx. time to Peak Conc. Cadmium at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000
Mean 12581.7 Std. Dev. 8966.01

Variance 8.03894E+007

## Approx. time to Peak Conc. Copper at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 14726.4 Std. Dev. 8834.58

Variance 7.80498E+007

# Approx. time to Peak Conc. Naphthalene at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 256 95% of values less than 282

Minimum 0 Maximum 11039
Mean 175.527 Std. Dev. 803.747

Variance 646010

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

# Concentration of Ammoniacal\_N at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.35032E-016

95% of values less than 1.39701E-014

Minimum 0 Maximum 1.57883E-009

Mean 1.30918E-011 Std. Dev. 1.32683E-010 Variance 1.76048E-020

## At 54 years

05% of values less than 3.4396E-018

10% of values less than 6.10809E-017

50% of values less than 6.8112E-011

90% of values less than 3.57496E-007

95% of values less than 1.98514E-006

Minimum 0 Maximum 0.000179451

Mean 1.66176E-006 Std. Dev. 1.39602E-005 Variance 1.94886E-010

### At 154 years

05% of values less than 1.69074E-008

10% of values less than 9.00868E-008

50% of values less than 3.77769E-006

90% of values less than 0.000137366

95% of values less than 0.000201514

Minimum 2.34054E-011

Maximum 0.00131418

Mean 4.66454E-005 Std. Dev. 0.000139824 Variance 1.95509E-008

## At 1054 years

05% of values less than 4.13093E-008

10% of values less than 1.33462E-007

50% of values less than 4.57327E-006

90% of values less than 0.000149509

95% of values less than 0.000211179

Minimum 1.25964E-010

Maximum 0.00110782

Mean 4.69129E-005 Std. Dev. 0.000125597 Variance 1.57747E-008

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 9.57364E-019

90% of values less than 7.17848E-015

95% of values less than 2.12302E-013

Minimum 0 Maximum 6.11014E-005

Mean 3.03987E-007 Std. Dev. 4.30976E-006 Variance 1.8574E-011

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

# Concentration of Cadmium at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 3.52522E-017

Mean 2.4008E-019 Std. Dev. 2.64597E-018 Variance 7.00117E-036

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.41865E-018

95% of values less than 4.47968E-014

Minimum 0 Maximum 3.52753E-007

Mean 1.81921E-009 Std. Dev. 2.48876E-008 Variance 6.19394E-016

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 8.43604E-015

90% of values less than 2.45547E-007

95% of values less than 1.22539E-006

Minimum 0 Maximum 1.80454E-005

Mean 2.88477E-007 Std. Dev. 1.59469E-006 Variance 2.54303E-012

### Phase: Cell 11

# Concentration of Copper at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 5.35517E-015

90% of values less than 2.34058E-006

95% of values less than 1.07822E-005

Minimum 0 Maximum 8.26006E-005

Mean 1.86736E-006 Std. Dev. 8.03498E-006 Variance 6.45609E-011

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

# Concentration of Naphthalene at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 6.06108E-019

95% of values less than 1.0558E-016

Minimum 0 Maximum 2.06176E-014

Mean 3.75671E-016 Std. Dev. 2.11641E-015 Variance 4.47918E-030

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.43929E-013

95% of values less than 7.33453E-012

Minimum 0 Maximum 3.19551E-010

Mean 4.00872E-012 Std. Dev. 2.73322E-011 Variance 7.47048E-022

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 6.95627E-013

95% of values less than 8.58649E-012

Minimum 0 Maximum 3.08E-010

Mean 5.43746E-012 Std. Dev. 3.42782E-011 Variance 1.17499E-021

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 3.59332E-017

Minimum 0 Maximum 5.48964E-013

Mean 3.26911E-015 Std. Dev. 3.89026E-014 Variance 1.51341E-027

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

# Approx. time to Peak Conc. Ammoniacal\_N at Phase Monitor Well [years]

05% of values less than 232 10% of values less than 232 50% of values less than 256 90% of values less than 312

95% of values less than 312

Minimum 210 Maximum 380

Mean 261.264 Std. Dev. 29.1406 Variance 849.175

# Approx. time to Peak Conc. Cadmium at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 12572.5 Std. Dev. 9193.71

Std. Dev. 9193.71 Variance 8.45243E+007

# Approx. time to Peak Conc. Copper at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000

Mean 14328.4 Std. Dev. 9037.24 Variance 8.16716E+007

# Approx. time to Peak Conc. Naphthalene at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 256 95% of values less than 282

Minimum 0 Maximum 1681
Mean 107.284 Std. Dev. 202.728

Variance 41098.8

Page 138 of 258

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

Flow to Leachate Treatment Plant [I/day]

At 29 years

05% of values less than 523.331

10% of values less than 523.331

50% of values less than 523.331

90% of values less than 1613.88

95% of values less than 2083

Minimum 523.331 Maximum 2477.55

Mean 810.008 Std. Dev. 520.912 Variance 271349

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

Head on EBS [m]

At 29 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1

95% of values less than 1

Minimum 1

Maximum 1 Mean 1 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 1.05161

10% of values less than 1.05161

50% of values less than 1.05161

90% of values less than 1.11982

95% of values less than 1.15548

Minimum 1.05161

Maximum 1.22168

Mean 1.06594 Std. Dev. 0.0361403 Variance 0.00130612

At 154 years

05% of values less than 1.48313

10% of values less than 1.48313

50% of values less than 1.48313

90% of values less than 1.48402

95% of values less than 1.69524

Minimum 1.48313

Maximum 4.02413

Mean 1.52095 Std. Dev. 0.206348 Variance 0.0425797

At 1054 years

05% of values less than 1.48314

10% of values less than 1.48314

50% of values less than 1.48314

90% of values less than 1.48314

95% of values less than 1.48314

Minimum 1.48314 Maximum 1.49501

Mean 1.48319 Std. Dev. 0.000837771 Variance 7.01861E-007

At infinity

05% of values less than 1.48314

10% of values less than 1.48314

50% of values less than 1.48314

90% of values less than 1.48314

95% of values less than 1.48314

Minimum 1.48314 Maximum 1.49501

Mean 1.48319 Std. Dev. 0.000837771 Variance 7.01861E-007 Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

Surface Breakout [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0

Maximum 0 Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0 Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

Leakage through EBS [I/day]

At 29 years

05% of values less than 606.721

10% of values less than 1075.85

50% of values less than 2166.39

90% of values less than 2166.39

95% of values less than 2166.39

Minimum 212.174

Maximum 2166.39

Mean 1879.72 Std. Dev. 520.912 Variance 271349

At 54 years

05% of values less than 1277.15

10% of values less than 1645.93

50% of values less than 2222.29

90% of values less than 2222.29

95% of values less than 2222.29

Minimum 520.61 Maximum 2222.29

Mean 2093.67 Variance 115107 Std. Dev. 339.274

At 154 years

05% of values less than 2689.72

10% of values less than 2689.72

50% of values less than 2689.72

90% of values less than 2690.68

95% of values less than 2698.69

Minimum 2689.72 Maximum 2876.56

Mean 2692.98 Std. Dev. 17.1796 Variance 295.137

At 1054 years

05% of values less than 2689.72

10% of values less than 2689.72

50% of values less than 2689.72

90% of values less than 2689.72

95% of values less than 2689.72

Minimum 2689.72 Maximum 2700.43

Mean 2689.78 Std. Dev. 0.755311 Variance 0.570495

At infinity

05% of values less than 2689.72

10% of values less than 2689.72

50% of values less than 2689.72

90% of values less than 2689.72

95% of values less than 2689.72

Minimum 2689.72 Maximum 2700.43

Mean 2689.78 Std. Dev. 0.755311 Variance 0.570495 Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 11

Aquifer Flow [m³/year]

At 29 years

05% of values less than 39437.1

10% of values less than 46561.2

50% of values less than 121862

90% of values less than 339320

95% of values less than 381302

Minimum 0 Maximum 609479

Mean 156930 Std. Dev. 112821 Variance 1.27286E+010

At 54 years

05% of values less than 39437.1

10% of values less than 46561.2

50% of values less than 121862

90% of values less than 339320

95% of values less than 381302

Minimum 0 Maximum 609479

Mean 156930 Std. Dev. 112821 Variance 1.27286E+010

At 154 years

05% of values less than 39437.1

10% of values less than 46561.2

50% of values less than 121862

90% of values less than 339320

95% of values less than 381302

Minimum 0 Maximum 609479

Mean 156930 Std. Dev. 112821 Variance 1.27286E+010

At 1054 years

05% of values less than 39437.1

10% of values less than 46561.2

50% of values less than 121862

90% of values less than 339320

95% of values less than 381302

Minimum 0 Maximum 609479

Mean 156930 Std. Dev. 112821 Variance 1.27286E+010

At infinity

05% of values less than 39437.1

10% of values less than 46561.2

50% of values less than 121862

90% of values less than 339320

95% of values less than 381302

Minimum 0 Maximum 609479

Mean 156930 Std. Dev. 112821 Variance 1.27286E+010

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Source Concentration of Ammoniacal\_N [mg/l]

### At 29 years

05% of values less than 12.5326

10% of values less than 13.4857

50% of values less than 19.0997

90% of values less than 25.8558

95% of values less than 26.9122

Minimum 9.14528 Maximum 31.9011

Mean 19.4126 Std. Dev. 4.5086 Variance 20.3274

### At 54 years

05% of values less than 12.4262

10% of values less than 13.3712

50% of values less than 18.941

90% of values less than 25.6363

95% of values less than 26.6889

Minimum 9.0679 Maximum 31.6303

Mean 19.248 Std. Dev. 4.47037 Variance 19.9842

### At 154 years

05% of values less than 12.0123

10% of values less than 12.9257

50% of values less than 18.2945

90% of values less than 24.7823

95% of values less than 25.8128

Minimum 8.76547 Maximum 30.5766

Mean 18.6067 Std. Dev. 4.32177 Variance 18.6777

## At 1054 years

05% of values less than 8.71427

10% of values less than 9.37696

50% of values less than 13.2714

90% of values less than 17.9783

95% of values less than 18.7133

Minimum 6.3589 Maximum 22.1818

Mean 13.4979 Std. Dev. 3.13495 Variance 9.82792

# At infinity

05% of values less than 0.0101352

10% of values less than 0.010906

50% of values less than 0.0154355

90% of values less than 0.0209098

95% of values less than 0.0217647

Minimum 0.00739578 Maximum 0.0257987

Mean 0.0156988 Std. Dev. 0.00364614 Variance 1.32943E-005

Project Number: 0001 Customer: IMS Hollywood

Phase: Cell 12

Source Concentration of Cadmium [mg/l]

At 29 years

05% of values less than 6.05316E-025

10% of values less than 3.96122E-022

50% of values less than 2.32181E-011

90% of values less than 0.000158715

95% of values less than 0.000690868

Minimum 3.02227E-030

Mean 0.00013931 Std. Dev. 0.000573601

Maximum 0.00432479 Variance 3.29019E-007

At 54 years

05% of values less than 6.05316E-025

10% of values less than 3.96122E-022

50% of values less than 2.32181E-011

90% of values less than 0.000158698

95% of values less than 0.000689579

Minimum 3.02227E-030

Maximum 0.00430747

Mean 0.000138888 Std. Dev. 0.000571503 Variance 3.26616E-007

At 154 years

05% of values less than 6.05316E-025

10% of values less than 3.96122E-022

50% of values less than 2.32181E-011

90% of values less than 0.000158634

95% of values less than 0.000684482

Minimum 3.02227E-030

Mean 0.00013722 Std. Dev. 0.000563205 Variance 3.17199E-007

Maximum 0.00423817

At 1054 years

05% of values less than 6.05316E-025

10% of values less than 3.96122E-022

50% of values less than 2.32181E-011

90% of values less than 0.000157988

95% of values less than 0.000638025

Minimum 3.02227E-030

Maximum 0.00363736

Mean 0.000122513 Std. Dev. 0.000490676 Variance 2.40763E-007

At infinity

05% of values less than 6.05316E-025

10% of values less than 3.96122E-022

50% of values less than 2.32181E-011

90% of values less than 0.000145056

95% of values less than 0.000145296

Minimum 3.02227E-030

Maximum 0.000145601

Mean 1.98495E-005 Std. Dev. 4.65791E-005 Variance 2.16961E-009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

### Source Concentration of Copper [mg/l]

### At 29 years

05% of values less than 2.40062E-024

10% of values less than 8.59467E-021

50% of values less than 2.05074E-010

90% of values less than 0.00780044

95% of values less than 0.0286871

Minimum 7.13548E-030

Mean 0.00723886

Maximum 0.326047

Std. Dev. 0.0334962

Variance 0.001122

### At 54 years

05% of values less than 2.40062E-024

10% of values less than 8.59467E-021

50% of values less than 2.05074E-010

90% of values less than 0.00779052

95% of values less than 0.0286147

Minimum 7.13548E-030

Maximum 0.324462

Mean 0.00721149 Std. Dev. 0.0333465

Variance 0.00111199

### At 154 years

05% of values less than 2.40062E-024

10% of values less than 8.59467E-021

50% of values less than 2.05074E-010

90% of values less than 0.00775126

95% of values less than 0.0283288

Minimum 7.13548E-030

Maximum 0.318244

Mean 0.00710343 Std. Dev. 0.0327569

Variance 0.00107302

## At 1054 years

05% of values less than 2.40062E-024

10% of values less than 8.59467E-021

50% of values less than 2.05074E-010

90% of values less than 0.00738891

95% of values less than 0.025758

Minimum 7.13548E-030

Mean 0.00616409

Maximum 0.264934

Std. Dev. 0.0276827

Variance 0.000766333

# At infinity

05% of values less than 2.40062E-024

10% of values less than 8.59467E-021

50% of values less than 2.05074E-010

90% of values less than 0.00269709

95% of values less than 0.00347684

Minimum 7.13548E-030

Maximum 0.00558467

Mean 0.000531063

Std. Dev. 0.00123121

Variance 1.51587E-006

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

### Source Concentration of Naphthalene [mg/l]

### At 29 years

05% of values less than 2.5184E-023

10% of values less than 8.1909E-021

50% of values less than 3.96408E-009

90% of values less than 0.0241249

95% of values less than 0.102261

Minimum 3.869E-027

Mean 0.0307561 Std. Dev. 0.142451 Variance 0.0202922

Maximum 1.20446

# At 54 years

05% of values less than 2.5184E-023

10% of values less than 8.1909E-021

50% of values less than 3.96408E-009

90% of values less than 0.0239902

95% of values less than 0.101626

Minimum 3.869E-027 Maximum 1.19571

Mean 0.0305458 Std. Dev. 0.141438 Variance 0.0200047

### At 154 years

05% of values less than 2.5184E-023

10% of values less than 8.1909E-021

50% of values less than 3.96408E-009

90% of values less than 0.0234622

95% of values less than 0.0991435

Minimum 3.869E-027 Maximum 1.16158

Mean 0.0297215 Std. Dev. 0.137463 Variance 0.0188962

## At 1054 years

05% of values less than 2.5184E-023

10% of values less than 8.1909E-021

50% of values less than 3.96408E-009

90% of values less than 0.0190022

95% of values less than 0.078435

Minimum 3.869E-027 Maximum 0.882866

Mean 0.0229459 Std. Dev. 0.104987 Variance 0.0110223

# At infinity

05% of values less than 2.5184E-023

10% of values less than 8.1909E-021

50% of values less than 3.96408E-009

90% of values less than 0.000224515

95% of values less than 0.00056553

Minimum 3.869E-027

Maximum 0.00273873

Mean 0.000109341 Std. Dev. 0.000376752 Variance 1.41942E-007

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Concentration of Ammoniacal\_N at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0.00112591

