REDACTED VERSION

BRINE COOPERATING PARTIES

BASELINE HUMAN HEALTH RISK ASSESSMENT REPORT

FOR THE

BRINE SERVICE COMPANY SUPERFUND SITE

USEPA CERCLIS ID: TX0000605264

PREPARED BY:

URS CORPORATION

HOUSTON, TEXAS

JUNE 2014

EXECUTIVE SUMMARY

This document presents the results of the Baseline Human Health Risk Assessment (BHHRA) conducted as part of the on-going remedial investigation/feasibility study (RI/FS) of the Brine Service Company, Inc. Site (the "Site"). The Site is located in Corpus Christi, Nueces County, Texas, in an industrial and petrochemical refining area situated between Interstate Highway 37 (IH-37) and Up River Road. The Site was proposed to the National Priorities List on September 13, 2001, and was placed on the National Priorities List on September 5, 2002. An Administrative Order on Consent for the RI/FS was executed by six companies[1] (Respondents) and the United States Environmental Protection Agency (USEPA) on October 21, 2009.

The Site consists of two former pit areas, referred to as the North Pit and the South Pit, bordered on the east by a drainage ditch (East Ditch). The North and South Pits were originally used for sand mining. The South Pit was subsequently developed into a disposal pit for drilling muds and, based on the RI findings, appears to contain residual waste material. Based on the RI findings, the North Pit does not contain waste material. Details about the Site setting and vicinity are contained in the RI Report (URS, 2014).

Report Purpose and Objectives

The purpose of this BHHRA Report is to document the estimated risks and hazards posed by the Site to human receptors. The primary objectives of the BHHRA are to:

- Evaluate potential risks to human health considering site-specific conditions and the absence of any controls or remedial actions to mitigate affected media;
- Identify exposure media that may require remedial action based on estimated risks and hazards to human health;
- Identify exposure media that do not require remedial action based on estimated risks and hazards to human health; and
- Prioritize the need for remedial action based on estimated risks and hazards to human health (if any are identified).

The following sections summarize the results of the BHHRA in relation to the primary objectives listed above.

[1] Anadarko E&P Company LP; ConocoPhillips Company; El Paso Merchant Energy-Petroleum Company; Hess Corporation; Sunoco, Inc. (R&M); Texaco, Inc.

Remedial Investigation Field Activities

The RI characterized the nature and extent of Site contamination through representative sampling of various environmental media, including:

- Waste materials;
- On-Site and off-Site surface and subsurface soils;
- On-Site soil gas;
- On-Site and off-Site groundwater;
- On-Site and off-Site sediments; and
- On-Site and off-Site surface water.

The field activities were performed using USEPA approved sampling techniques. Environmental samples were analyzed using USEPA approved analytical methods. Key findings from the RI Report are summarized in Section 3.0 of this report.

BHHRA

Potentially exposed receptors were determined based on the land use, media of concern, and current and future anticipated activities at the Site. The determination of potentially exposed human receptors was presented in the USEPA approved BHHRA Work Plan (Work Plan) for the Site (URS, 2010). The on-site commercial/industrial worker scenario described in the Work Plan is further refined in the BHHRA to include two separate receptors: an indoor worker and an outdoor worker. In addition, since Site-related chemicals of potential concern (COPCs) were identified off-site in the upper transmissive unit (UTU) and second transmissive unit (STU), off-site receptors are evaluated in the BHHRA. As stated in the Work Plan, the potential for exposure to residential receptors is not evaluated because the Site is located in an industrial setting, no on-site residences currently exist, and the closest residential community is greater than a ½-mile from the Site. Based on the conceptual site exposure model for the Site, the potentially exposed human receptors for the Site are:

- On-Site Current/Future Outdoor Worker;
- On-Site Current/Future Indoor Worker;
- On-Site Current/Future Construction Worker;
- On-Site Current/Future Maintenance Worker;
- On-Site Current/Future Adolescent Trespasser;
- Off-Site Current/Future Outdoor Worker; and
- Off-Site Current/Future Construction Worker.

In addition, the Site was divided into exposure areas (i.e., South Pit Exposure Area, North Pit Exposure

Area, and Off-Site Exposure Area) based on operational history and evidence of releases.

Basis for Conclusions

USEPA has established an acceptable cancer risk management range of 10^{-4} (one in ten thousand excess cancer risk) to 10^{-6} (one in one million excess cancer risk) for Superfund sites (40 Code of Federal Regulations [CFR] 300.430 (e)(2)(i)(A)(2)). For noncarcinogens, target organ/endpoint hazard indices (HIs) that are one or less indicate that it is unlikely adverse noncarcinogenic health effects will occur (40 CFR 300.430(e)(2)(i)(A)(1)). Although both reasonable maximum exposure (RME) and central tendency (CT) scenarios are evaluated in the BHHRA, USEPA's policy is to place more weight (emphasis) on the RME scenario results when making risk management decisions. Therefore, the discussion of the results focus on cancer risk and non-cancer hazard estimates for the RME scenarios. As discussed in the Uncertainty Analysis, the various uncertainties in the risk characterization process produce upper bound (i.e., conservative) risk estimates for the Site. An exposure medium is likely not to warrant remedial action based on potential risk to human health if the estimated cumulative risk level is within or below USEPA's acceptable risk range of 10^{-6} to 10^{-4} and the estimated HI is less than or equal to one.

Findings

The BHHRA evaluation described in the RI/FS Work Plan is complete. Exposure media are prioritized based on the potential to migrate or leach to other environmental media (e.g., groundwater in the UTU and STU) or magnitude of risk and/or hazard estimated for RME scenarios. The overall conclusion is that the following exposure media (in order of prioritization based on risk) are estimated to present a risk and/or hazard:

1. Light non-aqueous phase liquids and waste materials in the South Pit Exposure Area;
2. Groundwater in the STU in the Off-Site Exposure Area;
3. Groundwater in the UTU in the South Pit Exposure Area
4. Groundwater in the UTU in the Off-Site Exposure Area; and
5. Groundwater in the STU in the South Pit Exposure Area.

Using the exposure point concentrations, conservative exposure assumptions (Appendix A Tables 4.1 to 4.7), and USEPA toxicity data (Appendix A Tables 5.1 through 5.2 and Tables 6.1 through 6.2), the estimated RME non-cancer hazard estimate is greater than one for one or more of the receptors evaluated in the exposure areas listed above or a COPC concentration exceeds the maximum contaminant level (arsenic in the South Pit STU).