10% of values less than 0.00261389

50% of values less than 0.0434053

90% of values less than 1.21748

95% of values less than 1.93647

Minimum 7.09549E-007

Mean 0.368663 Std. Dev. 0.721918

Variance 0.521166

Maximum 4.21626

### At 54 years

05% of values less than 0.106848

10% of values less than 0.137754

50% of values less than 0.604558

90% of values less than 2.907

95% of values less than 3.5927

Minimum 0.0106014 Maximum 6.99304

Mean 1.09165 Std. Dev. 1.21448 Variance 1.47496

### At 154 years

05% of values less than 0.669813

10% of values less than 0.888495

50% of values less than 2.06304

90% of values less than 5.12742

95% of values less than 6.0148

Minimum 0.321509

Maximum 9.99818

Mean 2.60208 Std. Dev. 1.7501 Variance 3.06284

## At 1054 years

05% of values less than 0.194243

10% of values less than 0.286922

50% of values less than 0.866212

90% of values less than 2.79996

95% of values less than 3.39326

Minimum 0.0629745 Maximum 5.93061

Mean 1.23578 Std. Dev. 1.06815 Variance 1.14094

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0 Minimum 0

Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Concentration of Cadmium at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 4.14039E-016

Mean 2.0599E-018 Std. Dev. 2.92041E-017 Variance 8.52878E-034

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 8.54244E-010

Mean 4.25511E-012 Std. Dev. 6.02534E-011 Variance 3.63047E-021

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.29017E-011

95% of values less than 1.04881E-008

Minimum 0 Maximum 3.33466E-005

Mean 3.22702E-007 Std. Dev. 2.72646E-006 Variance 7.43357E-012

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $6.80355 \hbox{E-}012$ 

90% of values less than 3.65041E-005

95% of values less than 8.55659E-005

Minimum 0 Maximum 0.000174649

Mean 1.06655E-005 Std. Dev. 3.10138E-005 Variance 9.61854E-010

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Concentration of Copper at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.54814E-016

95% of values less than 1.0261E-015

Minimum 0 Maximum 1.04134E-014

Mean 2.7267E-016 Std. Dev. 1.22171E-015 Variance 1.49257E-030

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 2.44185E-013

90% of values less than 1.14766E-005

95% of values less than 6.82299E-005

Minimum 0 Maximum 0.00215124

Mean 3.59512E-005 Std. Dev. 0.000223608 Variance 5.00004E-008

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $2.05072 \hbox{E-}010$ 

90% of values less than 0.00322454

95% of values less than 0.00528846

Minimum 0 Maximum 0.0118216

Mean 0.000752963 Std. Dev. 0.0019493 Variance 3.79977E-006

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Concentration of Naphthalene at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 5.55639E-013 90% of values less than 1.74726E-005

95% of values less than 0.000125985

Minimum 0 Maximum 0.00209714

Mean 4.79776E-005 Std. Dev. 0.000244419 Variance 5.97406E-008

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 2.89585E-012 90% of values less than 7.87416E-005

95% of values less than 0.00122045

Minimum 0 Maximum 0.0154043

Mean 0.000352297 Std. Dev. 0.00180639 Variance 3.26306E-006

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 3.42822E-011

90% of values less than 0.000444168

95% of values less than 0.00637263

Minimum 0 Maximum 0.0487336

Mean 0.00126435 Std. Dev. 0.0059512 Variance 3.54168E-005

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 2.35544E-011

90% of values less than 0.000233901

95% of values less than 0.00264993

Minimum 0 Maximum 0.021837

Mean 0.000568351 Std. Dev. 0.0026591 Variance 7.07082E-006

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.35544E-011

95% of values less than 1.04958E-009

Minimum 0 Maximum 1.2046E-008

Mean 2.81782E-010 Std. Dev. 1.4239E-009 Variance 2.02749E-018

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Concentration of Ammoniacal\_N at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.92644E-011 95% of values less than 3.3735E-010

Minimum 0 Maximum 7.45743E-006

Mean 4.12776E-008 Std. Dev. 5.27104E-007 Variance 2.77838E-013

### At 54 years

05% of values less than 5.35067E-010

10% of values less than 9.35522E-009

50% of values less than 1.81699E-005

90% of values less than 0.00389145

95% of values less than 0.0130178

Minimum 0 Maximum 0.211133

Mean 0.00381021 Variance 0.000411559 Std. Dev. 0.0202869

### At 154 years

05% of values less than 0.000716538

10% of values less than 0.0016961

50% of values less than 0.0220858

90% of values less than 0.190339

95% of values less than 0.267374

Minimum 6.82772E-005

Maximum 0.946789

Mean 0.0690946 Std. Dev. 0.124015 Variance 0.0153797

## At 1054 years

05% of values less than 0.00119739

10% of values less than 0.00229202

50% of values less than 0.0227655

90% of values less than 0.157461

95% of values less than 0.232107

Minimum 0.00027265 Maximum 0.753059

Mean 0.0590917 Std. Dev. 0.0979066 Variance 0.0095857

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 9.42682E-016

90% of values less than 2.31121E-014

95% of values less than 5.96931E-014

Minimum 0 Maximum 1.52059E-012

Mean 1.73711E-014 Std. Dev. 1.09679E-013 Variance 1.20294E-026

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Concentration of Cadmium at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 2.29679E-014

Minimum 0 Maximum 6.56993E-007

Mean 7.06936E-009 Std. Dev. 6.11287E-008 Variance 3.73672E-015

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $6.80235\mbox{E-}012$ 

90% of values less than 1.94057E-005

95% of values less than 6.99516E-005

Minimum 0 Maximum 0.000324009

Mean 9.39878E-006 Std. Dev. 3.56095E-005 Variance 1.26804E-009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Concentration of Copper at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.45777E-010

90% of values less than 0.00423111

95% of values less than 0.00909347

Minimum 0 Maximum 0.0442826

Mean 0.00188097 Std. Dev. 0.00660449 Variance 4.36193E-005

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 1.01857E-014

Mean 9.994E-017 Std. Dev. 9.65409E-016 Variance 9.32014E-031

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.6608E-010

95% of values less than 3.43418E-009

Minimum 0 Maximum 4.28513E-006

Mean 2.86795E-008 Std. Dev. 3.08234E-007 Variance 9.5008E-014

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 6.43476E-016

90% of values less than 4.86305E-008

95% of values less than 7.24525E-007

Minimum 0 Maximum 0.000339179

Mean 5.45681E-006 Std. Dev. 3.6991E-005 Variance 1.36834E-009

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.21166E-015

90% of values less than 4.06845E-008

95% of values less than 6.55884E-007

Minimum 0 Maximum 0.000299062

Mean 4.88856E-006 Std. Dev. 3.28744E-005 Variance 1.08073E-009

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.84135E-014

95% of values less than 1.33955E-012

Minimum 0 Maximum 1.1721E-010

Mean 1.72177E-012 Std. Dev. 1.09865E-011 Variance 1.20703E-022

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Approx. time to Peak Conc. Ammoniacal\_N at Base of Unsaturated Zone [years]

05% of values less than 210 10% of values less than 210 50% of values less than 232 90% of values less than 256 95% of values less than 256

Minimum 190 Maximum 312
Mean 231.343 Std. Dev. 16.0414

Variance 257.327

### Approx. time to Peak Conc. Cadmium at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000

Mean 13080.4 Std. Dev. 9351.94

Variance 8.74587E+007

### Approx. time to Peak Conc. Copper at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 15629.3 Std. Dev. 8187.65

Variance 6.70376E+007

# Approx. time to Peak Conc. Naphthalene at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 232 90% of values less than 1856 95% of values less than 12189

Minimum 0 Maximum 18114
Mean 1533.99 Std. Dev. 4255.87

Variance 1.81124E+007

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Concentration of Ammoniacal\_N at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.0134E-015 95% of values less than 2.17319E-014

Minimum 0 Maximum 1.70123E-009

Mean 8.85507E-012 Std. Dev. 1.20014E-010 Variance 1.44034E-020

### At 54 years

05% of values less than 2.8996E-013

10% of values less than 7.03127E-012

50% of values less than 3.12028E-008

90% of values less than 1.40646E-005

95% of values less than 3.01688E-005

Minimum 0 Maximum 0.000478418

Mean 8.3716E-006 Std. Dev. 4.09344E-005 Variance 1.67563E-009

### At 154 years

05% of values less than 2.56267E-006

10% of values less than 6.06204E-006

50% of values less than 0.00012693

90% of values less than 0.00180168

95% of values less than 0.00283678

Minimum 3.09898E-007

Maximum 0.0060303

Mean 0.00055695 Std. Dev. 0.00102601 Variance 1.0527E-006

## At 1054 years

05% of values less than 1.06323E-005

10% of values less than 1.64792E-005

50% of values less than 0.000257271

90% of values less than 0.00240289

95% of values less than 0.00331548

Minimum 1.6052E-006 Maximum 0.00732421

Mean 0.000724231 Std. Dev. 0.00119991 Variance 1.43978E-006

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.08383E-017

90% of values less than 6.70294E-016

95% of values less than 3.16036E-015

Minimum 0 Maximum 1.90217E-014

Mean 4.92997E-016 Std. Dev. 1.92258E-015 Variance 3.69631E-030

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Concentration of Cadmium at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 1.43242E-009

Mean 8.28979E-012 Std. Dev. 1.01718E-010 Variance 1.03465E-020

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $9.29818\mbox{E-}014$ 

90% of values less than 1.11857E-007

95% of values less than 5.0998E-007

Minimum 0 Maximum 1.23827E-005

Mean 1.32396E-007 Std. Dev. 9.083E-007 Variance 8.25009E-013

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Concentration of Copper at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $9.27595\hbox{E-}013$ 

90% of values less than 4.0172E-005

95% of values less than 0.000100856

Minimum 0 Maximum 0.000707672

Mean 2.2674E-005 Std. Dev. 9.52456E-005 Variance 9.07172E-009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Concentration of Naphthalene at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 9.75143E-015

95% of values less than 4.24255E-013

Minimum 0 Maximum 1.34766E-009

Mean 7.61607E-012 Std. Dev. 9.54641E-011 Variance 9.11339E-021

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.64594E-018

90% of values less than 8.70727E-011

95% of values less than 7.01294E-010

Minimum 0 Maximum 6.01146E-007

Mean 5.93789E-009 Std. Dev. 4.77412E-008 Variance 2.27923E-015

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 3.69489E-018

90% of values less than 1.51425E-010

95% of values less than 1.166E-009

Minimum 0 Maximum 1.08744E-006

Mean 9.8363E-009 Std. Dev. 8.28157E-008 Variance 6.85844E-015

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 4.27524E-017

95% of values less than 3.70708E-015

Minimum 0 Maximum 9.43092E-013

Mean 7.39556E-015 Std. Dev. 6.84794E-014 Variance 4.68943E-027

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Approx. time to Peak Conc. Ammoniacal\_N at Phase Monitor Well [years]

05% of values less than 232 10% of values less than 232 50% of values less than 256 90% of values less than 282

95% of values less than 282

Minimum 210 Maximum 344
Mean 256.806 Std. Dev. 18.3436

Variance 336.487

# Approx. time to Peak Conc. Cadmium at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 13191.2 Std. Dev. 9391.84

Variance 8.82066E+007

# Approx. time to Peak Conc. Copper at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 15712 Std. Dev. 8218.2

Std. Dev. 8218.21 Variance 6.7539E+007

# Approx. time to Peak Conc. Naphthalene at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 256 90% of values less than 1024 95% of values less than 12189

Minimum 0 Maximum 20000

Mean 1174.46 Std. Dev. 3917.07

Variance 1.53435E+007

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

Flow to Leachate Treatment Plant [I/day]

At 29 years

05% of values less than 1802.29

10% of values less than 1802.29

50% of values less than 1802.29

90% of values less than 2543.09

95% of values less than 2671.41

Minimum 1802.29

Maximum 2844.23

Mean 1963.38 Std. Dev. 302.919

Variance 91759.8

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0

Maximum 0

Mean 0 Std. Dev. 0

Variance 0

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

Head on EBS [m]

At 29 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1

95% of values less than 1

Minimum 1 Maximum 1

Mean 1 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 1.2966

10% of values less than 1.2966

50% of values less than 1.2966

90% of values less than 1.30769

95% of values less than 1.38456

Minimum 1.2966

Maximum 1.42711

Mean 1.30536 Std. Dev. 0.0279037 Variance 0.000778614

At 154 years

05% of values less than 4.04627

10% of values less than 4.04627

50% of values less than 4.04627

90% of values less than 4.04627

95% of values less than 4.05055

Minimum 4.04627

Maximum 6.07794

Mean 4.07234 Std. Dev. 0.175118 Variance 0.0306665

At 1054 years

05% of values less than 4.0479

10% of values less than 4.0479

50% of values less than 4.0479

90% of values less than 4.0479

95% of values less than 4.0479

Minimum 4.0479 Maximum 4.0479

Mean 4.0479 Std. Dev. 1.52208E-007 Variance 2.31672E-014

At infinity

05% of values less than 4.0479

10% of values less than 4.0479

50% of values less than 4.0479

90% of values less than 4.0479

95% of values less than 4.0479

Minimum 4.0479 Maximum 4.0479

Mean 4.0479 Std. Dev. 1.52208E-007 Variance 2.31672E-014 Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

Surface Breakout [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 12

# Leakage through EBS [I/day]

### At 29 years

05% of values less than 313.525

10% of values less than 441.838

50% of values less than 1182.64

90% of values less than 1182.64

95% of values less than 1182.64

Minimum 140.702

Maximum 1182.64

Mean 1021.55 Std. Dev. 302.919 Variance 91759.8

### At 54 years

05% of values less than 877.158

10% of values less than 1358.03

50% of values less than 1358.03

90% of values less than 1358.03

95% of values less than 1358.03

Minimum 521.947

Maximum 1364.59

Mean 1310.58 Std. Dev. 164.63 Variance 27103.1

### At 154 years

05% of values less than 2983.97

10% of values less than 2983.97

50% of values less than 2983.97

90% of values less than 2983.97

95% of values less than 2986.5

Minimum 2983.97 Maximum 3218.97

Mean 2986.73 Std. Dev. 19.3667 Variance 375.068

## At 1054 years

05% of values less than 2984.93

10% of values less than 2984.93

50% of values less than 2984.93

90% of values less than 2984.93

95% of values less than 2984.93

Minimum 2984.93 Maximum 2984.93

Mean 2984.93 Std. Dev. 0.000123219 Variance -1.51829E-008

# At infinity

05% of values less than 2984.93

10% of values less than 2984.93

50% of values less than 2984.93

90% of values less than 2984.93

95% of values less than 2984.93

Minimum 2984.93 Maximum 2984.93

Mean 2984.93 Std. Dev. 0.000123219 Variance -1.51829E-008 Project Number: 0001 Customer: IMS Hollywood

Phase: Cell 12

Aquifer Flow [m³/year]

At 29 years

05% of values less than 35791.6

10% of values less than 42257.2

50% of values less than 110597

90% of values less than 307954

95% of values less than 346055

Minimum 0 Maximum 553140

Mean 142424 Std. Dev. 102392 Variance 1.04842E+010

At 54 years

05% of values less than 35791.6

10% of values less than 42257.2

50% of values less than 110597

90% of values less than 307954

95% of values less than 346055

Minimum 0 Maximum 553140

Mean 142424 Std. Dev. 102392 Variance 1.04842E+010

At 154 years

05% of values less than 35791.6

10% of values less than 42257.2

50% of values less than 110597

90% of values less than 307954

95% of values less than 346055

Minimum 0 Maximum 553140

Mean 142424 Std. Dev. 102392 Variance 1.04842E+010

At 1054 years

05% of values less than 35791.6

10% of values less than 42257.2

50% of values less than 110597

90% of values less than 307954

95% of values less than 346055

Minimum 0 Maximum 553140

Mean 142424 Std. Dev. 102392 Variance 1.04842E+010

At infinity

05% of values less than 35791.6

10% of values less than 42257.2

50% of values less than 110597

90% of values less than 307954 95% of values less than 346055

Minimum 0 Maximum 553140

Mean 142424 Std. Dev. 102392 Variance 1.04842E+010

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 13

# Source Concentration of Ammoniacal\_N [mg/l]

### At 29 years

05% of values less than 11.7964

10% of values less than 13.4542

50% of values less than 18.7016

90% of values less than 24.9159

95% of values less than 27.8904

Minimum 8.75591 Maximum 34.6391

Mean 18.969 Std. Dev. 4.72118 Variance 22.2895

### At 54 years

05% of values less than 11.695

10% of values less than 13.3352

50% of values less than 18.5362

90% of values less than 24.6956

95% of values less than 27.6438

Minimum 8.67849 Maximum 34.3328

Mean 18.8019 Std. Dev. 4.67953 Variance 21.898

### At 154 years

05% of values less than 11.2877

10% of values less than 12.8769

50% of values less than 17.8991

90% of values less than 23.8469

95% of values less than 26.6937

Minimum 8.38024

Maximum 33.1529

Mean 18.1549 Std. Dev. 4.51852 Variance 20.417

## At 1054 years

05% of values less than 8.06969

10% of values less than 9.20584

50% of values less than 12.7962

90% of values less than 17.0484

95% of values less than 19.0836

Minimum 5.99112 Maximum 23.7013

Mean 12.9788 Std. Dev. 3.23025 Variance 10.4345

# At infinity

05% of values less than 0.00689694

10% of values less than 0.00786798

50% of values less than 0.0109366

90% of values less than 0.0145708

95% of values less than 0.0163102

Minimum 0.00512044 Maximum 0.0202569

Mean 0.0110926 Std. Dev. 0.00276081 Variance 7.62206E-006

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 13

Source Concentration of Cadmium [mg/l]

At 29 years

05% of values less than 1.03473E-025

10% of values less than 4.31833E-022

50% of values less than 2.80249E-012

90% of values less than 0.000197239

95% of values less than 0.001032

Minimum 3.35876E-030

Maximum 0.00728871

Mean 0.000151402 Std. Dev. 0.000656527 Variance 4.31027E-007

At 54 years

05% of values less than 1.03473E-025

10% of values less than 4.31833E-022

50% of values less than 2.80249E-012

90% of values less than 0.000197164

95% of values less than 0.00102948

Minimum 3.35876E-030

Maximum 0.00725322

Mean 0.000150911 Std. Dev. 0.000653763 Variance 4.27406E-007

At 154 years

05% of values less than 1.03473E-025

10% of values less than 4.31833E-022

50% of values less than 2.80249E-012

90% of values less than 0.000196866

95% of values less than 0.00101961

Minimum 3.35876E-030

Maximum 0.00711514

Mean 0.000148979 Std. Dev. 0.000642952 Variance 4.13388E-007

At 1054 years

05% of values less than 1.03473E-025

10% of values less than 4.31833E-022

50% of values less than 2.80249E-012

90% of values less than 0.000194037

95% of values less than 0.000929627

Minimum 3.35876E-030

Maximum 0.00591673

Mean 0.000131832 Std. Dev. 0.000548657 Variance 3.01025E-007

At infinity

05% of values less than 1.03473E-025

10% of values less than 4.31833E-022

50% of values less than 2.80249E-012

90% of values less than 0.000121854 95% of values less than 0.000132921

Minimum 3.35876E-030

Maximum 0.000143071

Mean 1.78164E-005 Std. Dev. 4.23121E-005 Variance 1.79031E-009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 13

### Source Concentration of Copper [mg/l]

### At 29 years

05% of values less than 6.4326E-025

10% of values less than 2.25402E-021

50% of values less than 1.11247E-011

90% of values less than 0.0045512

95% of values less than 0.0263738

Minimum 2.28552E-029

Maximum 0.241126

Mean 0.00669589 Std. Dev. 0.0304937 Variance 0.000929868

### At 54 years

05% of values less than 6.4326E-025

10% of values less than 2.25402E-021

50% of values less than 1.11247E-011

90% of values less than 0.00454764

95% of values less than 0.0263066

Minimum 2.28552E-029

Maximum 0.239979

Mean 0.0066695 Std. Dev. 0.0303575 Variance 0.000921581

### At 154 years

05% of values less than 6.4326E-025

10% of values less than 2.25402E-021

50% of values less than 1.11247E-011

90% of values less than 0.00453362

95% of values less than 0.026044

Minimum 2.28552E-029

Maximum 0.235513

Mean 0.0065666 Std. Dev. 0.0298272 Variance 0.000889665

## At 1054 years

05% of values less than 6.4326E-025

10% of values less than 2.25402E-021

50% of values less than 1.11247E-011

90% of values less than 0.00440133

95% of values less than 0.0236533

Minimum 2.28552E-029

Maximum 0.196665

Mean 0.00566098 Std. Dev. 0.0251957 Variance 0.000634822

# At infinity

05% of values less than 6.4326E-025

10% of values less than 2.25402E-021

50% of values less than 1.11247E-011

90% of values less than 0.00235952 95% of values less than 0.00311593

Minimum 2.28552E-029

Maximum 0.00442277

Mean 0.000417836 Std. Dev. 0.00104277 Variance 1.08736E-006

Page 169 of 258

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 13

### Source Concentration of Naphthalene [mg/l]

### At 29 years

05% of values less than 2.05348E-024

10% of values less than 1.70796E-021

50% of values less than 1.43823E-009

90% of values less than 0.0261194

95% of values less than 0.20345

Minimum 4.62234E-029

Maximum 2.78385

Mean 0.0413034 Std. Dev. 0.234453

Variance 0.054968

### At 54 years

05% of values less than 2.05348E-024

10% of values less than 1.70796E-021

50% of values less than 1.43823E-009

90% of values less than 0.0259666

95% of values less than 0.202073

Minimum 4.62234E-029

Maximum 2.76176

Mean 0.0409991 Std. Dev. 0.232626

Variance 0.0541149

### At 154 years

05% of values less than 2.05348E-024

10% of values less than 1.70796E-021

50% of values less than 1.43823E-009

90% of values less than 0.0253733

95% of values less than 0.19674

Minimum 4.62234E-029 Maximum 2.67644

Mean 0.0398218 Std. Dev. 0.225571 Variance 0.0508825

## At 1054 years

05% of values less than 2.05348E-024

10% of values less than 1.70796E-021

50% of values less than 1.43823E-009

90% of values less than 0.0203258

95% of values less than 0.152202

Minimum 4.62234E-029 Maximum 1.98055

Mean 0.0301183 Std. Dev. 0.167879 Variance 0.0281833

# At infinity

05% of values less than 2.05348E-024

10% of values less than 1.70796E-021

50% of values less than 1.43823E-009

90% of values less than 0.000190629

95% of values less than 0.000685138 Minimum 4.62234E-029

Maximum 0.00349835

Mean 9.70772E-005 Std. Dev. 0.000360925 Variance 1.30267E-007

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 13

# Concentration of Ammoniacal\_N at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0.00011147

10% of values less than 0.000394678

50% of values less than 0.0206349

90% of values less than 0.845219

95% of values less than 1.32555

Minimum 8.66285E-008

Maximum 2.35087

Mean 0.233296 Std. Dev. 0.462192 Variance 0.213622

### At 54 years

05% of values less than 0.0782247

10% of values less than 0.13742

50% of values less than 0.655801

90% of values less than 3.12142

95% of values less than 3.69115

Minimum 0.0157685

Maximum 6.55024 Mean 1.19185 Std. Dev. 1.2802 Variance 1.63891

### At 154 years

05% of values less than 0.999025

10% of values less than 1.15993

50% of values less than 2.65217

90% of values less than 5.88575

95% of values less than 6.71894

Minimum 0.626607

Maximum 11.0442

Mean 3.18034 Std. Dev. 1.9659 Variance 3.86476

## At 1054 years

05% of values less than 0.243043

10% of values less than 0.390045

50% of values less than 1.17772

90% of values less than 3.1795

95% of values less than 3.85366

Minimum 0.144367 Maximum 6.48138

Mean 1.5145 Std. Dev. 1.19365 Variance 1.42481

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 13

# Concentration of Cadmium at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 2.61678E-012

Minimum 0 Maximum 5.58742E-007

Mean 3.16035E-009 Std. Dev. 3.95375E-008 Variance 1.56322E-015

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.67861E-011

95% of values less than 1.05835E-007

Minimum 0 Maximum 0.000501527

Mean 3.35921E-006 Std. Dev. 3.60586E-005 Variance 1.30022E-009

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 6.3312E-007

95% of values less than 3.86744E-005

Minimum 0 Maximum 0.00203767

Mean 2.83203E-005 Std. Dev. 0.000181397 Variance 3.29049E-008

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 8.35904E-015

90% of values less than 2.15373E-005

95% of values less than 0.000333019

Minimum 0 Maximum 0.00197191

Mean 5.53493E-005 Std. Dev. 0.000252722 Variance 6.38682E-008

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.38781E-012

90% of values less than 8.16923E-005

95% of values less than 0.000156648

Minimum 0 Maximum 0.00021235

Mean 1.87445E-005 Std. Dev. 4.86304E-005 Variance 2.36492E-009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 13

# Concentration of Copper at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.76271E-016

95% of values less than 1.7718E-015

Minimum 0 Maximum 2.64461E-014

Mean 4.13592E-016 Std. Dev. 2.30009E-015 Variance 5.2904E-030

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 9.96583E-014

90% of values less than 1.67942E-005

95% of values less than 0.000254702

Minimum 0 Maximum 0.0160272

Mean 0.000138173 Std. Dev. 0.00118485 Variance 1.40387E-006

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.11241E-011

90% of values less than 0.00265768

95% of values less than 0.00419962

Minimum 0 Maximum 0.00853527

Mean 0.000574997 Std. Dev. 0.00156634 Variance 2.45343E-006

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 13

# Concentration of Naphthalene at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.65797E-013 90% of values less than 2.16131E-006

95% of values less than 4.44742E-005

Mean 1.91746E-005 Std. Dev. 0.000122159 Variance 1.49228E-008

Maximum 0.0014283

### At 54 years

Minimum 0

05% of values less than 0

10% of values less than 0

50% of values less than 8.88832E-013 90% of values less than 4.43345E-005

95% of values less than 0.000617629

Minimum 0 Maximum 0.0261363

Mean 0.000402418 Std. Dev. 0.00252524 Variance 6.37684E-006

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 2.4917E-011

90% of values less than 0.000655604 95% of values less than 0.00352204

Minimum 0 Maximum 0.125284

Mean 0.00181345 Variance 0.000119554 Std. Dev. 0.0109341

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.95277E-011

90% of values less than 0.000143341

95% of values less than 0.00160803

Minimum 0 Maximum 0.0406834

Mean 0.000743391 Std. Dev. 0.00428935 Variance 1.83985E-005

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.81143E-011

95% of values less than 1.69518E-010

Minimum 0 Maximum 8.8936E-009

Mean 9.99982E-011 Std. Dev. 6.88039E-010 Variance 4.73398E-019

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 13

# Concentration of Ammoniacal\_N at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.29801E-014

95% of values less than 6.76032E-012

Minimum 0 Maximum 3.2437E-009

Mean 3.03576E-011 Std. Dev. 2.71532E-010 Variance 7.37298E-020

# At 54 years

05% of values less than 6.19935E-009

10% of values less than 5.45117E-008

50% of values less than 0.000121615

90% of values less than 0.013349

95% of values less than 0.0507628

Minimum 1.08515E-014 Maximum 0.252467

Mean 0.0086865 Std. Dev. 0.0324076 Variance 0.00105026

#### At 154 years

05% of values less than 0.00312228

10% of values less than 0.00657951

50% of values less than 0.0809682

90% of values less than 0.439311

95% of values less than 0.571804

Minimum 0.000318199 Maximum 2.07009

Mean 0.174948 Std. Dev. 0.27351 Variance 0.0748079

## At 1054 years

05% of values less than 0.00382775

10% of values less than 0.00710423

50% of values less than 0.0715404

90% of values less than 0.37553

95% of values less than 0.461185

Minimum 0.000811194 Maximum 1.6256

Mean 0.14309 Std. Dev. 0.211108 Variance 0.0445664

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 3.05327E-015

90% of values less than 5.67112E-014

95% of values less than 1.83964E-013

Minimum 0 Maximum 3.72796E-012

Mean 6.35028E-014 Std. Dev. 3.27817E-013 Variance 1.07464E-025

#### Phase: Cell 13

# Concentration of Cadmium at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 5.23377E-016

Minimum 0 Maximum 9.74243E-009

Mean 4.92434E-011 Std. Dev. 6.87155E-010 Variance 4.72182E-019

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.61354E-008

95% of values less than 1.96245E-006

Minimum 0 Maximum 0.000365716

Mean 5.87868E-006 Std. Dev. 3.96865E-005 Variance 1.57502E-009

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $6.62149\mbox{E-}013$ 

90% of values less than 3.0929E-005

95% of values less than 0.000211881

Minimum 0 Maximum 0.000915534

Mean 3.23322E-005 Std. Dev. 0.000120468 Variance 1.45125E-008

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 13

# Concentration of Copper at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 2.1084E-016

Mean 1.04895E-018 Std. Dev. 1.48715E-017 Variance 2.21161E-034

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.08076E-011

90% of values less than 0.00296094

95% of values less than 0.0115162

Minimum 0 Maximum 0.0577577

Mean 0.00178629 Std. Dev. 0.00687599 Variance 4.72792E-005

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 13

# Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.59236E-010

95% of values less than 6.76049E-009

Minimum 0 Maximum 3.04322E-006

Mean 3.65501E-008 Std. Dev. 2.99597E-007 Variance 8.97586E-014

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.93056E-014

90% of values less than 1.43507E-007

95% of values less than 3.13806E-006

Minimum 0 Maximum 0.000480339

Mean 5.37912E-006 Std. Dev. 4.14008E-005 Variance 1.71403E-009

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 2.62517E-014

90% of values less than 1.8072E-007

95% of values less than 2.82442E-006

Minimum 0 Maximum 0.000407996

Mean 4.54018E-006 Std. Dev. 3.50819E-005 Variance 1.23074E-009

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 4.28605E-014

95% of values less than 5.99758E-013

Minimum 0 Maximum 2.00935E-010

Mean 2.74735E-012 Std. Dev. 2.11494E-011 Variance 4.47299E-022

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 13

# Approx. time to Peak Conc. Ammoniacal\_N at Base of Unsaturated Zone [years]

05% of values less than 210 10% of values less than 210 50% of values less than 232 90% of values less than 256

95% of values less than 256

Minimum 210 Maximum 312
Mean 231.821 Std. Dev. 14.5027

Variance 210.328

### Approx. time to Peak Conc. Cadmium at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 16406 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000

Mean 11922 Std. Dev. 8952.14

Variance 8.01408E+007

### Approx. time to Peak Conc. Copper at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 15447.2 Std. Dev. 8155.18

Variance 6.6507E+007

# Approx. time to Peak Conc. Naphthalene at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 232 90% of values less than 12189 95% of values less than 14859

Minimum 0 Maximum 18114
Mean 2225.56 Std. Dev. 4952.05

Variance 2.45228E+007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 13

# Concentration of Ammoniacal\_N at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.87941E-017 95% of values less than 3.20305E-015