In addition, the BHHRA concludes that the following exposure media are estimated to not present a risk or hazard:

- Surface and subsurface soil in the North Pit Exposure Area;
- Groundwater in the UTU and STU in the North Pit Exposure Area;

- Surface and subsurface soils in the South Pit Exposure Area;
- Soil gas (vapor) in the South Pit and North Pit Exposure Areas;
- Surface water in the East Ditch; and
- Sediment in the East Ditch.

Using the exposure point concentrations, conservative exposure assumptions (Appendix A Tables 4), and USEPA toxicity data (Appendix A Tables 5.1 through 5.2 and Tables 6.1 through 6.2), the estimated RME cancer risk is within or below USEPA's acceptable cancer risk management range (1×10^{-6} to 1×10^{-4}) and the non-cancer hazard estimate is less than one for all of the receptors evaluated in the exposure areas listed above.

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ACRONYM LIST

ARAR	Applicable or Relevant and Appropriate Requirements
bgs	below ground surface
BHHRA	Baseline Human Health Risk Assessment
CFR	Code of Federal Regulations
COPCs	Chemicals of Potential Concern
CR	Cancer Risk
CSEM	Conceptual Site Exposure Model
CSF	Cancer Slope Factor
CT	Central Tendency
DA_{event}	absorbed dose per event
EPC	Exposure Point Concentrations
gpd	gallons per day
HI	Hazard Index
HQ	Hazard Quotient
IH	Interstate Highway
IRIS	Integrated Risk Information System
IUR	Inhalation Unit Risk
LNAPL	Light non-aqueous phase liquids
MCL	Maximum Contaminant Level
$\mu g/m^3$	micrograms per cubic meter
mg/kg	milligram per kilogram
mg/L	milligram per liter
mg/m^3	milligram per cubic meter
MQL	Method Quantitation Limit
NCP	National Contingency Plan
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PCL	Protective Concentration Level
PEF	Particulate Emission Factor
PPRTV	Provisional Peer-Reviewed Toxicity Value
RAGS	Risk Assessment Guidance for Superfund

RfC	Reference Concentration
RfD	Reference Dose
RI/FS	Remedial Investigation/Feasibility Study
RME	Reasonable Maximum Exposure
RSL	Regional Screening Levels
SDL	Sample Detection Limit
SDWS	Secondary Drinking Water Standards
STU	Second Transmissive Unit
SVOC	Semivolatile Organic Compound
TCEQ	Texas Commission on Environmental Quality
TDS	Total Dissolved Solids
TRRP	Texas Risk Reduction Program
UCL	Upper Confidence Limit
URS	URS Corporation
USEPA	United States Environmental Protection Agency
UTU	Upper Transmissive Unit
VF	Volatilization Factor
VOC	Volatile Organic Compound

1.0 INTRODUCTION

This document presents the Baseline Human Health Risk Assessment (BHHRA) conducted as part of the remedial investigation/feasibility study (RI/FS) of the Brine Service Company, Inc. Superfund Site (the "Site"). The Site is located in Corpus Christi, Nueces County, Texas, in an industrial and petrochemical refining area situated between Interstate Highway 37 (IH-37) and Up River Road (Figure 1). The Site was proposed to the National Priorities List on September 13, 2001 and was placed on the National Priorities List on September 5, 2002. An Administrative Order on Consent for the RI/FS was executed by six companies[1] (Respondents) and the U.S. Environmental Protection Agency (USEPA) on October 21, 2009.

The Respondents submitted the RI Report to the USEPA on May 19, 2014 (URS, 2014). The RI Report:

- Summarized the Site background;
- Documented decisions and evaluations completed during the field investigations; and
- Presented the findings from the RI activities regarding Site geology and hydrogeology and the nature and extent of contamination at the Site.

The Site consists of two former pit areas, referred to as the North Pit and the South Pit, bordered on the east by a drainage ditch (East Ditch). The North and South Pits were originally used for sand mining. The South Pit was subsequently developed into a disposal pit for drilling muds and, based on the RI findings, appears to contain residual waste material. Based on the RI findings, the North Pit does not contain waste material. Details about the Site setting and vicinity are contained in the RI Report (URS, 2014).

1.1 Statement of Work

The Administrative Order on Consent includes a Statement of Work that describes the requirements for the BHHRA. The BHHRA was conducted using data summarized and discussed in the RI report to develop the estimated risks and hazards posed by the Site to potentially exposed human receptors. The BHHRA follows the protocols for USEPA Risk Assessment Guidance for Superfund (RAGS) Part A (USEPA, 1989), RAGS Part B (USEPA, 1991a), RAGS Part D (USEPA, 2001), RAGS Part E (USEPA, 2004a), and RAGS Part F (USEPA, 2009). In addition, the risk assessment was completed in accordance with the USEPA-approved BHHRA Work Plan (Work Plan) for the Site (URS, 2010).

1.2 Report Purpose and Objectives

The purpose of this BHHRA Report is to present the estimated risks and hazards posed by the Site to potentially exposed human receptors. The primary objectives of the BHHRA are to:

- Evaluate potential risks to human health considering site-specific conditions assuming the absence of any controls or remedial actions to mitigate affected media;
- Identify exposure media that may require remedial action based on estimated risks and hazards

to human health;

- Identify exposure media that do not require remedial action based on estimated risks and hazards to human health; and
- Prioritize the need for remedial action based on estimated risks and hazards to human health (if any are identified).

1.3 Report Structure

This Report consists of the following sections:

- Section 1, Introduction, presents the statement of work, states the purpose and objectives of the report, and outlines the format of the report.
- Section 2, Site Background, presents the location and description, describes the physical characteristics of the Site that could influence the transport and migration of contaminants and the determination of complete exposure pathways, and summarizes the RI sample collection.
- Section 3, Summary of Remedial Investigation Findings, presents the significant findings of the RI.
- Section 4, Risk Assessment Methodology, summarizes the risk assessment methods used to complete the BHHRA, including identification of chemicals of potential concern (COPCs), justification for complete and incomplete exposure pathways, determination of potentially exposed receptors, the toxicity assessment, and risk characterization.
- Section 5, South Pit Exposure Area, presents the Site-specific human health risk assessment for the South Pit Exposure Area.
- Section 6, North Pit Exposure Area, presents the Site-specific human health risk assessment for the North Pit Exposure Area.
- Section 7, Off-Site Exposure Area, presents the Site-specific human health risk assessment for the Off-Site Exposure Area.
- Section 8, LNAPL Qualitative Assessment, presents a qualitative assessment of the potential for exposure to LNAPL at the Site.
- Section 9, Uncertainty Analysis, discusses the uncertainties associated with each step of the risk assessment process.
- Section 10, Conclusions, summarizes the results of the BHHRA for the Site.
- Section 11, References, lists the data sources used to compile this report.

2.0 SITE BACKGROUND

This section summarizes the Site location and history as well as the physical characteristics of the Site, including Site-specific information for topography, meteorology, land use, geology, hydrogeology, groundwater resources and use, and surface water resources and use. This section also summarizes the pertinent RI data. This information is used to identify potential mechanisms by which constituents may be transported to human receptors and to determine appropriate exposure scenarios for the BHHRA.

2.1 Site Location and History

The Site is located in Corpus Christi, Nueces County, Texas, along the north side of IH-37, northeast of the intersection of the IH-37 feeder road and Goldston Road (Figure 1). The Site consists of two former pit areas, referred to as the North Pit and the South Pit. The larger of the two pits was the South Pit. Several pipeline easements recorded by Koch, Enerfin, Enterprise Products, and Javelina traverse the Site. A man-made drainage ditch (East Ditch) located along the east side of the Site extends under Up River Road. Based on a review of historical aerial photographs and topographic maps (URS, 2010; URS, 2014), it appears that the course of the East Ditch has evolved and matured over time from a small naturally occurring drainage swale to a more engineered drainage channel.

The Site was first identified as having environmental impacts in November 1997 when Koch Pipeline Company notified the Texas Commission on Environmental Quality (TCEQ) of impacted soils in an excavation trench for an interconnecting pipeline. Approximately 3,000 cubic yards of soil were excavated and a TCEQ inspector observed visible staining and light non-aqueous phase liquids (LNAPL) in the groundwater seeping into the excavation. Laboratory results from soil samples collected from the excavated material indicated elevated concentrations of total petroleum hydrocarbons, total metals, volatile organic compounds (VOCs), and semivolatile organic compounds (SVOCs) (TCEQ, 2000). Subsequently, the TCEQ conducted a Site Screening Inspection (TCEQ, 2000).

An RI/FS Work Plan (URS, 2010) for the Site, which included the Work Plan, was approved by USEPA in August 2010. Phase I RI activities conducted at the Site from September to December 2010 assessed the nature and extent of affected environmental media at the Site. The data collected during the Phase I RI formed the basis for screening-level human health risk assessment (URS, 2011a). The Phase II RI Technical Memorandum (URS, 2011b) and the screening-level human health risk assessment recommended additional sample collection to fill data gaps identified in the Phase I investigation. Phase II data collection was completed in early 2014. Evaluation of the Phase II data showed that data gaps had been addressed.

2.2 Topography

The Federal Emergency Management Agency Flood Rate Insurance Map Panel Number 4854940284C for Nueces County shows an area of the East Ditch extending approximately 770 feet south of Up River Road (approximately 130 feet into Lot 3) as being within an area of 100-year flood. The remainder of the East Ditch extending south to IH-37 is located within an area between the 100-year and 500-year

flood. The upland areas of the Site, outside the extent of the East Ditch, are located within areas of minimal flooding (FEMA, 1985).

2.3 Meteorology

Corpus Christi is within a humid subtropical region along the coast to a semi-arid region west and southwest of the city (NOAA, 2014). Peak rainfall months are May and September with an average annual precipitation of 30 inches. The warmest month of the year is August with an average maximum temperature of 93.4 degrees Fahrenheit, while the coldest month of the year is January with an average minimum temperature of 46.2 degrees Fahrenheit. In the last 50 years, eight tropical storms or hurricanes have made landfall within 25 nautical miles of Corpus Christi. The maximum storm surge in Corpus Christi was documented as 7.5 feet above mean sea level with Hurricane Allen in 1980. The storm surge elevations further inland along the Corpus Christi Ship Channel are not documented. Based on the topographic contours (USGS, 1975a; USGS, 1975b), the storm surge could have potentially entered the extreme northern part of the East Ditch but not as far as the 10-foot contour line shown on Figure 2.

2.4 Demography and Land Use

This section describes the area demographics and land use. This information was used to develop the conceptual site exposure model (CSEM) and to determine appropriate human receptors for the BHHRA.

2.4.1 Adjacent Land Use

The land use at and surrounding the Site is commercial/industrial (Corpus Christi, 2009). A construction lay down area formerly occupied Lot 1B directly north of the Site and an occupational health clinic is located on Lot 1A. East of the Site, a former equipment yard and industrial park were purchased in 2013 by EF90 LLC for the construction of a tank terminal facility. The Nueces Power Equipment facility is located west of the Site. The Flint Hills Resources West Refinery is located approximately 1.25 miles northwest of the Site and the Citgo Refinery West Plant is located approximately 0.5 mile east of the Site.

Approximately 46 oil and gas wells were drilled between 1932 and 1987 within 0.5-mile of the Site. Based on the Environmental Data Resources report (URS, 2014), twelve wells appear to be active, 22 wells were plugged; seven wells were dry; four wells were permitted; and one well was not drilled.

2.4.2 Demographics

The population of Corpus Christi (as of the 2010 census) was 305,215 (USDoC, 2014) and the population density within the area of the Site is less than 1000 persons per square mile (Corpus Christi, 2014). The nearest residential area to the Site is the (b) (6) , approximately 3,100 feet (0.6 miles) to the west. The Tuloso Midway Academic Career Center is located approximately 0.4 miles south of the Site (Leopard Street south of IH-37).

2.4.3 Zoning

The Site is located outside the Corpus Christi City limits but within the Corpus Christi Industrial District 1 (CCREDC, 2014). Nueces County does not have zoning requirements, however, the county does have requirements for properties being developed for residential land use if these properties are within the 100 or 500-year flood zone (i.e. elevation certificates, hydraulic studies, groundwater quality/sustainability studies, etc.). Furthermore, if the property lies within 5-miles of the Corpus Christi City Limits, the City also has jurisdiction over plan approval (Molina, 2010).