Minimum 0 Maximum 2.40598E-012

Mean 2.49348E-014 Variance 4.47602E-026 Std. Dev. 2.11566E-013

# At 54 years

05% of values less than 4.12274E-012

10% of values less than 6.06246E-011

50% of values less than 1.82175E-007

90% of values less than 3.04358E-005

95% of values less than 0.000108907

Minimum 5.85913E-018

Maximum 0.000922915

Mean 2.18717E-005 Std. Dev. 9.4153E-005 Variance 8.86478E-009

#### At 154 years

05% of values less than 9.51298E-006

10% of values less than 2.22448E-005

50% of values less than 0.000441689

90% of values less than 0.00359821

95% of values less than 0.00660544

Minimum 5.16898E-007

Maximum 0.0367839

Mean 0.00158388 Std. Dev. 0.00361842 Variance 1.3093E-005

## At 1054 years

05% of values less than 2.71643E-005

10% of values less than 4.75175E-005

50% of values less than 0.000651639

90% of values less than 0.00447516

95% of values less than 0.00681871

Minimum 2.48756E-006 Maximum 0.0349453

Mean 0.00176906 Std. Dev. 0.00355838 Variance 1.2662E-005

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 6.01185E-017

90% of values less than 2.01748E-015

95% of values less than 1.04681E-014

Minimum 0 Maximum 2.65214E-013

Mean 4.75836E-015 Std. Dev. 2.47373E-014 Variance 6.11936E-028

#### Phase: Cell 13

# Concentration of Cadmium at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 1.57096E-012

Mean 7.92448E-015 Std. Dev. 1.10809E-013 Variance 1.22787E-026

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.51596E-011

95% of values less than 1.42212E-009

Minimum 0 Maximum 6.30455E-006

Mean 5.80385E-008 Std. Dev. 5.14129E-007 Variance 2.64328E-013

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 5.01275E-015

90% of values less than 3.09905E-007

95% of values less than 1.13688E-006

Minimum 0 Maximum 4.96598E-005

Mean 5.18261E-007 Std. Dev. 3.70887E-006 Variance 1.37557E-011

#### Phase: Cell 13

# Concentration of Copper at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 5.1123E-014

90% of values less than 2.32746E-005

95% of values less than 7.9639E-005

Minimum 0 Maximum 0.00102848

Mean 2.0574E-005 Std. Dev. 0.000106058 Variance 1.12483E-008

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 13

# Concentration of Naphthalene at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.00941E-013

95% of values less than 5.77981E-012

Minimum 0 Maximum 2.495E-009

Mean 2.80516E-011 Std. Dev. 2.34456E-010 Variance 5.49695E-020

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 5.86847E-017

90% of values less than 9.92185E-010

95% of values less than 8.33274E-009

Minimum 0 Maximum 1.61752E-006

Mean 1.55213E-008 Std. Dev. 1.27116E-007 Variance 1.61585E-014

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.0502E-016

90% of values less than 1.80147E-009

95% of values less than 1.49452E-008

Minimum 0 Maximum 2.19872E-006

Mean 2.06737E-008 Std. Dev. 1.69997E-007 Variance 2.88989E-014

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.40082E-016

95% of values less than 6.26887E-015

Minimum 0 Maximum 1.66977E-012

Mean 1.62887E-014 Std. Dev. 1.34714E-013 Variance 1.81479E-026

#### Phase: Cell 13

# Approx. time to Peak Conc. Ammoniacal\_N at Phase Monitor Well [years]

05% of values less than 232 10% of values less than 256 50% of values less than 256 90% of values less than 282

95% of values less than 282

Minimum 210 Maximum 344

Mean 258.726 Std. Dev. 14.7949 Variance 218.89

# Approx. time to Peak Conc. Cadmium at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 18114 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 12067 Std. Dev. 9063.04

Std. Dev. 9063.04 Variance 8.21386E+007

# Approx. time to Peak Conc. Copper at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000

Mean 15354.3 Std. Dev. 8304 Variance 6.89564E+007

# Approx. time to Peak Conc. Naphthalene at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 256 90% of values less than 11039 95% of values less than 13458

Minimum 0 Maximum 20000 Mean 2232.96 Std. Dev. 5081.29

Variance 2.58195E+007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 13

Flow to Leachate Treatment Plant [I/day]

At 29 years

05% of values less than 1552.92

10% of values less than 1552.92

50% of values less than 1552.92

90% of values less than 2039.36

95% of values less than 2181.76

Minimum 1552.92

Maximum 2299.61

Mean 1672.3 Std. Dev. 215.742 Variance 46544.5

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Maximum 0 Minimum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0

Maximum 0 Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 13

Head on EBS [m]

At 29 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1

95% of values less than 1

Minimum 1

Maximum 1 Mean 1 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 1.3523

10% of values less than 1.3523

50% of values less than 1.3523

90% of values less than 1.45866

95% of values less than 1.48947

Minimum 1.3523

Maximum 1.51485

Mean 1.3784 Std. Dev. 0.0470957 Variance 0.002218

At 154 years

05% of values less than 4.74858

10% of values less than 4.74858

50% of values less than 4.74858

90% of values less than 4.74924

95% of values less than 4.77872

Minimum 4.74858

Maximum 6.66598

Mean 4.77462 Variance 0.0290773 Std. Dev. 0.170521

At 1054 years

05% of values less than 4.75389

10% of values less than 4.75389

50% of values less than 4.75389

90% of values less than 4.75389

95% of values less than 4.75389

Minimum 4.75389 Maximum 4.75389

Mean 4.75389 Std. Dev. 4.33859E-007 Variance -1.88234E-013

At infinity

05% of values less than 4.75389

10% of values less than 4.75389

50% of values less than 4.75389

90% of values less than 4.75389

95% of values less than 4.75389

Minimum 4.75389 Maximum 4.75389

Mean 4.75389 Std. Dev. 4.33859E-007 Variance -1.88234E-013

#### Phase: Cell 13

Surface Breakout [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 13

# Leakage through EBS [I/day]

### At 29 years

05% of values less than 198.527

10% of values less than 340.931

50% of values less than 827.366

90% of values less than 827.366

95% of values less than 827.366

Minimum 80.6807

Maximum 827.366

Mean 707.986 Std. Dev. 215.742

Variance 46544.5

### At 54 years

05% of values less than 296.035

10% of values less than 497.661

50% of values less than 973.108

90% of values less than 973.108

95% of values less than 973.108

Minimum 122.403 Maximum 982.005

Mean 861.139 Std. Dev. 225.433 Variance 50820

#### At 154 years

05% of values less than 2378.09

10% of values less than 2378.09

50% of values less than 2378.09

90% of values less than 2378.36

95% of values less than 2390.56

Minimum 2378.09

Maximum 2777.57

Mean 2384.18 Std. Dev. 38.3401 Variance 1469.97

## At 1054 years

05% of values less than 2380.29

10% of values less than 2380.29

50% of values less than 2380.29

90% of values less than 2380.29

95% of values less than 2380.29

Minimum 2380.29 Maximum 2380.29

Mean 2380.29 Std. Dev. 0.000240198 Variance -5.76949E-008

# At infinity

05% of values less than 2380.29

10% of values less than 2380.29

50% of values less than 2380.29

90% of values less than 2380.29

95% of values less than 2380.29

Minimum 2380.29 Maximum 2380.29

Mean 2380.29 Std. Dev. 0.000240198 Variance -5.76949E-008

#### Phase: Cell 13

Aquifer Flow [m³/year]

At 29 years

05% of values less than 31152

10% of values less than 36779.4

50% of values less than 96260.4

90% of values less than 268034

95% of values less than 301196

Minimum 0 Maximum 481437

Mean 123962 Std. Dev. 89119.4 Variance 7.94226E+009

At 54 years

05% of values less than 31152

10% of values less than 36779.4

50% of values less than 96260.4

90% of values less than 268034

95% of values less than 301196

Minimum 0 Maximum 481437

Mean 123962 Std. Dev. 89119.4 Variance 7.94226E+009

At 154 years

05% of values less than 31152

10% of values less than 36779.4

50% of values less than 96260.4

90% of values less than 268034

95% of values less than 301196

Minimum 0 Maximum 481437

Mean 123962 Std. Dev. 89119.4 Variance 7.94226E+009

At 1054 years

05% of values less than 31152

10% of values less than 36779.4

50% of values less than 96260.4

90% of values less than 268034

95% of values less than 301196

Minimum 0 Maximum 481437

Mean 123962 Std. Dev. 89119.4 Variance 7.94226E+009

At infinity

05% of values less than 31152

10% of values less than 36779.4

50% of values less than 96260.4

90% of values less than 268034

95% of values less than 301196

Minimum 0 Maximum 481437

Mean 123962 Std. Dev. 89119.4 Variance 7.94226E+009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14a

# Source Concentration of Ammoniacal\_N [mg/l]

### At 29 years

05% of values less than 12.2383

10% of values less than 13.7877

50% of values less than 18.8474

90% of values less than 24.6977

95% of values less than 25.6194

Minimum 9.11756 Maximum 33.1912

Mean 19.0781 Std. Dev. 4.37137 Variance 19.1089

### At 54 years

05% of values less than 12.1205

10% of values less than 13.6554

50% of values less than 18.6675

90% of values less than 24.4599

95% of values less than 25.3736

Minimum 9.02977 Maximum 32.8716

Mean 18.8953 Std. Dev. 4.32938 Variance 18.7436

#### At 154 years

05% of values less than 11.6602

10% of values less than 13.1362

50% of values less than 17.9566

90% of values less than 23.531

95% of values less than 24.4088

Minimum 8.68685 Maximum 31.6233

Mean 18.1771 Std. Dev. 4.16532 Variance 17.3499

## At 1054 years

05% of values less than 8.1274

10% of values less than 9.15623

50% of values less than 12.5161

90% of values less than 16.4016

95% of values less than 17.0134

Minimum 6.05492 Maximum 22.0421

Mean 12.6692 Std. Dev. 2.90294 Variance 8.42709

# At infinity

05% of values less than 0.00407473

10% of values less than 0.00459054

50% of values less than 0.00627505

90% of values less than 0.00822306

95% of values less than 0.0085298

Minimum 0.00303567 Maximum 0.011051

Mean 0.00635179 Std. Dev. 0.00145541 Variance 2.11822E-006

#### Phase: Cell 14a

Source Concentration of Cadmium [mg/l]

At 29 years

05% of values less than 1.16402E-023

10% of values less than 8.42546E-021

50% of values less than 6.95775E-011

90% of values less than 0.000131601

95% of values less than 0.00085888

Minimum 1.12812E-029

Mean 0.000114441

Maximum 0.00269636

Std. Dev. 0.000413069

Variance 1.70626E-007

At 54 years

05% of values less than 1.16402E-023

10% of values less than 8.42546E-021

50% of values less than 6.95775E-011

90% of values less than 0.000131601

95% of values less than 0.00085683

Minimum 1.12812E-029

Mean 0.0001141 Std. Dev. 0.000411649 Variance 1.69455E-007

Maximum 0.0026857

At 154 years

05% of values less than 1.16402E-023

10% of values less than 8.42546E-021

50% of values less than 6.95775E-011

90% of values less than 0.000131601

95% of values less than 0.000848581

Minimum 1.12812E-029

Maximum 0.00264346

Mean 0.000112734 Std. Dev. 0.000405963 Variance 1.64806E-007

At 1054 years

05% of values less than 1.16402E-023

10% of values less than 8.42546E-021

50% of values less than 6.95775E-011

90% of values less than 0.000131601

95% of values less than 0.000775598

Minimum 1.12812E-029

Maximum 0.00228031

Mean 0.000100873 Std. Dev. 0.000356889 Variance 1.2737E-007

At infinity

05% of values less than 1.16402E-023

10% of values less than 8.42546E-021

50% of values less than 6.95775E-011

90% of values less than 0.000104002 95% of values less than 0.000116801

Minimum 1.12812E-029

Maximum 0.000144714

Mean 1.56237E-005 Std. Dev. 3.78933E-005 Variance 1.4359E-009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14a

### Source Concentration of Copper [mg/l]

### At 29 years

05% of values less than 1.31883E-023

10% of values less than 2.40486E-020

50% of values less than 4.77198E-010

90% of values less than 0.00415618

95% of values less than 0.045239

Minimum 8.75167E-029

Maximum 0.420463

Mean 0.00844577 Std. Dev. 0.0434899 Variance 0.00189138

# At 54 years

05% of values less than 1.31883E-023

10% of values less than 2.40486E-020

50% of values less than 4.77198E-010

90% of values less than 0.00415304

95% of values less than 0.0450872

Minimum 8.75167E-029

Maximum 0.418032

Mean 0.00840606 Variance 0.00187097 Std. Dev. 0.0432547

#### At 154 years

05% of values less than 1.31883E-023

10% of values less than 2.40486E-020

50% of values less than 4.77198E-010

90% of values less than 0.00414054

95% of values less than 0.0444847

Minimum 8.75167E-029

Maximum 0.408445

Mean 0.00824842 Variance 0.00179134 Std. Dev. 0.0423242

## At 1054 years

05% of values less than 1.31883E-023

10% of values less than 2.40486E-020

50% of values less than 4.77198E-010

90% of values less than 0.00402577

95% of values less than 0.0392411

Minimum 8.75167E-029

Maximum 0.329002

Mean 0.00692206 Std. Dev. 0.0345789 Variance 0.0011957

# At infinity

05% of values less than 1.31883E-023

10% of values less than 2.40486E-020

50% of values less than 4.77198E-010

90% of values less than 0.00222766

95% of values less than 0.00279955

Minimum 8.75167E-029

Maximum 0.00346547

Mean 0.000344166 Std. Dev. 0.000875101 Variance 7.65803E-007

#### Phase: Cell 14a

### Source Concentration of Naphthalene [mg/l]

### At 29 years

05% of values less than 2.40881E-022

10% of values less than 5.17894E-020

50% of values less than 4.74596E-010

90% of values less than 0.0528016

95% of values less than 0.302565

Minimum 7.80021E-030

Maximum 1.68441

Mean 0.0500098 Std. Dev. 0.202662 Variance 0.0410718

### At 54 years

05% of values less than 2.40881E-022

10% of values less than 5.17894E-020

50% of values less than 4.74596E-010

90% of values less than 0.0524541

95% of values less than 0.300277

Minimum 7.80021E-030

Mean 0.0496142 Std. Dev. 0.201003

Variance 0.0404021

Maximum 1.67027

#### At 154 years

05% of values less than 2.40881E-022

10% of values less than 5.17894E-020

50% of values less than 4.74596E-010

90% of values less than 0.0510492

95% of values less than 0.291294

Minimum 7.80021E-030 Maximum 1.61487

Mean 0.0480595 Std. Dev. 0.194494 Variance 0.0378281

## At 1054 years

05% of values less than 2.40881E-022

10% of values less than 5.17894E-020

50% of values less than 4.74596E-010

90% of values less than 0.0397066

95% of values less than 0.219464

Minimum 7.80021E-030 Maximum 1.17911

Mean 0.0357281 Std. Dev. 0.143123 Variance 0.0204841

# At infinity

05% of values less than 2.40881E-022

10% of values less than 5.17894E-020

50% of values less than 4.74596E-010

90% of values less than 0.000200279 95% of values less than 0.000565878

Minimum 7.80021E-030

Maximum 0.00157152

Mean 7.70018E-005 Std. Dev. 0.00023716 Variance 5.62447E-008

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14a

# Concentration of Ammoniacal\_N at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 8.87278E-007

10% of values less than 1.08309E-005

50% of values less than 0.00268646

90% of values less than 0.329208

95% of values less than 0.609029

Minimum 3.62719E-013 Maximum 1.25806

Mean 0.0919895 Std. Dev. 0.217971 Variance 0.0475116

# At 54 years

05% of values less than 0.0500512

10% of values less than 0.102408

50% of values less than 0.727503

90% of values less than 2.74899

95% of values less than 3.55711

Minimum 0.000988309 Maximum 6.21783

Mean 1.13896 Std. Dev. 1.19956 Variance 1.43895

#### At 154 years

05% of values less than 0.337141

10% of values less than 0.510874

50% of values less than 1.70172

90% of values less than 4.36966

95% of values less than 5.03883

Minimum 0.157767 Maximum 8.55436

Mean 2.10726 Std. Dev. 1.5421 Variance 2.37806

## At 1054 years

05% of values less than 0.0520798

10% of values less than 0.12304

50% of values less than 0.631228

90% of values less than 2.26649

95% of values less than 2.70555

Minimum 0.00289041 Maximum 4.96273

Mean 0.951396 Std. Dev. 0.900124 Variance 0.810223

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14a

# Concentration of Cadmium at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 5.09564E-016

Minimum 0 Maximum 1.33789E-008

Mean 6.6697E-011 Std. Dev. 9.43664E-010 Variance 8.90502E-019

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.64016E-011

95% of values less than 2.46379E-007

Minimum 0 Maximum 0.000347146

Mean 1.91706E-006 Std. Dev. 2.45202E-005 Variance 6.01241E-010

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 6.74248E-007

95% of values less than 3.10958E-005

Minimum 0 Maximum 0.00203822

Mean 3.36236E-005 Std. Dev. 0.000205912 Variance 4.23998E-008

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 2.18705E-015

90% of values less than 1.53532E-005

95% of values less than 0.000330576

Minimum 0 Maximum 0.00232997

Mean 6.4556E-005 Std. Dev. 0.000292728 Variance 8.56899E-008

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $6.39452 \hbox{E-} 011$ 

90% of values less than 8.89419E-005

95% of values less than 0.000140778

Minimum 0 Maximum 0.000184777

Mean 1.64215E-005 Std. Dev. 4.29903E-005 Variance 1.84817E-009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14a