2.5 Summary of Site Geology and Hydrogeology

The Site geologic and hydrogeologic conceptual site model was refined with the field investigations. As discussed in the RI Report (URS, 2014), the following are the key points for the model (Figure 12):

1. Waste materials are sludge-like, exhibiting a non-granular, oily, viscous or grease-like consistency or a reworked soil/waste mixture, such as hydrocarbons in a granular soil matrix.
2. Delineation has been obtained between the waste materials in the South Pit and the East Ditch.
3. Black discolored material identified in the North Pit soil borings is not associated with sludge or reworked soil/waste mixture. The North Pit consists mostly of fill with gravel, which supports the historical use of the North Pit as a storm water overflow structure to the South Pit.
4. The surface lithology in areas that have experienced human alteration, such as in and around the North and South Pits, includes fill with gravel. This fill is encountered from ground surface up to 8-feet below ground surface (bgs) reaching thickness of 19 feet in the South Pit and 14 feet in the North Pit.
5. Directly underlying the fill, the lithology includes silt and silty to sandy clays encountered across the Site at depths varying from 1 to 13-feet bgs. This vadose zone is approximately 14 feet thick.
6. The surface lithology is underlain by the unconfined and locally perched clayey to silty sand that makes up the upper transmissive unit (UTU). The UTU is encountered from 8 to 18-feet bgs and ranges up to 15 feet in thickness. On the southern portion of the Site, the UTU is laterally continuous from west to east up to the inferred South Pit boundary, where it is no longer present. The UTU pinches out east of the East Ditch.
7. The UTU is underlain by very stiff to hard clay which is continuous across the Site and appears to be acting as an aquitard. It was encountered from 6 feet (shallower on the southern portion of the Site) to 26-feet bgs and is approximately 13 feet thick.
8. The aquitard clay layer is underlain by the second transmissive unit (STU). East of the East Ditch, the STU was encountered at approximately 14-feet bgs and depths up to 36-feet bgs on the western portion of the Site. The STU is laterally continuous in the vicinity of the South Pit. The STU thickness ranges from a minimum of 22 feet thick east of the East Ditch to a

minimum of 9 feet thick along the western property line.

Two groundwater bearing units are identified at the Site: the UTU and STU.

1. The UTU lacks lateral continuity across the Site and is therefore not a viable and continuous preferential groundwater pathway.
2. The UTU is not in hydraulic communication with the East Ditch in the vicinity of the South Pit, but does appear to be in communication with the East Ditch in the vicinity of the North Pit.
3. The UTU is classified as a Class 3 groundwater resource. Class 3 groundwater resources are not considered potentially usable water and are not subject to drinking water criteria.
4. The STU is classified as a Class 2 groundwater resource. Class 2 groundwater resources are potentially usable as a drinking water supply.

2.6 Groundwater Resources and Use

The City of Corpus Christi supplies water for municipal and industrial use to the Site and vicinity. Potable water is obtained from Lake Corpus Christi and Choke Canyon Reservoir Systems, within the Nueces River Basin, and from Lake Texana. A water well search of the Texas Water Development Board Database, conducted in 2009 (TWDB, 2009), did not identify any registered public water supply or domestic drinking water wells within a one-mile radius of the Site. No public water supply or domestic drinking water wells were identified within a 1/2-mile radius of the Site in a search conducted by EDR in 2011 (URS, 2014).

Groundwater was classified for usability based on the Texas Risk Reduction Program (TRRP) criteria. Using the criteria outlined in the Groundwater Resource Classification Logic Diagram of RG-366/TRRP-8 (TCEQ, 2010b), the applicable classification for the UTU is Class 3. Yield, corrected to a 4-inch well, ranged from 5.9 to 3,525 gallons per day (gpd) with an average yield of 850 gpd for the UTU. Total dissolved solids (TDS) concentrations ranged from 3,410 milligram per liter [mg/L] to 17,600 mg/L for the UTU, with and average TDS concentration of 9,220 mg/L for all wells and 12,170 mg/L for permanent wells (Figure 10). Class 3 groundwater resources are not considered potentially usable water and are not subject to drinking water criteria.

Using the criteria outlined in the Groundwater Resource Classification Logic Diagram of RG-366/TRRP-8 (TCEQ, 2010b), the applicable classification for the STU is Class 2. Yield, corrected to a 4-inch well, ranged from 294 to 2,751 gpd with an average yield of 1,220 gpd for the STU. TDS concentrations in the STU ranged from 4,980 to 5,660 mg/L and there is no current use of the resource. Class 2 groundwater resources are potentially usable as a drinking water supply. Currently there is no groundwater usage at the Site; the City of Corpus Christi supplies water to the Site.

2.7 Surface Water Resources and Use

Observations of the East Ditch during Site visits indicates that surface water in the East Ditch is intermittent. The southern part of the ditch (south of the concrete S-turn) is generally dry while the

northern part of the ditch holds water. Prior to Site activities beginning on September 27, 2010, a major flood occurred in the Corpus Christi area in which over 12 inches of precipitation fell between September 14 and September 21, 2010. An initial reconnaissance of the East Ditch on September 27, 2010 revealed a fairly continuous stream of water in the southern portion. By the following week, water in the southern portion of the East Ditch began drying to intermittent pools. Observations of the southern portion of the East Ditch showed that the intermittent pools began to dry up due to minimal precipitation. Surface water remained in the northern extent of the East Ditch, north of the 'S-Turn', during the field activities.

2.8 RI Sample Collection

Figure 3 shows the RI sample locations. Figure 4 shows the locations of the surface and subsurface soil samples and groundwater monitoring wells. Figure 5 shows the locations of the off-Site soil background samples. Figure 6 shows the locations of surface water and sediment samples collected in the East Ditch and along Up River Road. Figure 7 shows the passive and active soil gas sample locations. Samples were collected in accordance with standard operating procedures provided in the RI Work Plan and were analyzed for the parameters listed in the RI Work Plan (URS, 2010) and the Technical Memoranda (URS, 2011b; URS, 2012; and URS, 2013).

2.8.1 Soil

Soil borings for subsurface soil samples were generally advanced to approximately 15 to 20-feet bgs. Subsurface soil samples were collected based on visual observations, field screening using an organic vapor meter (e.g., photoionization detection), or other criteria. At a minimum, soil samples were collected from the surface soil at 0 to 0.5-feet bgs, shallow soil at the 1 to 2-feet bgs depth interval, from the subsurface soil at the 4 to 5-feet bgs depth interval and at a deeper depth interval using the procedures described in the RI/FS Work Plan (URS, 2010). If a specific interval displayed characteristics indicative of being affected by COPCs and the reference interval did not display these characteristics, the interval suspected of being affected by Site COPCs was sampled.

2.8.2 Sludge and Reworked Soil/Waste Material

If sludge or reworked soil/waste mixture was encountered in the soil borings, a sample was collected and the boring was terminated at that depth to prevent any potential vertical migration of Site COPCs.

2.8.3 Sediment and Surface Water

Sample collection procedures are described in the RI/FS Work Plan and the RI Report (URS, 2010; URS, 2014). Samples were collected from the top 6 inches of sediment. Surface water samples were collected from accumulated surface water in both the East Ditch and the Up River Road ditch.

2.8.4 Groundwater

Temporary and permanent monitoring wells that did not contain measureable LNAPL were purged and sampled using procedures described in the RI/FS Work Plan (URS, 2010) in order to obtain groundwater chemical data to evaluate Site conditions.