# Concentration of Copper at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.09166E-017

95% of values less than 6.52673E-016

Minimum 0 Maximum 9.1326E-015

Mean 1.54113E-016 Std. Dev. 8.38914E-016 Variance 7.03776E-031

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.75101E-013

90% of values less than 8.80699E-007

95% of values less than 1.22073E-005

Minimum 0 Maximum 0.000482831

Mean 4.31739E-006 Std. Dev. 3.50718E-005 Variance 1.23003E-009

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $4.77099\mbox{E-}010$ 

90% of values less than 0.00259342

95% of values less than 0.00473555

Minimum 0 Maximum 0.0101924

Mean 0.000558687 Std. Dev. 0.00162795 Variance 2.65023E-006

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14a

# Concentration of Naphthalene at base of Clay Liner [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 9.02955E-015

90% of values less than 6.512E-007

95% of values less than 1.14894E-005

Minimum 0 Maximum 0.000263417

Mean 3.51378E-006 Std. Dev. 2.20349E-005 Variance 4.85538E-010

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 8.49275E-013

90% of values less than 4.16327E-005

95% of values less than 0.00136882

Minimum 0 Maximum 0.057463

Mean 0.00072768 Std. Dev. 0.00484604 Variance 2.34841E-005

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 2.22841E-012

90% of values less than 0.000168277

95% of values less than 0.00351353

Minimum 0 Maximum 0.115403

Mean 0.00154201 Std. Dev. 0.00975721 Variance 9.52031E-005

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 5.46405E-013

90% of values less than 7.95418E-005

95% of values less than 0.000905734

Minimum 0 Maximum 0.0473887

Mean 0.000659917 Std. Dev. 0.00417037 Variance 1.7392E-005

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.27701E-011

95% of values less than 1.21263E-010

Minimum 0 Maximum 1.6653E-005

Mean 8.29389E-008 Std. Dev. 1.17461E-006 Variance 1.3797E-012

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14a

# Concentration of Ammoniacal\_N at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 2.69012E-014

10% of values less than 7.8154E-013

50% of values less than 9.96137E-008

90% of values less than 0.000307835

95% of values less than 0.00154801

Minimum 0 Maximum 0.00694113

Mean 0.00023398 Std. Dev. 0.000887494 Variance 7.87645E-007

#### At 154 years

05% of values less than 0.000114668

10% of values less than 0.000283307

50% of values less than 0.00808437

90% of values less than 0.0959902

95% of values less than 0.155369

Minimum 4.05423E-006

Maximum 0.379175

Mean 0.0332584 Variance 0.00366067 Std. Dev. 0.0605035

## At 1054 years

05% of values less than 0.000180534

10% of values less than 0.000350773

50% of values less than 0.00804159

90% of values less than 0.0743425

95% of values less than 0.122358

Minimum 2.48507E-005 Maximum 0.429965

Mean 0.0276026 Std. Dev. 0.0512353 Variance 0.00262505

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.8171E-016

90% of values less than 1.26435E-014

95% of values less than 3.14802E-014

Minimum 0 Maximum 5.61056E-005

Mean 2.79133E-007 Std. Dev. 3.95738E-006 Variance 1.56609E-011

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14a

Concentration of Cadmium at base of Unsaturated Zone [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 1.16628E-011

Mean 5.80237E-014 Std. Dev. 8.22628E-013 Variance 6.76716E-025

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 1.26077E-015

Minimum 0 Maximum 0.000387495

Mean 1.92792E-006 Std. Dev. 2.73318E-005 Variance 7.47027E-010

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.43551E-009

95% of values less than 2.78047E-006

Minimum 0 Maximum 0.00203251

Mean 3.03345E-005 Std. Dev. 0.000207328 Variance 4.29848E-008

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 5.33152E-012

90% of values less than 3.91477E-005

95% of values less than 0.000204101

Minimum 0 Maximum 0.000457046

Mean 2.3109E-005 Std. Dev. 7.83837E-005 Variance 6.144E-009

#### Phase: Cell 14a

# Concentration of Copper at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $2.34766\mbox{E-}010$ 

90% of values less than 0.00171191

95% of values less than 0.00806861

Minimum 0 Maximum 0.0609518

Mean 0.00149158 Std. Dev. 0.00655145 Variance 4.29215E-005

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14a

# Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.22699E-012

95% of values less than 2.28825E-011

Minimum 0 Maximum 5.70511E-008

Mean 4.85469E-010 Std. Dev. 4.76095E-009 Variance 2.26666E-017

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 7.1084E-017

90% of values less than 4.27056E-009

95% of values less than 3.75419E-008

Minimum 0 Maximum 7.72191E-005

Mean 7.24111E-007 Std. Dev. 6.09392E-006 Variance 3.71358E-011

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 9.20236E-017

90% of values less than 2.97108E-009

95% of values less than 2.84153E-008

Minimum 0 Maximum 5.34536E-005

Mean 5.86828E-007 Std. Dev. 4.43883E-006 Variance 1.97032E-011

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.74219E-015

95% of values less than 3.42056E-014

Minimum 0 Maximum 4.61977E-007

Mean 2.2987E-009 Std. Dev. 3.25853E-008 Variance 1.0618E-015

#### Phase: Cell 14a

# Approx. time to Peak Conc. Ammoniacal\_N at Base of Unsaturated Zone [years]

05% of values less than 210 10% of values less than 210 50% of values less than 232 90% of values less than 256 95% of values less than 256

Minimum 190 Maximum 344
Mean 228.239 Std. Dev. 21.9532

Variance 481.943

### Approx. time to Peak Conc. Cadmium at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 12811.4 Std. Dev. 8850.32

Variance 7.83281E+007

### Approx. time to Peak Conc. Copper at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 15413.5 Std. Dev. 8418.83

Variance 7.08766E+007

# Approx. time to Peak Conc. Naphthalene at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 210 90% of values less than 1681 95% of values less than 12189

Minimum 0 Maximum 18114
Mean 1266.19 Std. Dev. 3805.45

Variance 1.44815E+007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14a

# Concentration of Ammoniacal\_N at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 9.29048E-018

10% of values less than 1.17728E-015

50% of values less than 9.47151E-011

90% of values less than 5.42114E-007

95% of values less than 3.25184E-006

Minimum 0 Maximum 1.38702E-005

Mean 4.51643E-007 Std. Dev. 1.81298E-006 Variance 3.28691E-012

#### At 154 years

05% of values less than 3.89227E-007

10% of values less than 8.5474E-007

50% of values less than 2.89874E-005

90% of values less than 0.000709602

95% of values less than 0.00117318

Minimum 8.28043E-009

Maximum 0.00259952

Mean 0.000213802 Variance 1.78161E-007 Std. Dev. 0.000422091

## At 1054 years

05% of values less than 1.16372E-006

10% of values less than 2.55225E-006

50% of values less than 5.27744E-005

90% of values less than 0.000770117

95% of values less than 0.00113807

Minimum 1.31655E-007 Maximum 0.00301884

Mean 0.000248961 Std. Dev. 0.000464902 Variance 2.16134E-007

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.41877E-018

90% of values less than 2.69621E-016

95% of values less than 1.79969E-015

Minimum 0 Maximum 4.36545E-007

Mean 2.17187E-009 Std. Dev. 3.07915E-008 Variance 9.48115E-016

#### Phase: Cell 14a

# Concentration of Cadmium at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 4.78728E-014

Mean 2.38181E-016 Std. Dev. 3.37669E-015 Variance 1.1402E-029

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.13748E-014

95% of values less than 1.30781E-009

Minimum 0 Maximum 4.06846E-005

Mean 2.30662E-007 Std. Dev. 2.87689E-006 Variance 8.27652E-012

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.02782E-014

90% of values less than 1.94865E-007

95% of values less than 9.74279E-007

Minimum 0 Maximum 9.69573E-006

Mean 2.17645E-007 Std. Dev. 1.00927E-006 Variance 1.01862E-012

#### Phase: Cell 14a

# Concentration of Copper at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 6.17814E-013

90% of values less than 6.02762E-006

95% of values less than 4.50289E-005

Minimum 0 Maximum 0.000804841

Mean 1.13047E-005 Std. Dev. 6.84757E-005 Variance 4.68893E-009

#### Phase: Cell 14a

# Concentration of Naphthalene at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 4.01828E-018

95% of values less than 1.33357E-016

Minimum 0 Maximum 2.2426E-013

Mean 2.05268E-015 Std. Dev. 1.82369E-014 Variance 3.32585E-028

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.66432E-012

95% of values less than 2.32384E-011

Minimum 0 Maximum 1.81046E-007

Mean 1.10427E-009 Std. Dev. 1.28823E-008 Variance 1.65955E-016

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 6.23807E-012

95% of values less than 2.75439E-011

Minimum 0 Maximum 2.62881E-007

Mean 1.79636E-009 Std. Dev. 1.91999E-008 Variance 3.68636E-016

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.05409E-018

95% of values less than 8.12756E-017

Minimum 0 Maximum 3.73291E-010

Mean 1.8578E-012 Std. Dev. 2.63299E-011 Variance 6.93264E-022

#### Phase: Cell 14a

# Approx. time to Peak Conc. Ammoniacal\_N at Phase Monitor Well [years]

05% of values less than 232 10% of values less than 232 50% of values less than 256 90% of values less than 282

95% of values less than 282

Minimum 210 Maximum 380
Mean 251.781 Std. Dev. 22.496

Variance 506.072

# Approx. time to Peak Conc. Cadmium at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000
Mean 12619.9 Std. Dev. 9023

Variance 8.14145E+007

# Approx. time to Peak Conc. Copper at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000

Mean 15024.9 Std. Dev. 8667.43 Variance 7.51244E+007

# Approx. time to Peak Conc. Naphthalene at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 0 90% of values less than 312 95% of values less than 1054

Minimum 0 Maximum 20000 Mean 509.114 Std. Dev. 2309.87

Variance 5.33552E+006

#### Phase: Cell 14a

Flow to Leachate Treatment Plant [I/day]

At 29 years

05% of values less than 857.675

10% of values less than 857.675

50% of values less than 857.675

90% of values less than 1386.52

95% of values less than 1468.93

Minimum 857.675

Maximum 1670.18

Mean 971.793 Std. Dev. 216.771

Variance 46989.6

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14a

Head on EBS [m]

At 29 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1

95% of values less than 1

Minimum 1 Maximum 1

Mean 1 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 1.18987

10% of values less than 1.18987

50% of values less than 1.18987

90% of values less than 1.30475

95% of values less than 1.32251

Minimum 1.18987

Maximum 1.36572

Mean 1.21466 Std. Dev. 0.0470489 Variance 0.0022136

At 154 years

05% of values less than 2.89198

10% of values less than 2.89198

50% of values less than 2.89198

90% of values less than 2.89221

95% of values less than 2.90041

Minimum 2.89198

Maximum 5.07615

Mean 2.92418 Std. Dev. 0.20557 Variance 0.0422591

At 1054 years

05% of values less than 2.89226

10% of values less than 2.89226

50% of values less than 2.89226

90% of values less than 2.89226

95% of values less than 2.89226

Minimum 2.89226

Maximum 2.89226

Mean 2.89226 Std. Dev. 1.00676E-007 Variance 1.01357E-014

At infinity

05% of values less than 2.89226

10% of values less than 2.89226

50% of values less than 2.89226

90% of values less than 2.89226

95% of values less than 2.89226

Minimum 2.89226 Maximum 2.89226

Mean 2.89226 Std. Dev. 1.00676E-007 Variance 1.01357E-014

#### Phase: Cell 14a

Surface Breakout [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14a

# Leakage through EBS [I/day]

## At 29 years

05% of values less than 295.258

10% of values less than 377.667

50% of values less than 906.509

90% of values less than 906.509

95% of values less than 906.509

Minimum 94.0082

Maximum 906.509

Mean 792.39 Std. Dev. 216.771 Variance 46989.6

## At 54 years

05% of values less than 390.217

10% of values less than 492.368

50% of values less than 992.567

90% of values less than 992.567

95% of values less than 992.567

Minimum 128.347

Maximum 997.942

Mean 888.694 Std. Dev. 211.366 Variance 44675.6

#### At 154 years

05% of values less than 1764.06

10% of values less than 1764.06

50% of values less than 1764.06

90% of values less than 1764.16

95% of values less than 1767.88

Minimum 1764.06

Maximum 1945.97

Mean 1766.7 Std. Dev. 16.1707 Variance 261.493

# At 1054 years

05% of values less than 1764.18

10% of values less than 1764.18

50% of values less than 1764.18

90% of values less than 1764.18

95% of values less than 1764.18

Minimum 1764.18 Maximum 1764.18

Mean 1764.18 Std. Dev. 8.49227E-005 Variance -7.21187E-009

# At infinity

05% of values less than 1764.18

10% of values less than 1764.18

50% of values less than 1764.18

90% of values less than 1764.18

95% of values less than 1764.18

Minimum 1764.18 Maximum 1764.18

Mean 1764.18 Std. Dev. 8.49227E-005 Variance -7.21187E-009

#### Phase: Cell 14a

Aquifer Flow [m³/year]

At 29 years

05% of values less than 30157.8

10% of values less than 35605.6

50% of values less than 93188.2

90% of values less than 259480

95% of values less than 291584

Minimum 0 Maximum 466072

Mean 120006 Std. Dev. 86275.1 Variance 7.4434E+009

At 54 years

05% of values less than 30157.8

10% of values less than 35605.6

50% of values less than 93188.2

90% of values less than 259480

95% of values less than 291584

Minimum 0 Maximum 466072

Mean 120006 Std. Dev. 86275.1 Variance 7.4434E+009

At 154 years

05% of values less than 30157.8

10% of values less than 35605.6

50% of values less than 93188.2

90% of values less than 259480

95% of values less than 291584

Minimum 0 Maximum 466072

Mean 120006 Std. Dev. 86275.1 Variance 7.4434E+009

At 1054 years

05% of values less than 30157.8

10% of values less than 35605.6

50% of values less than 93188.2

90% of values less than 259480

95% of values less than 291584

Minimum 0 Maximum 466072

Mean 120006 Std. Dev. 86275.1 Variance 7.4434E+009

At infinity

05% of values less than 30157.8

10% of values less than 35605.6

50% of values less than 93188.2

90% of values less than 259480

95% of values less than 291584

Minimum 0 Maximum 466072

Mean 120006 Std. Dev. 86275.1 Variance 7.4434E+009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Source Concentration of Ammoniacal\_N [mg/l]

## At 29 years

05% of values less than 10.2862

10% of values less than 11.6973

50% of values less than 17.6713

90% of values less than 23.0955

95% of values less than 24.1617

Minimum 7.98803 Maximum 29.2432

Mean 17.3662 Std. Dev. 4.3422 Variance 18.8547

## At 54 years

05% of values less than 10.1849

10% of values less than 11.5845

50% of values less than 17.5012

90% of values less than 22.8681

95% of values less than 23.9283

Minimum 7.90937 Maximum 28.9552

Mean 17.1958 Std. Dev. 4.29964 Variance 18.4869

#### At 154 years

05% of values less than 9.80551

10% of values less than 11.1502

50% of values less than 16.8383

90% of values less than 22.0163

95% of values less than 23.0183

Minimum 7.61476 Maximum 27.8767

Mean 16.5541 Std. Dev. 4.13946 Variance 17.1351

# At 1054 years

05% of values less than 6.73316

10% of values less than 7.65256

50% of values less than 11.5624

90% of values less than 15.118

95% of values less than 15.8059

Minimum 5.22884 Maximum 19.1421

Mean 11.3668 Std. Dev. 2.84213 Variance 8.07771

# At infinity

05% of values less than 0.00246211

10% of values less than 0.00279831

50% of values less than 0.00422801

90% of values less than 0.00552818

95% of values less than 0.00577972

Minimum 0.00191203

Maximum 0.00699968

Mean 0.0041565 Std. Dev. 0.00103928 Variance 1.0801E-006

Variance 5.76967E-007

Project: Hollywood IWMF

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

Source Concentration of Cadmium [mg/l]

At 29 years

05% of values less than 8.42942E-024

10% of values less than 4.97222E-022

50% of values less than 1.5941E-011

90% of values less than 0.000384437

95% of values less than 0.00153021

Minimum 8.11496E-029

Mean 0.000211301 Std. Dev. 0.000759583

At 54 years

05% of values less than 8.42942E-024

10% of values less than 4.97222E-022

50% of values less than 1.5941E-011

90% of values less than 0.000383912

95% of values less than 0.00152517

Minimum 8.11496E-029

Maximum 0.00644898

Mean 0.000210495 Std. Dev. 0.000756133 Variance 5.71737E-007

Maximum 0.00648336

At 154 years

05% of values less than 8.42942E-024

10% of values less than 4.97222E-022

50% of values less than 1.5941E-011

90% of values less than 0.000381908

95% of values less than 0.001506

Minimum 8.11496E-029

Mean 0.000207424

Std. Dev. 0.000743031 Variance 5.52095E-007

Maximum 0.00631875

At 1054 years

05% of values less than 8.42942E-024

10% of values less than 4.97222E-022

50% of values less than 1.5941E-011

90% of values less than 0.000362622

95% of values less than 0.00132871

Minimum 8.11496E-029

Maximum 0.00516298

Mean 0.000179558 Std. Dev. 0.000625617 Variance 3.91396E-007

At infinity

05% of values less than 8.42942E-024

10% of values less than 4.97222E-022

50% of values less than 1.5941E-011

90% of values less than 8.98553E-005

95% of values less than 0.00010178

Minimum 8.11496E-029

Maximum 0.000143038 Mean 1.66136E-005 Std. Dev. 3.59526E-005 Variance 1.29259E-009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

## Source Concentration of Copper [mg/l]

## At 29 years

05% of values less than 1.02704E-023

10% of values less than 3.93529E-022

50% of values less than 2.35119E-011

90% of values less than 0.00249527

95% of values less than 0.0312964

Minimum 1.93448E-028

Maximum 0.346424

Mean 0.0065113 Std. Dev. 0.035102

Variance 0.00123215

## At 54 years

05% of values less than 1.02704E-023

10% of values less than 3.93529E-022

50% of values less than 2.35119E-011

90% of values less than 0.00249476

95% of values less than 0.0312011

Minimum 1.93448E-028

Maximum 0.344435

Mean 0.00648168 Std. Dev. 0.0349102

Variance 0.00121872

#### At 154 years

05% of values less than 1.02704E-023

10% of values less than 3.93529E-022

50% of values less than 2.35119E-011

90% of values less than 0.00249283

95% of values less than 0.0308381

Minimum 1.93448E-028

Maximum 0.336911

Mean 0.00636884 Std. Dev. 0.0341833 Variance 0.0011685

# At 1054 years

05% of values less than 1.02704E-023

10% of values less than 3.93529E-022

50% of values less than 2.35119E-011

90% of values less than 0.00247377

95% of values less than 0.0274644

Minimum 1.93448E-028

Maximum 0.270729

Mean 0.00536173 Std. Dev. 0.0277773 Variance 0.000771576

# At infinity

05% of values less than 1.02704E-023

10% of values less than 3.93529E-022

50% of values less than 2.35119E-011

90% of values less than 0.00210461

95% of values less than 0.00239573

Minimum 1.93448E-028

Maximum 0.00270971

Mean 0.000327633 Std. Dev. 0.00076148 Variance 5.79851E-007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

## Source Concentration of Naphthalene [mg/l]

## At 29 years

05% of values less than 1.30608E-024

10% of values less than 1.68473E-021

50% of values less than 5.67315E-010

90% of values less than 0.00688849

95% of values less than 0.0526366

Minimum 1.52422E-029

Maximum 1.21986

Mean 0.0213547 Std. Dev. 0.116262

Variance 0.0135169

## At 54 years

05% of values less than 1.30608E-024

10% of values less than 1.68473E-021

50% of values less than 5.67315E-010

90% of values less than 0.00684838

95% of values less than 0.052275

Minimum 1.52422E-029

Maximum 1.20955

Mean 0.0211853 Std. Dev. 0.115304

Variance 0.013295

### At 154 years

05% of values less than 1.30608E-024

10% of values less than 1.68473E-021

50% of values less than 5.67315E-010

90% of values less than 0.00669477

95% of values less than 0.0509061

Minimum 1.52422E-029

Maximum 1.17079

Mean 0.0205451 Std. Dev. 0.111684

Variance 0.0124732

# At 1054 years

05% of values less than 1.30608E-024

10% of values less than 1.68473E-021

50% of values less than 5.67315E-010

90% of values less than 0.00535273

95% of values less than 0.0391524

Minimum 1.52422E-029

Maximum 0.848053

Mean 0.0151724 Std. Dev. 0.0814967

Variance 0.00664171

## At infinity

05% of values less than 1.30608E-024

10% of values less than 1.68473E-021

50% of values less than  $5.67315 \hbox{E-} 010$ 

90% of values less than 4.82025E-005

95% of values less than 0.00015577

Minimum 1.52422E-029

Maximum 0.000954584

Mean 2.97985E-005 Std. Dev. 0.000114194

Variance 1.30403E-008

Page 216 of 258

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Concentration of Ammoniacal\_N at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 4.95755E-008

10% of values less than 2.99996E-007

50% of values less than 0.000184897

90% of values less than 0.110267

95% of values less than 0.207676

Minimum 1.06546E-011 Maximum 0.385414

Mean 0.0315905 Std. Dev. 0.0758327 Variance 0.0057506

# At 54 years

05% of values less than 0.0440094

10% of values less than 0.090833

50% of values less than 0.578702

90% of values less than 2.88439

95% of values less than 3.8704

Minimum 0.00666208 Maximum 5.64628

Mean 1.077 Std. Dev. 1.19051 Variance 1.41732

#### At 154 years

05% of values less than 1.17361

10% of values less than 1.45754

50% of values less than 3.38901

90% of values less than 6.89658

95% of values less than 7.50033

Minimum 0.382017

Maximum 10.8478

Mean 3.68071 Std. Dev. 2.03559 Variance 4.14364

# At 1054 years

05% of values less than 0.295106

10% of values less than 0.404688

50% of values less than 1.42695

90% of values less than 3.42917

95% of values less than 4.12148

Minimum 0.0527458 Maximum 5.97591

Mean 1.67595 Std. Dev. 1.21572 Variance 1.47797

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Concentration of Cadmium at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 6.79006E-010

Mean 3.37925E-012 Std. Dev. 4.78933E-011 Variance 2.29377E-021

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 6.58447E-012

95% of values less than 7.39642E-010

Minimum 0 Maximum 0.000251846

Mean 1.30649E-006 Std. Dev. 1.77727E-005 Variance 3.15868E-010

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.24391E-007

95% of values less than 4.47576E-006

Minimum 0 Maximum 0.00219204

Mean 2.04542E-005 Std. Dev. 0.000187295 Variance 3.50794E-008

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 8.49891E-013

90% of values less than  $4.02926\hbox{E-}005$ 

95% of values less than 0.00026428

Minimum 0 Maximum 0.00531395

Mean 9.2818E-005 Std. Dev. 0.000507776 Variance 2.57837E-007

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.1632E-011

90% of values less than 0.000109938

95% of values less than 0.000126954

Minimum 0 Maximum 0.000145187

Mean 1.7368E-005 Std. Dev. 4.06229E-005 Variance 1.65022E-009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Concentration of Copper at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.5173E-016

95% of values less than 2.543E-015

Minimum 0 Maximum 3.02484E-014

Mean 5.33983E-016 Std. Dev. 2.88942E-015 Variance 8.34873E-030

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 6.82415E-013

90% of values less than 5.35155E-005

95% of values less than 0.000862818

Minimum 0 Maximum 0.0142199

Mean 0.000284775 Std. Dev. 0.0014997 Variance 2.24911E-006

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.34493E-011

90% of values less than 0.00215255

95% of values less than 0.00339665

Minimum 0 Maximum 0.00497973

Mean 0.000422368 Std. Dev. 0.00105018 Variance 1.10287E-006

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Concentration of Naphthalene at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 8.2799E-016

90% of values less than 1.29634E-008

95% of values less than 1.58642E-007

Minimum 0 Maximum 1.02456E-005

Mean 1.19835E-007 Std. Dev. 9.62038E-007 Variance 9.25516E-013

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.05209E-012

90% of values less than 4.85527E-006

95% of values less than 0.000123169

Minimum 0 Maximum 0.0660548

Mean 0.000489169 Std. Dev. 0.00495908 Variance 2.45925E-005

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 2.68451E-011

90% of values less than 0.000269788

95% of values less than 0.00203252

Minimum 0 Maximum 0.271738

Mean 0.00248436 Std. Dev. 0.0208949 Variance 0.000436595

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 2.72331E-011

90% of values less than 4.29067E-005

95% of values less than 0.000390103

Minimum 0 Maximum 0.136459

Mean 0.001204 Std. Dev. 0.0104672 Variance 0.000109561

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 4.31438E-011

95% of values less than 5.42643E-010

Minimum 0 Maximum 1.08963E-008

Mean 2.37615E-010 Std. Dev. 1.26143E-009 Variance 1.5912E-018

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Concentration of Ammoniacal\_N at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 3.63182E-010

10% of values less than 5.86596E-009

50% of values less than 7.83871E-006

90% of values less than 0.00600198

95% of values less than 0.0261049

Minimum 4.25258E-013 Maximum 0.217809

Mean 0.00537982 Std. Dev. 0.0240769 Variance 0.000579695

#### At 154 years

05% of values less than 0.00859214

10% of values less than 0.0153605

50% of values less than 0.111559

90% of values less than 0.612803

95% of values less than 0.89386

Minimum 0.00249184 Maximum 2.78206

Mean 0.251382 Std. Dev. 0.404646 Variance 0.163738

# At 1054 years

05% of values less than 0.00966452

10% of values less than 0.0151225

50% of values less than 0.10143

90% of values less than 0.474553

95% of values less than 0.678853

Minimum 0.00264534 Maximum 2.08948

Mean 0.200072 Std. Dev. 0.305202 Variance 0.0931485

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $5.09395 \hbox{E-} 015$ 

90% of values less than 1.05888E-013

95% of values less than 2.15797E-013

Minimum 0 Maximum 4.33966E-010

Mean 2.5136E-012 Std. Dev. 3.07464E-011 Variance 9.4534E-022

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Concentration of Cadmium at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 5.3731E-013

Mean 5.13059E-015 Std. Dev. 5.12164E-014 Variance 2.62312E-027

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.20835E-009

95% of values less than 1.44094E-006

Minimum 0 Maximum 0.00424415

Mean 2.32405E-005 Std. Dev. 0.000299593 Variance 8.97559E-008

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.1632E-011

90% of values less than 6.99811E-005

95% of values less than 0.00033544

Minimum 0 Maximum 0.00147955

Mean 4.00599E-005 Std. Dev. 0.000142814 Variance 2.03958E-008

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Concentration of Copper at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 3.55015E-013

Mean 1.78691E-015 Std. Dev. 2.50404E-014 Variance 6.27021E-028

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 2.19288E-011

90% of values less than 0.00222192

95% of values less than 0.0096145

Minimum 0 Maximum 0.0409924

Mean 0.00133726 Std. Dev. 0.00489851 Variance 2.39954E-005

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.8371E-011

95% of values less than 4.3181E-010

Minimum 0 Maximum 2.20878E-006

Mean 1.49582E-008 Std. Dev. 1.58472E-007 Variance 2.51134E-014

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 4.74946E-015

90% of values less than 2.66705E-007

95% of values less than 4.54303E-006

Minimum 0 Maximum 0.00313788

Mean 2.94768E-005 Std. Dev. 0.000267067 Variance 7.1325E-008

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.03131E-014

90% of values less than 2.75245E-007

95% of values less than 3.83151E-006

Minimum 0 Maximum 0.00272898

Mean 2.48376E-005 Std. Dev. 0.000225859 Variance 5.10124E-008

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 6.97031E-014

95% of values less than 2.96072E-012

Minimum 0 Maximum 2.22117E-010

Mean 4.23685E-012 Std. Dev. 2.55892E-011 Variance 6.54806E-022

#### Phase: Cell 15

# Approx. time to Peak Conc. Ammoniacal\_N at Base of Unsaturated Zone [years]

05% of values less than 232 10% of values less than 232 50% of values less than 256 90% of values less than 256 95% of values less than 256

Minimum 190 Maximum 282
Mean 247.194 Std. Dev. 14.6071

Variance 213.367

## Approx. time to Peak Conc. Cadmium at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 18114 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 13203.1 Std. Dev. 8295.7

Variance 6.88186E+007

## Approx. time to Peak Conc. Copper at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000
Mean 14436 Std. Dev. 8617.07

Variance 7.42539E+007

# Approx. time to Peak Conc. Naphthalene at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 282 90% of values less than 12189 95% of values less than 13458

Minimum 0 Maximum 18114
Mean 2132.97 Std. Dev. 4721.61

Variance 2.22936E+007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Concentration of Ammoniacal\_N at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 6.92084E-014

10% of values less than 9.19738E-013

50% of values less than 4.51386E-009

90% of values less than 9.02287E-006

95% of values less than 4.27135E-005

Minimum 1.14308E-016

Maximum 0.000363818

Mean 9.12819E-006 Std. Dev. 4.19077E-005 Variance 1.75626E-009

#### At 154 years

05% of values less than 4.61811E-005

10% of values less than 6.68293E-005

50% of values less than 0.000711249

90% of values less than 0.00684958

95% of values less than 0.0107696

Minimum 1.06343E-005

Mean 0.00246889 Std. Dev. 0.0046007 Variance 2.11664E-005

Maximum 0.028764

# At 1054 years

05% of values less than 9.55477E-005

10% of values less than 0.000138843

50% of values less than 0.0011035

90% of values less than 0.00772241

95% of values less than 0.0112976

Minimum 2.88381E-005 Maximum 0.0271024

Mean 0.00285632 Std. Dev. 0.00457758 Variance 2.09542E-005

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 7.75289E-017

90% of values less than 3.57432E-015

95% of values less than 1.28658E-014

Minimum 0 Maximum 7.09726E-011

Mean 4.08188E-013 Std. Dev. 5.04533E-012 Variance 2.54554E-023

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Concentration of Cadmium at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 5.19306E-016

Mean 2.58566E-018 Std. Dev. 3.66289E-017 Variance 1.34167E-033

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 6.15006E-014

95% of values less than 2.47023E-009

Minimum 0 Maximum 1.45822E-005

Mean 7.77956E-008 Std. Dev. 1.02911E-006 Variance 1.05907E-012

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 9.42107E-014

90% of values less than 5.56607E-007

95% of values less than 3.12603E-006

Minimum 0 Maximum 3.37501E-005

Mean 6.10492E-007 Std. Dev. 2.8931E-006 Variance 8.37E-012

#### Phase: Cell 15

# Concentration of Copper at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 3.9284E-013

90% of values less than 2.85934E-005

95% of values less than 0.000101276

Minimum 0 Maximum 0.00207524

Mean 2.53849E-005 Std. Dev. 0.000158255 Variance 2.50446E-008

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Concentration of Naphthalene at Phase Monitor Well [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.40772E-016