2.9 Soil Gas

The Phase II RI Technical Memorandum (URS, 2011b) recommended the evaluation of the vapor intrusion pathway. Passive soil gas samples using adsorbent media were collected from a depth of 2 to 3-feet bgs in the vicinity of the occupied buildings: Wingfoot Tire on Lot 3, Robert's Equipment and Sales on Lot 6, and Adult Video on Lot 7. Passive soil gas samplers were supplied by Beacon Environmental Service.

After evaluation of the passive soil gas data, four locations were sampled for soil gas concentrations using Summa® canisters (active soil gas). Samples were collected over an eight hour period from a depth of 5-feet bgs at the following locations shown on Figure 7:

SG-04: background

SG-13: adjacent to Adult Video Store

SG-22: parking lot of the Adult Video Store

SG-33: Roberts Equipment property

SG-49: Wingfoot Tire property

3.0 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

This section summarizes the key findings of the RI that influence the preparation of the BHHRA. The RI identified and delineated the nature and extent of contamination in surface and subsurface soils, soil gas, groundwater, sediments, and surface water. The residual waste material found at the Site is located within the former South Pit. There were isolated areas of high field readings and black discoloration not associated with waste materials identified in the former North Pit. This material does not appear to have a pathway for migration. Impacted groundwater associated with Site activities is centered in the vicinity of the former South Pit.

3.1 Waste Materials

The primary wastes remaining at the Site are the LNAPL in groundwater and residual waste material within the former South Pit. The residual waste material at the Site is characterized as: sludge-like, exhibiting a non-granular, oily, viscous or grease-like consistency, or a reworked soil/waste mixture, such as hydrocarbons in a granular soil matrix. The LNAPL has a density similar to water and is highly viscous, characteristics of non-migrating LNAPL.

The North Pit area does not contain waste material. The North Pit consists mostly of fill material with gravel, which supports the historical use of the North Pit as a storm water overflow structure to the South Pit.

3.2 Soils

The RI data demonstrate the following key points for the soils data.

1. Subsurface soil delineation is complete around the South Pit using benzene and benzo(a)pyrene as indicators of contamination.
2. An area of impacted subsurface soil on the trucking facility property (Lot 8B) is not associated with Site activities.
3. Elevated metals concentrations in the surface soils are associated with the caliche and gravel fill overlying native soils and not with Site activities.
4. The source of the metals, polycyclic aromatic hydrocarbons (PAHs), and pesticides in the surface soil samples is believed to be related to post Brine Service Company operations (i.e., historical such as backfilling or sandblasting and current operations).
5. The presence of benzene in soils in the vicinity of the South Pit is associated primarily with the historical Brine Service Company operations.
6. Mercury concentrations exceeding screening criteria are observed at shallower soil depths and not in waste materials.

3.3 Groundwater

The RI data demonstrate the following key points for the two groundwater bearing units.

1. In the vicinity of the South Pit, the UTU and STU have a hydraulic flow gradient to the north to northeast (Figures 8 and 9).
2. The presence of benzene in groundwater in the vicinity of the South Pit is associated primarily with historical Brine Service Company operations.
3. The UTU in the vicinity of the South Pit is impacted by LNAPL and dissolved phase constituents.
4. LNAPL can be attributed to Brine Service Company operations. LNAPL is stable and non-mobile as indicated by presence within the historical footprint of the South Pit and lack of migration outside the footprint in the 50 years since pit closure.
5. Based on the geology, the temporary well data, and the dry permanent well on the EF90 property, delineation of the impacted groundwater is complete downgradient in the UTU.
6. The presence of affected groundwater on the adjacent western property (Nueces Power) was found, and is indicative of a source of contamination that is not associated with the Brine Service Company operations.
7. No affected groundwater has been identified in the vicinity of the North Pit and as such the groundwater evaluation for the North Pit area is complete.
8. The applicable groundwater classification for the STU is Class 2. Class 2 groundwater resources are potentially usable as a drinking water supply. Currently there is no groundwater usage at the Site; the City of Corpus Christi supplies water to the Site.
9. The most recent analytical results for the STU indicate that arsenic and benzene concentrations slightly exceed groundwater ingestion criteria.
10. Current analyte concentrations in the UTU and STU are similar to or lower than historical analyte concentrations.

3.4 Sediments and Surface Water

The RI data demonstrate the following key points for surface water and sediments.

1. Surface water within the freshwater (upper) portion of the East Ditch occurs when storm water runoff from IH-37 and surrounding properties inundates the ditch and as such it is characterized as having intermittent or episodic flow.
2. The estuarine (lower) portion of the East Ditch is classified as a perennial stream.
3. An evaluation of the groundwater-surface water pathway indicates that groundwater is not contributing the metals, pesticides, and PAHs identified in the East Ditch.
4. Metals identified in the sediments of the estuarine portion of the East Ditch can be attributed to surface soil runoff from the North Pit area and Lot 8B and as such not related to the activities associated with operations of the Brine Service Company.

5. Based on a comparison of PAHs identified in the estuarine (lower) portion of the East Ditch and along Up River Road, PAHs are not associated with Site activities and can be attributed to run-off from the adjacent road.

3.5 Soil Gas

The results of the passive soil gas sampling event were used to select locations for additional soil vapor sample collection using Summa® canisters in the vicinity of the occupied businesses. The detected soil gas constituents that indicate an exceedance of their screening criteria are benzene, ethylbenzene, and TPH (C_5-C_8 aliphatics).

4.0 RISK ASSESSMENT METHODOLOGY

This section presents the methods used to perform the BHHRA for the Site. These methods follow the USEPA RAGS Part A (USEPA, 1989), RAGS Part B (USEPA, 1991a), RAGS Part D (USEPA, 2001), RAGS Part E (USEPA, 2004a), and RAGS Part F (USEPA, 2009). In addition, the risk assessment was completed in accordance with the USEPA-approved Work Plan for the Site (URS, 2010). The risk assessment tables are formatted in accordance with the USEPA RAGS Part D guidance (USEPA, 2001). The risk assessment was performed assuming the absence of any controls or remedial actions to mitigate affected media.

The BHHRA includes the following key components:

- Data Evaluation and Screening;
- Exposure Assessment;
- Toxicity Assessment;
- Risk Characterization; and
- Uncertainty Analysis.

The following subsections present a discussion of each of the risk assessment components.