95% of values less than 1.51362E-015

Minimum 0 Maximum 1.43061E-012

Mean 2.22264E-014 Std. Dev. 1.56856E-013 Variance 2.46037E-026

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 5.07032E-018

90% of values less than 6.50825E-010

95% of values less than 8.25009E-009

Minimum 0 Maximum 5.46963E-006

Mean 5.44961E-008 Std. Dev. 4.85567E-007 Variance 2.35775E-013

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.29272E-017

90% of values less than 1.08152E-009

95% of values less than 1.59439E-008

Minimum 0 Maximum 8.7631E-006

Mean 7.73895E-008 Std. Dev. 7.05014E-007 Variance 4.97044E-013

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.96857E-016

95% of values less than 5.61398E-015

Minimum 0 Maximum 4.19609E-013

Mean 5.24946E-015 Std. Dev. 3.52356E-014 Variance 1.24155E-027

#### Phase: Cell 15

Approx. time to Peak Conc. Ammoniacal\_N at Phase Monitor Well [years]

05% of values less than 25610% of values less than 282

50% of values less than 282 90% of values less than 282

95% of values less than 282

Minimum 232 Maximum 344

Mean 280.915 Std. Dev. 11.3507 Variance 128.838

Approx. time to Peak Conc. Cadmium at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000

95% of values less than 20000

Minimum 0 Maximum 20000
Mean 13911.1 Std. Dev. 8338.08

Mean 13911.1 Std. Dev. 8338.08 Variance 6.95236E+007

Approx. time to Peak Conc. Copper at Phase Monitor Well [years]

05% of values less than 0

10% of values less than 0

50% of values less than 20000

90% of values less than 20000

95% of values less than 20000

Minimum 0 Maximum 20000

Mean 14596.8 Std. Dev. 8626.89 Variance 7.44232E+007

Approx. time to Peak Conc. Naphthalene at Phase Monitor Well [years]

05% of values less than 0

10% of values less than 0

50% of values less than 312

90% of values less than 2050

95% of values less than 13458

Minimum 0 Maximum 20000

Mean 1642.3 Std. Dev. 4423.66 Variance 1.95687E+007

Page 230 of 258

#### Phase: Cell 15

Flow to Leachate Treatment Plant [I/day]

At 29 years

05% of values less than 2610.88

10% of values less than 2610.88

50% of values less than 2610.88

90% of values less than 3310.77

95% of values less than 3391.92

Minimum 2610.88

Maximum 3561.26

Mean 2765.08 Std. Dev. 276.841

Variance 76641.2

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0

Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

Head on EBS [m]

At 29 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1

95% of values less than 1

Minimum 1 Maximum 1

Mean 1 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 1.43883

10% of values less than 1.43883

50% of values less than 1.43883

90% of values less than 1.55007

95% of values less than 1.56281

Minimum 1.43883

Maximum 1.5893

Mean 1.46336 Std. Dev. 0.0439776 Variance 0.00193403

At 154 years

05% of values less than 6.03184

10% of values less than 6.03184

50% of values less than 6.03184

90% of values less than 6.04149

95% of values less than 6.04673

Minimum 6.03184

Maximum 8.17477

Mean 6.06134 Variance 0.0384969 Std. Dev. 0.196206

At 1054 years

05% of values less than 6.06683

10% of values less than 6.06683

50% of values less than 6.06683

90% of values less than 6.06683

95% of values less than 6.06683

Minimum 6.06683 Maximum 6.06683

Mean 6.06683 Std. Dev. 3.13785E-007 Variance 9.84607E-014

At infinity

05% of values less than 6.06683

10% of values less than 6.06683

50% of values less than 6.06683

90% of values less than 6.06683

95% of values less than 6.06683

Minimum 6.06683 Maximum 6.06683

Mean 6.06683 Std. Dev. 3.13785E-007 Variance 9.84607E-014

# Phase: Cell 15

Surface Breakout [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0

Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0 95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 15

# Leakage through EBS [I/day]

## At 29 years

05% of values less than 249.538

10% of values less than 330.687

50% of values less than 1030.58

90% of values less than 1030.58

95% of values less than 1030.58

Minimum 80.2058

Maximum 1030.58

Mean 876.384 Std. Dev. 276.841 Variance 76641.2

## At 54 years

05% of values less than 390.864

10% of values less than 513.641

50% of values less than 1256.7

90% of values less than 1256.7

95% of values less than 1258.33

Minimum 127.817

Maximum 1267.85

Mean 1107.91 Std. Dev. 299.464 Variance 89678.6

#### At 154 years

05% of values less than 3623.43

10% of values less than 3623.43

50% of values less than 3623.43

90% of values less than 3628.4

95% of values less than 3631.11

Minimum 3623.43

Maximum 4727.67

Mean 3638.06 Std. Dev. 100.39 Variance 10078.1

# At 1054 years

05% of values less than 3641.46

10% of values less than 3641.46

50% of values less than 3641.46

90% of values less than 3641.46

95% of values less than 3641.46

Minimum 3641.46

Maximum 3641.46

Mean 3641.46 Std. Dev. 0.000414206 Variance 1.71566E-007

# At infinity

05% of values less than 3641.46

10% of values less than 3641.46

50% of values less than 3641.46

90% of values less than 3641.46

95% of values less than 3641.46

Minimum 3641.46

Maximum 3641.46

Mean 3641.46 Std. Dev. 0.000414206 Variance 1.71566E-007

#### Phase: Cell 15

Aquifer Flow [m³/year]

At 29 years

05% of values less than 37559.1

10% of values less than 44344

50% of values less than 116059

90% of values less than 323162

95% of values less than 363144

Minimum 0 Maximum 580456

Mean 149457 Std. Dev. 107449 Variance 1.15453E+010

At 54 years

05% of values less than 37559.1

10% of values less than 44344

50% of values less than 116059

90% of values less than 323162

95% of values less than 363144

Minimum 0 Maximum 580456

Mean 149457 Std. Dev. 107449 Variance 1.15453E+010

At 154 years

05% of values less than 37559.1

10% of values less than 44344

50% of values less than 116059

90% of values less than 323162

95% of values less than 363144

Minimum 0 Maximum 580456

Mean 149457 Std. Dev. 107449 Variance 1.15453E+010

At 1054 years

05% of values less than 37559.1

10% of values less than 44344

50% of values less than 116059

90% of values less than 323162

95% of values less than 363144

Minimum 0 Maximum 580456

Mean 149457 Std. Dev. 107449 Variance 1.15453E+010

At infinity

05% of values less than 37559.1

10% of values less than 44344

50% of values less than 116059

90% of values less than 323162

95% of values less than 363144

Minimum 0 Maximum 580456

Mean 149457 Std. Dev. 107449 Variance 1.15453E+010

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14b

# Source Concentration of Ammoniacal\_N [mg/l]

## At 29 years

05% of values less than 13.3378

10% of values less than 14.2965

50% of values less than 20.5495

90% of values less than 27.0357

95% of values less than 28.2453

Minimum 9.45385 Maximum 36.5264

Mean 20.5276 Std. Dev. 4.82462 Variance 23.2769

## At 54 years

05% of values less than 13.199

10% of values less than 14.1478

50% of values less than 20.3358

90% of values less than 26.7544

95% of values less than 27.9514

Minimum 9.3555 Maximum 36.1464

Mean 20.3149 Std. Dev. 4.77478 Variance 22.7985

#### At 154 years

05% of values less than 12.6721

10% of values less than 13.583

50% of values less than 19.524

90% of values less than 25.6864

95% of values less than 26.8356

Minimum 8.98203 Maximum 34.7034

Mean 19.5038 Std. Dev. 4.58365 Variance 21.0099

# At 1054 years

05% of values less than 8.53

10% of values less than 9.14315

50% of values less than 13.1422

90% of values less than 17.2903

95% of values less than 18.0639

Minimum 6.04608 Maximum 23.3599

Mean 13.1275 Std. Dev. 3.08507 Variance 9.51763

# At infinity

05% of values less than 0.00205184

10% of values less than 0.00219933

50% of values less than 0.00316127

90% of values less than 0.00415907

95% of values less than 0.00434515

Minimum 0.00145435

Maximum 0.00561908

Mean 0.00315775 Std. Dev. 0.000742093 Variance 5.50702E-007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14b

Source Concentration of Cadmium [mg/l]

At 29 years

05% of values less than 1.44756E-024

10% of values less than 1.00731E-020

50% of values less than 2.65488E-010

90% of values less than 0.000125712

95% of values less than 0.000677916

Minimum 2.5142E-029

Maximum 0.00996888

Mean 0.000148701 Std. Dev. 0.000846007 Variance 7.15728E-007

At 54 years

05% of values less than 1.44756E-024

10% of values less than 1.00731E-020

50% of values less than 2.65488E-010

90% of values less than 0.000125712

95% of values less than 0.000676392

Minimum 2.5142E-029

Maximum 0.00990751

Mean 0.000148056 Std. Dev. 0.000841195 Variance 7.07609E-007

At 154 years

05% of values less than 1.44756E-024

10% of values less than 1.00731E-020

50% of values less than 2.65488E-010

90% of values less than 0.000125712

95% of values less than 0.000670486

Minimum 2.5142E-029

Maximum 0.00967201

Mean 0.000145571 Variance 6.76857E-007 Std. Dev. 0.000822713

At 1054 years

05% of values less than 1.44756E-024

10% of values less than 1.00731E-020

50% of values less than 2.65488E-010

90% of values less than 0.000125712

95% of values less than 0.000615726

Minimum 2.5142E-029

Maximum 0.00765609

Mean 0.00012383 Std. Dev. 0.000663878 Variance 4.40734E-007

At infinity

05% of values less than 1.44756E-024

10% of values less than 1.00731E-020

50% of values less than 2.65488E-010

90% of values less than 7.13692E-005

95% of values less than 0.000102428

Minimum 2.5142E-029

Maximum 0.000143808

Mean 1.39078E-005 Std. Dev. 3.4179E-005 Variance 1.16821E-009

#### Phase: Cell 14b

## Source Concentration of Copper [mg/l]

## At 29 years

05% of values less than 8.75099E-022

10% of values less than 1.38451E-019

50% of values less than 1.46366E-009

90% of values less than 0.01014

95% of values less than 0.0345113

Minimum 1.12615E-027

Maximum 0.150413

Mean 0.0048289 Std. Dev. 0.0170865

Variance 0.00029195

## At 54 years

05% of values less than 8.75099E-022

10% of values less than 1.38451E-019

50% of values less than 1.46366E-009

90% of values less than 0.0101211

95% of values less than 0.0343975

Minimum 1.12615E-027

Maximum 0.149678

Mean 0.00481132 Std. Dev. 0.0170133

Variance 0.000289453

#### At 154 years

05% of values less than 8.75099E-022

10% of values less than 1.38451E-019

50% of values less than 1.46366E-009

90% of values less than 0.0100479

95% of values less than 0.0339575

Minimum 1.12615E-027

Maximum 0.14684

Mean 0.00474282 Std. Dev. 0.0167283 Variance 0.000279837

# At 1054 years

05% of values less than 8.75099E-022

10% of values less than 1.38451E-019

50% of values less than 1.46366E-009

90% of values less than 0.009364

95% of values less than 0.0299648

Minimum 1.12615E-027 Maximum 0.121249

Mean 0.00412791 Std. Dev. 0.0141839 Variance 0.000201182

# At infinity

05% of values less than 8.75099E-022

10% of values less than 1.38451E-019

50% of values less than 1.46366E-009

90% of values less than 0.00212307

95% of values less than 0.00215275

Minimum 1.12615E-027

Maximum 0.0021886

Mean 0.000379194 Std. Dev. 0.000787589 Variance 6.20296E-007

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14b

## Source Concentration of Naphthalene [mg/l]

## At 29 years

05% of values less than 1.08308E-024

10% of values less than 2.77087E-021

50% of values less than 1.27138E-008

90% of values less than 0.0264879

95% of values less than 0.121409

Minimum 4.21257E-028

Maximum 1.72908

Mean 0.0273142 Std. Dev. 0.14108 Variance 0.0199034

## At 54 years

05% of values less than 1.08308E-024

10% of values less than 2.77087E-021

50% of values less than 1.27138E-008

90% of values less than 0.0263056

95% of values less than 0.120476

Minimum 4.21257E-028

Maximum 1.71338

Mean 0.0270874 Std. Dev. 0.139828 Variance 0.0195518

#### At 154 years

05% of values less than 1.08308E-024

10% of values less than 2.77087E-021

50% of values less than 1.27138E-008

90% of values less than 0.0256072

95% of values less than 0.116911

Minimum 4.21257E-028

Mean 0.0262205 Std. Dev. 0.135054 Variance 0.0182395

Maximum 1.6536

# At 1054 years

05% of values less than 1.08308E-024

10% of values less than 2.77087E-021

50% of values less than 1.27138E-008

90% of values less than 0.0197168

95% of values less than 0.0873186

Minimum 4.21257E-028 Maximum 1.17115

Mean 0.0191198 Std. Dev. 0.0963964 Variance 0.00929226

# At infinity

05% of values less than 1.08308E-024

10% of values less than 2.77087E-021

50% of values less than 1.27138E-008

90% of values less than 8.03333E-005

95% of values less than 0.000187419

Minimum 4.21257E-028

Maximum 0.000821662

Mean 3.0187E-005 Std. Dev. 9.106E-005 Variance 8.29191E-009

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14b

Concentration of Ammoniacal\_N at base of Clay Liner [mg/l]

At 29 years

05% of values less than 2.15487E-006

10% of values less than 1.13154E-005

50% of values less than 0.00132071

90% of values less than 0.379811

95% of values less than 0.527295

Minimum 1.15055E-011

Maximum 1.8431

Mean 0.0944381 Std. Dev. 0.228874

Variance 0.0523831

Variance 1.76992

At 54 years

05% of values less than 0.058068

10% of values less than 0.113653

50% of values less than 0.695312

90% of values less than 2.94005

95% of values less than 3.82266

Minimum 0.0051676

Maximum 8.79361

Mean 1.19418 Std. Dev. 1.33038

At 154 years

05% of values less than 1.10164

10% of values less than 1.42023

50% of values less than 3.10564

90% of values less than 6.41849

95% of values less than 7.92422

Minimum 0.584776

Maximum 12.9454

Mean 3.60232 Std. Dev. 2.24335 Variance 5.03261

At 1054 years

05% of values less than 0.19767

10% of values less than 0.30089

50% of values less than 1.08509

90% of values less than 3.03247

95% of values less than 3.82963

Minimum 0.0350488 Maximum 8.1509

Mean 1.47738 Std. Dev. 1.31216 Variance 1.72176

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14b

# Concentration of Cadmium at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 2.09274E-010

Mean 1.30088E-012 Std. Dev. 1.50423E-011 Variance 2.26269E-022

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.41263E-013

95% of values less than 1.76944E-010

Minimum 0 Maximum 7.02655E-005

Mean 5.0784E-007 Std. Dev. 5.20591E-006 Variance 2.71015E-011

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.91166E-008

95% of values less than  $1.97069 \hbox{E-}006$ 

Minimum 0 Maximum 0.000953134

Mean 8.80852E-006 Std. Dev. 7.65078E-005 Variance 5.85344E-009

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 4.06718E-013

90% of values less than 9.24765E-006

95% of values less than 0.000156736

Minimum 0 Maximum 0.00342689

Mean 5.52224E-005 Std. Dev. 0.000319523 Variance 1.02095E-007

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.12227E-010

90% of values less than 7.1243E-005

95% of values less than 0.000125712

Minimum 0 Maximum 0.000144439

Mean 1.44438E-005 Std. Dev. 3.74204E-005 Variance 1.40029E-009

#### Phase: Cell 14b

# Concentration of Copper at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 4.33427E-016

95% of values less than 2.33991E-015

Minimum 0 Maximum 1.21878E-014

Mean 3.53517E-016 Std. Dev. 1.4211E-015 Variance 2.01952E-030

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 9.33659E-012

90% of values less than 5.50351E-005

95% of values less than 0.000553997

Minimum 0 Maximum 0.00470428

Mean 0.000114198 Std. Dev. 0.000533551 Variance 2.84677E-007

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.4565E-009

90% of values less than 0.00263882

95% of values less than 0.00310535

Minimum 0 Maximum 0.00393261

Mean 0.000496344 Std. Dev. 0.00107024 Variance 1.14542E-006

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14b

# Concentration of Naphthalene at base of Clay Liner [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.14058E-013 90% of values less than 3.75621E-007