4.1 Data Evaluation and Screening

Data evaluation and screening is a common data reduction step used in quantitative risk assessments to identify COPCs. It allows the risk evaluation to focus on those constituents that are likely to have the greatest potential impact on the overall risk and to eliminate constituents that are expected to pose negligible risk. The data screening process for this BHHRA includes the following steps:

- Determination of exposure areas;
- Evaluation of essential nutrients;
- Evaluation of frequency of detection;
- Evaluation of background levels;
- Selection of screening criteria; and
- Identification of COPCs.

4.1.1 Determination of Exposure Areas

During the RI planning, the Site soils were segregated into five investigation units; however, for the purposes of the BHHRA, the on-site soil investigative units have been combined to determine exposure areas (i.e., the South Pit Exposure Area and North Pit Exposure Area). The soil exposure areas were selected based on the distribution of the Site analytical data and consideration of reasonable anticipated human receptor activity patterns (Figure 4). The two impacted groundwater-bearing units (i.e., UTU

and STU) are also evaluated by exposure area (South Pit Exposure Area, North Pit Exposure Area, and Off-Site Exposure Area). The East Ditch, which includes the East Ditch Investigation Unit-South, East Ditch Investigation Unit-North, and East Ditch Investigation Unit-Downstream, is evaluated as a single unit for potential exposures to surface water and sediment. Sediment and surface water samples collected in the East Ditch south of IH-37 to immediately north of IH-37 are designated as East Ditch background samples (Figure 6). In addition, sediment and surface water samples collected in the drainage ditch that parallels Up River Road are used to characterize background contributions to the East Ditch Area in the vicinity of Up River Road.

4.1.2 Evaluation of Essential Nutrients

Surface water samples were analyzed for hardness (calcium and magnesium) to provide data for the calculation of Site-specific surface water criteria for the screening-level ecological risk assessment; calcium and magnesium were not listed as analytical parameters in the RI/FS Work Plan. In accordance with USEPA (1989), essential nutrients (e.g., calcium) detected in environmental media at the Site were evaluated to determine if they could be eliminated from the quantitative risk assessment. Essential nutrients are not expected to be toxic at the concentrations typically encountered in environmental media. TCEQ (2001) and (2007) indicate that environmental concentrations of certain nutrients (calcium, magnesium, potassium, sodium, and phosphorus) are not expected to be a health concern. Based on this guidance, calcium and magnesium were eliminated as COPCs in surface water.

4.1.3 Evaluation of Frequency of Detection

Pursuant to USEPA (1989), chemicals detected at a low frequency in media of concern may be considered as sampling or analytical anomalies and, therefore, may not be related to the site operations or require quantitative assessment. A detection frequency of five percent is conventionally used as a benchmark to eliminate chemicals from further quantitative assessment when at least 20 or more samples are collected from a specific medium. No chemicals were excluded from consideration in the BHHRA based on frequency of detection.

4.1.4 Evaluation of Background Concentrations

A statistical background comparison was completed for select naturally occurring and anthropogenic constituents (i.e., PAHs and metals) in surface soil, surface water, and sediment. Site-specific background values were developed for soil; however, the Texas-Specific Median Background values for soil promulgated in the TRRP rule (TCEQ, 1999) were used if the site-specific soil background values were lower. Note that the results of the background comparison are not used to eliminate constituents from the BHHRA; rather the findings are used to support determining Site-related contributions.

4.1.5 Selection of Screening Criteria

Applicable screening criteria were determined based on the current land use and reasonable anticipated future land use. The Site is currently in commercial/industrial use and is expected to remain

commercial/industrial in the future. The potential for exposure to a residential receptor is not anticipated because the Site is within an industrial area of Corpus Christi, Texas; no on-site residences exist, and the closest off-site residential community ((b) (6) [redacted]) is located more than a ½-mile from the Site. Hence, commercial/industrial risk-based screening criteria are considered appropriate for screening the Site data to identify COPCs for further evaluation in the BHHRA. This approach is protective for all potentially exposed receptors since the screening criteria protective of a standard industrial worker scenario would also be protective of other human receptor populations, such as the construction or maintenance workers, that may utilize the Site at lower exposure frequencies and shorter durations.

The screening criteria selected for soil and groundwater are the Regional Screening Levels (RSLs) published by USEPA (2013a) and the TRRP Protective Concentration Levels (PCLs) by TCEQ (2012a). The USEPA does not provide RSLs for tap water for commercial/industrial land use; the tap water RSLs are based on residential land use only. TRRP groundwater commercial/industrial PCLs are available for Class 1 and 2 groundwater resources; however, they include applicable or relevant and appropriate requirements (ARARs) (i.e., maximum contaminant levels [MCLs] and secondary drinking water standards [SDWS]). Even though the City of Corpus Christi supplies drinking water to Site businesses, as a conservative measure, the USEPA tap water RSLs are used as the criteria for screening constituents reported in the STU. If a constituent did not have a USEPA tap water RSL, its TCEQ TRRP residential groundwater PCL was used. USEPA does not provide RSLs for sediment and surface water. The screening criteria for sediments and surface water are the human health sediment and surface water PCLs published in the TCEQ's TRRP-24 *Determining PCLs for Surface Water and Sediment* (TCEQ, 2006a; TCEQ, 2006b). In the absence of a surface water PCL for a constituent, the TRRP commercial/industrial groundwater ingestion PCL was used. The TCEQ's PCLs for carcinogenic constituents are based on one-in-one hundred thousand cancer risk (1×10^{-5}), while the RSLs are based on one-in-one million cancer risk (1×10^{-6}). For consistency, the TCEQ PCLs for carcinogens were reduced by an order of magnitude prior to use in the screening process. Screening criteria for the vapor intrusion into indoor air pathway were developed by adjusting commercial/industrial ambient air screening levels published by USEPA (2002b and 2011) and the Massachusetts Department of Environmental Protection (MassDEP, 2011) using the default attenuation factor (i.e., 0.001) recommended for commercial buildings by California Environmental Protection Agency (CalEPA, 2011).

The following summarizes the screening criteria used to identify COPCs by environmental media:

Surface soil (0 to 2-feet bgs): Surface soil is defined as the soils from surface to 2-feet bgs. Data are compared to the lower of the industrial soil RSLs and TRRP commercial/industrial 30-acre source area soil PCLs for combined direct contact exposures ($^{Tot}Soil_{Comb}$), adjusted for a 10^{-6} carcinogenic risk. The RSLs and $^{Tot}Soil_{Comb}$ PCLs both take into consideration the three potential exposure routes (ingestion, inhalation, and dermal contact).

Surface and Subsurface Soil/Waste (0 to 10-feet bgs): Surface and subsurface soil/waste are defined

as the soils or waste materials located from surface to 10-feet bgs. Data are compared to the lower of the industrial soil RSLs and TRRP commercial/industrial 30-acre source area soil PCLs for combined direct contact exposures ($^{Tot}Soil_{Comb}$), adjusted for a 10^{-6} carcinogenic risk.

Subsurface Soil/Waste (>2-feet bgs): Subsurface soil/waste is defined as the soils or waste materials located from 2-feet bgs to the confining clay beneath the UTU. Data are compared to the TRRP commercial/industrial 30-acre source area PCLs for inhalation of volatile emissions migrating from subsurface soil to ambient air ($^{Air}Soil_{Inh\text{-}v}$), adjusted for a 10^{-6} carcinogenic risk (where applicable).

All Soils/Waste: All soil/waste is defined as soils or waste materials overlying the UTU. Data are compared to the TRRP commercial/industrial 30-acre source area PCLs for the protection of soil constituents leaching to Class 3 groundwater ($^{GW}Soil_{Class\ 3}$), adjusted for a 10^{-6} carcinogenic risk. An adjustment was not made if the groundwater protection PCL for a carcinogen was based on a MCL.

Groundwater (UTU): Data are compared to the lower of the TRRP commercial/industrial PCLs for Class 3 groundwater ($^{GW}GW_{Class3}$) and inhalation of volatile emissions migrating from groundwater to ambient air ($^{Air}GW_{Inh\text{-}v}$), adjusted for a 10^{-6} carcinogenic risk (where applicable).

Groundwater (STU): Data are compared to the USEPA residential tap water RSLs; if an USEPA RSL was not available for a constituent, the TRRP residential PCLs for Class 1 or 2 groundwater ($^{GW}GW_{Ing}$) were used, adjusted for a 10^{-6} carcinogenic risk (where applicable).

Sediments: Data are compared to the TCEQ's human health sediment ($^{Tot}Sed_{comb}$) PCLs, adjusted for a 10^{-6} carcinogenic risk. The $^{Tot}Sed_{comb}$ PCLs do not evaluate the inhalation route; these PCLs are based on ingestion and dermal contact with sediment.

Surface water: Data are compared to the TCEQ's human health surface water ($^{Tot}RW_{comb}$) PCLs, adjusted for a 10^{-6} carcinogenic risk. The $^{Tot}RW_{comb}$ PCLs do not take into consideration inhalation as an exposure route of concern; these PCLs are based on ingestion and dermal contact with surface water.

Soil Gas: Data are compared to soil gas screening criteria developed by adjusting commercial/industrial air risk-based screening levels published by USEPA (2002b and 2011) and the MassDEP (2011) using an attenuation factor (i.e., 0.001) recommended for commercial buildings by CalEPA (2011). The soil gas screening criteria selected are based on a 10^{-6} carcinogenic risk. The soil gas screening criteria are provided in Appendix I.

4.1.6 Identification of COPCs

The data reduction screening step was completed for all constituents analyzed in environmental media of concern (i.e., surface soil, subsurface soil, subsurface waste, groundwater, sediment, surface water, and soil gas). The constituents with maximum concentrations greater than their human health screening criteria are retained for further evaluation as COPCs. If a constituent was not detected in a medium of concern and the sample detection limit (SDL) exceeds its human health screening criterion, it is evaluated further in the *Uncertainty Analysis* (Section 9.0). The constituents with maximum concentrations and SDLs less than their human health screening criteria are eliminated from further

evaluation. The USEPA's RAGS D Table 2 format (USEPA, 2001) presents the analytical data summary and screening results for each environmental media by exposure area. The analytical data summary tables also summarize the minimum detected concentration and SDL, maximum detected concentration and SDL, location of the maximum detected concentration, the frequency of detection, and applicable background values and ARARs. Appendix K includes summary tables of the background and Site data for media of concern.

4.2 Exposure Assessment

The exposure assessment is the qualitative or quantitative evaluation of the magnitude, frequency, duration, and route of exposure to COPCs that were detected in media of concern. This requires understanding of both the environmental setting and the exposure pathways by which human receptors may potentially be exposed to COPCs. The exposure assessment considers both reasonable maximum exposure (RME) and central tendency (CT) scenarios. The RME is the maximum exposure that is reasonably anticipated to occur at a site and is intended to represent a conservative estimate of exposure (that is above average, but within the range of possible scenarios) for potentially exposed human receptors. The CT represents a most likely scenario and is intended to represent a more realistic estimate of exposure for potentially exposed human receptors. An example of a RME and CT assumption in this BHHRA is the exposure duration for the outdoor and indoor workers: 25 years for the RME scenario and 9 years for the CT scenario. The exposure assessment is comprised of the following three components:

Characterization of the exposure/environmental setting: Information pertaining to the exposure/environmental setting (e.g., land use, topography, and groundwater and surface water resources) are used to support the development of exposure scenarios as well as the selection of potentially exposed receptors.

Identification of exposure pathways: This step of the exposure assessment involves developing exposure scenarios (based on COPC fate and transport mechanisms and complete exposure pathways and routes) and estimating activity patterns of potentially exposed populations.

Quantification of exposure: The quantification of exposure involves determining exposure point concentrations (EPCs), which are the concentrations at the point where exposure is assumed to occur and estimating constituent intake or exposure concentration for each applicable exposure route.

4.2.1 Constituent Release, Transport, and Fate

The potential for constituent migration in environmental media depends primarily on site-specific characteristics (e.g., flat terrain and heavy vegetation minimize surface runoff) and the physical and chemical properties of the constituent. A constituent may be physically transformed (e.g., volatilization), chemically altered (e.g., hydrolysis), biodegraded, and/or retained in one or more environmental media.

The following discusses possible migration mechanisms for the transport of COPCs in environmental

media of concern at the Site. These transport mechanisms are depicted in the CSEM (Figure 11).

Soil/Waste

Possible mechanisms of constituent release and migration from the soil/waste medium include:

- Dust emissions, atmospheric dispersion, and deposition;
- Surface runoff/overland flow to surface water and sediments;
- Volatilization of VOCs and migration to outdoor and indoor air; and
- Leaching to underlying water-bearing unit(s).

Groundwater

Possible transport mechanisms associated with the groundwater include:

- Lateral migration in the aquifer;
- Vertical migration to deeper water-bearing unit(s);
- Discharge to surface water and sediment; and
- Volatilization of VOCs and migration to outdoor and indoor air.

Surface Water

Possible transport mechanisms associated with surface water include:

- Volatilization of VOCs to outdoor air;
- Transport downstream; and
- Deposition and absorption onto sediment.

Sediment

Possible transport mechanisms associated with sediment include:

- Volatilization of VOCs to outdoor air; and
- Partitioning and re-suspension into surface water.