95% of values less than 2.03508E-006

Minimum 0 Maximum 4.53817E-005

Mean 6.66271E-007 Std. Dev. 3.8021E-006 Variance 1.4456E-011

# At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.40789E-011 90% of values less than 4.34738E-005 95% of values less than 0.000321219

Minimum 0

Maximum 0.00728083

Mean 0.000146034 Std. Dev. 0.000791932 Variance 6.27157E-007

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 3.99341E-010

90% of values less than 0.000796792

95% of values less than 0.00325467

Minimum 0 Maximum 0.0503636

Mean 0.000894689 Std. Dev. 0.00469059 Variance 2.20017E-005

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 6.19416E-011 90% of values less than 0.000155089

95% of values less than 0.00177593

Minimum 0 Maximum 0.0226308

Mean 0.000384062 Std. Dev. 0.00199578 Variance 3.98315E-006

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 4.40924E-011 95% of values less than 4.02548E-010

Minimum 0 Maximum 5.75149E-009

Mean 9.81879E-011 Std. Dev. 5.22648E-010 Variance 2.73161E-019

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14b

# Concentration of Ammoniacal\_N at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 54 years

05% of values less than 1.39397E-007

10% of values less than 6.90819E-007

50% of values less than 0.000682088

90% of values less than 0.0650556

95% of values less than 0.153402

Minimum 2.08417E-011 Maximum 1.269

Mean 0.025578 Std. Dev. 0.101075 Variance 0.0102162

#### At 154 years

05% of values less than 0.020724

10% of values less than 0.0324379

50% of values less than 0.24639

90% of values less than 0.989575

95% of values less than 1.27306

Minimum 0.0112272

Maximum 4.00035

Mean 0.431524 Std. Dev. 0.533515 Variance 0.284639

# At 1054 years

05% of values less than 0.0202175

10% of values less than 0.0299589

50% of values less than 0.191109

90% of values less than 0.744936

95% of values less than 0.976858

Minimum 0.00768885 Maximum 2.88787

Mean 0.32784 Std. Dev. 0.400234 Variance 0.160187

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 9.41005E-015

90% of values less than 1.10075E-013

95% of values less than 2.01362E-013

Minimum 0 Maximum 2.41561E-008

Mean 1.63983E-010 Std. Dev. 1.81039E-009 Variance 3.27751E-018

Project Number: 0001 Customer: IMS Hollywood

#### Phase: Cell 14b

# Concentration of Cadmium at base of Unsaturated Zone [mg/l]

## At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

#### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 2.80108E-016

Minimum 0 Maximum 4.68769E-008

Mean 3.60314E-010 Std. Dev. 3.56387E-009 Variance 1.27012E-017

# At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.38357E-008

95% of values less than 2.1506E-006

Minimum 0 Maximum 0.000541023

Mean 5.55629E-006 Std. Dev. 4.20242E-005 Variance 1.76604E-009

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 9.95099E-011

90% of values less than 5.95244E-005

95% of values less than 0.00018225

Minimum 0 Maximum 0.0022468

Mean 3.50094E-005 Std. Dev. 0.000175305 Variance 3.07319E-008

### Phase: Cell 14b

# Concentration of Copper at base of Unsaturated Zone [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 5.59203E-016

95% of values less than 1.24528E-011

Minimum 0 Maximum 3.38695E-008

Mean 2.85468E-010 Std. Dev. 2.68091E-009 Variance 7.18731E-018

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 1.24419E-009

90% of values less than 0.00485845

95% of values less than 0.0090227

Minimum 0 Maximum 0.0273061

Mean 0.00134071 Std. Dev. 0.00385402 Variance 1.48534E-005

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 14b

Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 2.7398E-015 90% of values less than 5.99606E-009

95% of values less than 5.09943E-008

Minimum 0 Maximum 2.89353E-005

Mean 3.91858E-007 Std. Dev. 2.75687E-006 Variance 7.60033E-012

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 3.2221E-013

90% of values less than 3.14417E-006

95% of values less than 2.64803E-005

Minimum 0 Maximum 0.009006

Mean 7.57206E-005 Std. Dev. 0.000671903 Variance 4.51454E-007

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 7.50399E-013

90% of values less than 3.06828E-006

95% of values less than 1.99864E-005

Minimum 0 Maximum 0.00714961

Mean 5.94053E-005 Std. Dev. 0.000530284 Variance 2.81201E-007

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 3.70898E-013

95% of values less than 1.05211E-011

Minimum 0 Maximum 2.72416E-010

Mean 4.5224E-012 Std. Dev. 2.59708E-011 Variance 6.74484E-022

### Phase: Cell 14b

# Approx. time to Peak Conc. Ammoniacal\_N at Base of Unsaturated Zone [years]

05% of values less than 210 10% of values less than 210 50% of values less than 232 90% of values less than 256 95% of values less than 256

Minimum 190 Maximum 312
Mean 228.388 Std. Dev. 19.2101

Variance 369.029

### Approx. time to Peak Conc. Cadmium at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 18114 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 13308.3 Std. Dev. 8383.7

Variance 7.02864E+007

### Approx. time to Peak Conc. Copper at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000 95% of values less than 20000

Minimum 0 Maximum 20000 Mean 15669.2 Std. Dev. 7737.67

Variance 5.98715E+007

# Approx. time to Peak Conc. Naphthalene at Base of Unsaturated Zone [years]

05% of values less than 0 10% of values less than 0 50% of values less than 256 90% of values less than 12189 95% of values less than 14859

Minimum 0 Maximum 18114
Mean 2656.95 Std. Dev. 5246.77

Variance 2.75286E+007

Page 248 of 258

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 14b

# Concentration of Ammoniacal\_N at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 2.77097E-019

Minimum 0 Maximum 5.69286E-018

Mean 7.46958E-020 Std. Dev. 4.70016E-019 Variance 2.20915E-037

# At 54 years

05% of values less than 6.49269E-011

10% of values less than 5.48669E-010

50% of values less than 4.31255E-007

90% of values less than  $9.96575 \hbox{E-}005$ 

95% of values less than 0.000199243

Minimum 4.4713E-015

Maximum 0.0011472

Mean 3.30205E-005 Std. Dev. 0.000109703 Variance 1.20347E-008

### At 154 years

05% of values less than 7.71598E-005

10% of values less than 0.00011193

50% of values less than 0.00114663

90% of values less than 0.00945527

95% of values less than 0.0120938

Minimum 1.60272E-005

Maximum 0.0286059

Mean 0.00279278 Std. Dev. 0.0043963 Variance 1.93274E-005

## At 1054 years

05% of values less than 9.56242E-005

10% of values less than 0.000230104

50% of values less than 0.00145112

90% of values less than 0.00908959

95% of values less than 0.0124473

Minimum 3.14841E-005 Maximum 0.0286464

Mean 0.00308555 Std. Dev. 0.00446338 Variance 1.99218E-005

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 8.06635E-017

90% of values less than 1.50077E-015

95% of values less than 4.66369E-015

Minimum 0 Maximum 1.56774E-010

Mean 1.02063E-012 Std. Dev. 1.15495E-011 Variance 1.33391E-022

### Phase: Cell 14b

# Concentration of Cadmium at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 1.09662E-014

Mean 8.92549E-017 Std. Dev. 9.13916E-016 Variance 8.35242E-031

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.68752E-012

95% of values less than 2.55633E-010

Minimum 0 Maximum 1.72457E-006

Mean 1.62535E-008 Std. Dev. 1.3589E-007 Variance 1.8466E-014

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $5.52996\hbox{E-}013$ 

90% of values less than 3.59613E-007

95% of values less than 1.08649E-006

Minimum 0 Maximum 2.40268E-005

Mean 3.69095E-007 Std. Dev. 2.03944E-006 Variance 4.15933E-012

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 14b

# Concentration of Copper at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

# At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 2.96045E-018

Minimum 0 Maximum 1.5228E-013

Mean 8.84154E-016 Std. Dev. 1.08006E-014 Variance 1.16654E-028

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than  $4.62235\hbox{E-}012$ 

90% of values less than 3.20711E-005

95% of values less than 7.04397E-005

Minimum 0 Maximum 0.000439792

Mean 1.31259E-005 Std. Dev. 4.65552E-005 Variance 2.16738E-009

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 14b

# Concentration of Naphthalene at Phase Monitor Well [mg/l]

### At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

### At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 1.0086E-012

95% of values less than 9.83914E-012

Minimum 0

Maximum 3.81878E-009

Mean 5.63731E-011 Std. Dev. 4.16164E-010 Variance 1.73192E-019

### At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 7.94788E-016

90% of values less than 7.91675E-009

95% of values less than 5.92128E-008

Minimum 0 Maximum 3.98579E-005

Mean 2.58576E-007 Std. Dev. 2.84143E-006 Variance 8.07372E-012

## At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 1.77572E-015

90% of values less than 1.05683E-008

95% of values less than 7.50933E-008

Minimum 0 Maximum 4.74836E-005

Mean 3.09642E-007 Std. Dev. 3.38459E-006 Variance 1.14554E-011

# At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 2.74065E-015

95% of values less than 7.86309E-014

Minimum 0 Maximum 4.90795E-012

Mean 4.13764E-014 Std. Dev. 3.57325E-013 Variance 1.27681E-025

### Phase: Cell 14b

Approx. time to Peak Conc. Ammoniacal\_N at Phase Monitor Well [years]

05% of values less than 232 10% of values less than 256 50% of values less than 256

90% of values less than 282

95% of values less than 282

Minimum 210 Maximum 344

Mean 264.09 Std. Dev. 18.0779 Variance 326.812

Approx. time to Peak Conc. Cadmium at Phase Monitor Well [years]

05% of values less than 0 10% of values less than 0 50% of values less than 20000 90% of values less than 20000

95% of values less than 20000

Minimum 0 Maximum 20000

Mean 14131.9 Std. Dev. 8425.93 Variance 7.09964E+007

Approx. time to Peak Conc. Copper at Phase Monitor Well [years]

05% of values less than 0

10% of values less than 0

50% of values less than 20000

90% of values less than 20000

95% of values less than 20000

Minimum 0 Maximum 20000

Mean 15882.3 Std. Dev. 7733.33 Variance 5.98044E+007

Approx. time to Peak Conc. Naphthalene at Phase Monitor Well [years]

05% of values less than 0

10% of values less than 0

50% of values less than 282

90% of values less than 12189

95% of values less than 14859

Minimum 0 Maximum 20000

Mean 2267.82 Std. Dev. 5024.32 Variance 2.52438E+007

### Phase: Cell 14b

Flow to Leachate Treatment Plant [I/day]

At 29 years

05% of values less than 1014.39

10% of values less than 1014.39

50% of values less than 1014.39

90% of values less than 1319.87

95% of values less than 1403.17

Minimum 1014.39

Maximum 1481.63

Mean 1090.03 Std. Dev. 135.473

Variance 18353

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 14b

Head on EBS [m]

At 29 years

05% of values less than 1

10% of values less than 1

50% of values less than 1

90% of values less than 1

95% of values less than 1

Minimum 1

Maximum 1 Mean 1 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 1.36473

10% of values less than 1.36473

50% of values less than 1.36473

90% of values less than 1.46976

95% of values less than 1.49805

Minimum 1.36473

Mean 1.39073 Std. Dev. 0.0464977 Variance 0.00216204

Maximum 1.52456

At 154 years

05% of values less than 5.06344

10% of values less than 5.06344

50% of values less than 5.06344

90% of values less than 5.06673

95% of values less than 5.18735

Minimum 5.06344

Maximum 7.75373

Mean 5.12729 Variance 0.118365 Std. Dev. 0.344042

At 1054 years

05% of values less than 5.07659

10% of values less than 5.07659

50% of values less than 5.07659

90% of values less than 5.07659

95% of values less than 5.07659

Minimum 5.07659 Maximum 5.07659

Mean 5.07659 Std. Dev. 3.91769E-007 Variance 1.53483E-013

At infinity

05% of values less than 5.07659

10% of values less than 5.07659

50% of values less than 5.07659

90% of values less than 5.07659

95% of values less than 5.07659

Minimum 5.07659 Maximum 5.07659

Mean 5.07659 Std. Dev. 3.91769E-007 Variance 1.53483E-013

### Phase: Cell 14b

Surface Breakout [I/day]

At 29 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0

Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 54 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 154 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At 1054 years

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

At infinity

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

Minimum 0 Maximum 0

Mean 0 Std. Dev. 0 Variance 0

Project Number: 0001 Customer: IMS Hollywood

### Phase: Cell 14b

# Leakage through EBS [I/day]

### At 29 years

05% of values less than 108.88

10% of values less than 192.176

50% of values less than 497.664

90% of values less than 497.664

95% of values less than 497.664

Minimum 30.4237

Maximum 497.664

Mean 422.022 Std. Dev. 135.473 Variance 18353

### At 54 years

05% of values less than 163.313

10% of values less than 282.697

50% of values less than 588.42

90% of values less than 588.42

95% of values less than 588.42

Minimum 46.4594

Maximum 593.018

Mean 515.377 Std. Dev. 143.655 Variance 20636.8

### At 154 years

05% of values less than 1508.78

10% of values less than 1508.78

50% of values less than 1508.78

90% of values less than 1509.6

95% of values less than 1524.82

Minimum 1508.78

Maximum 2122.54

Mean 1515.9 Std. Dev. 48.951 Variance 2396.2

## At 1054 years

05% of values less than 1512.05

10% of values less than 1512.05

50% of values less than 1512.05

90% of values less than 1512.05

95% of values less than 1512.05

Minimum 1512.05 Maximum 1512.05

Mean 1512.05 Std. Dev. 0.00011021 Variance -1.21463E-008

# At infinity

05% of values less than 1512.05

10% of values less than 1512.05

50% of values less than 1512.05

90% of values less than 1512.05

95% of values less than 1512.05

Minimum 1512.05 Maximum 1512.05

Mean 1512.05 Std. Dev. 0.00011021 Variance -1.21463E-008

Phase: Cell 14b

Aquifer Flow [m³/year]

At 29 years

05% of values less than 25407.6

10% of values less than 29997.4

50% of values less than 78510.2

90% of values less than 218610

95% of values less than 245657

Minimum 0

**Maximum 392661** 

Mean 101104 Std. Dev. 72686 Variance 5.28325E+009

At 54 years

05% of values less than 25407.6

10% of values less than 29997.4

50% of values less than 78510.2

90% of values less than 218610

95% of values less than 245657

Minimum 0 **Maximum 392661** 

Mean 101104 Std. Dev. 72686 Variance 5.28325E+009

At 154 years

05% of values less than 25407.6

10% of values less than 29997.4

50% of values less than 78510.2

90% of values less than 218610

95% of values less than 245657

Minimum 0 **Maximum 392661** 

Mean 101104 Std. Dev. 72686 Variance 5.28325E+009

At 1054 years

05% of values less than 25407.6

10% of values less than 29997.4

50% of values less than 78510.2

90% of values less than 218610

95% of values less than 245657

Minimum 0 **Maximum 392661** 

Mean 101104 Std. Dev. 72686 Variance 5.28325E+009

At infinity

05% of values less than 25407.6

10% of values less than 29997.4

50% of values less than 78510.2

90% of values less than 218610 95% of values less than 245657

Minimum 0

Mean 101104 Std. Dev. 72686 Variance 5.28325E+009

Maximum 392661