4.2.2 Potentially Exposed Human Populations

Potential receptors were determined based on the land use, media of concern, and current and future anticipated activities at the Site. The determination of potentially exposed human receptors was presented in the Work Plan (URS, 2010). The on-site commercial/industrial worker scenario described in the Work Plan is further refined in the BHHRA to include two separate receptors: an indoor worker and outdoor worker. These potentially exposed populations are discussed below. In addition, since Site-related COPCs were identified in the UTU and STU off-site, an off-site outdoor worker and off-site construction worker are evaluated for potential exposures to COPCs in groundwater in the UTU and STU off-site. As stated in the USEPA-approved Work Plan, the potential for exposure to

residential receptors is not evaluated because the Site is located within an industrial setting, no on-site residences currently exist, and the closest residential community is greater than a ½-mile from the Site.

The CSEM, depicting human receptors and potential exposure pathways and routes, was prepared for the Site (Figure 11). The CSEM is used as the basis for the selection of exposure pathways and routes for evaluation in the BHHRA. The USEPA's RAGS D Table 1 (Appendix A) summarizes the selection of human health receptors and the justification for including and excluding specific exposure pathways and routes.

The potentially exposed human receptors for the Site are:

- On-Site Current/Future Outdoor Worker;
- On-Site Current/Future Indoor Worker;
- On-Site Current/Future Construction Worker;
- On-Site Current/Future Maintenance Worker;
- On-Site Current/Future Adolescent Trespasser;
- Off-Site Current/Future Outdoor Worker; and
- Off-Site Current/Future Construction Worker.

4.2.3 Potentially Complete Exposure Pathways and Routes

The following provides a discussion of the potential pathways and routes related to exposures to media of concern at the Site. Figure 12 depicts the soil intervals for the BHHRA

Surface Soil: Surface soil is defined as soils from the ground surface to 2-feet bgs within the South Pit and North Pit Exposure Areas. Incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates are considered complete exposure routes.

Subsurface Soil: Subsurface soil is defined as soils located below 2-feet bgs within the South Pit and North Pit Exposure Areas. Inhalation of volatile COPCs migrating from subsurface soil to ambient air is considered a complete exposure pathway. In addition, because construction work is assumed to occur to a depth of 10-feet bgs, incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates are considered complete exposure routes for subsurface soils to a depth of 10-feet bgs.

Subsurface Waste: Subsurface waste is defined as sludge and reworked soil/waste mixtures located below 2-feet bgs within the South Pit Exposure Area. Inhalation of volatile COPCs migrating from subsurface waste to ambient air is considered a complete exposure pathway. In addition, because construction work is assumed to occur to a depth of 10-feet bgs, incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates are considered complete exposure routes for subsurface waste to a depth of 10-feet bgs. No subsurface waste was identified in the North Pit Exposure area.

All Soil or All Waste: All soil or all waste is defined as soils or sludge and reworked soil/waste mixture overlying the UTU in the South Pit Exposure Area and soils overlying the UTU in the North Pit Exposure Area. Current and future leaching of COPCs in the soils or waste to groundwater is considered a complete pathway.

Groundwater (UTU): Direct use of groundwater in the UTU for drinking is an incomplete pathway because it is considered non-potable (Class 3). The UTU is not used as a water resource, and is not likely to be used for that purpose in the future; hence, the UTU is evaluated based on its Class 3 groundwater designation and the potential for volatile COPCs in the UTU to migration to ambient air. In addition, because construction work is assumed to take place to a depth of 10-feet bgs, a construction worker conducting work in a trench is assumed to be exposed to the UTU via incidental ingestion, dermal contact, and inhalation of volatile COPCs.

Groundwater (STU): Even though no public water supply wells were identified within a 1-mile radius of the Site, and potable water at the Site and vicinity is municipally-supplied by the City of Corpus Christi, it is conservatively assumed that groundwater in the STU can be potentially used as a drinking water source (Class 2). Exposure to groundwater in the STU is assumed to occur via ingestion; it is assumed that tap water at the Site is not routinely used for bathing and, therefore, dermal contact with COPCs in the STU is not evaluated. A hand-washing scenario was considered significantly less conservative than a drinking water scenario and, therefore, is also not evaluated.

Outdoor Air: Sufficiently volatile COPCs in subsurface soil, groundwater, and LNAPL/waste could migrate to outdoor air. Inhalation of COPCs emanating from these media to outdoor (ambient) air is considered a complete exposure pathway.

Indoor Air: Sufficiently volatile COPCs in soil, groundwater, and LNAPL/waste could migrate to indoor air (vapor intrusion). Inhalation of COPCs emanating from these media into indoor air is considered a potentially complete exposure pathway, and is evaluated using soil gas data.

Sediments: Sediment is a potential exposure medium for human receptors that may maintain or trespass the East Ditch Area. Incidental ingestion, dermal contact, and inhalation of volatile COPCs are potential routes of exposure. Evaluation of the inhalation route is considered unnecessary because no sufficiently volatile COPCs are screened for further evaluation in the sediment pathway.

Surface Water: Surface water is a potential exposure medium for human receptors that may maintain or trespass the East Ditch Area. Incidental ingestion, dermal contact, and inhalation of volatile COPCs are potential routes of exposure. Evaluation of the inhalation route is considered unnecessary because no sufficiently volatile COPCs are screened for further evaluation in the surface water pathway.

4.2.4 Description of Receptor Exposure Scenarios

Based on the exposure pathway analysis conducted for the Site, the human health exposure scenarios quantitatively evaluated in the BHHRA are summarized below. This information is also summarized in the USEPA RAGS Part D Table 1 in Appendix A, and depicted in CSEM (Figure 11).

On-Site Current/Future Outdoor Worker

The Site currently has various commercial/industrial uses, and is expected to be used for commercial/industrial purposes in the future. Therefore, a current and future on-site outdoor worker is considered a potentially exposed receptor at the Site. An on-site outdoor worker is anticipated to participate in routine outdoor activities, and is assumed to be exposed to:

- Surface soil (0 to 2-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates;
- Subsurface soil (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Waste materials (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Groundwater - UTU (Class 3 groundwater) via inhalation of volatile COPCs in ambient air; and
- Groundwater - STU (Class 2 groundwater) via ingestion.

Since the STU is conservatively evaluated as a drinking water source, the groundwater-to-ambient air pathway is not additionally quantified (given it is a less conservative scenario).

On-Site Current/Future Indoor Worker

A current and future on-site indoor worker is anticipated to participate in routine indoor activities, and is assumed to be exposed via inhalation to volatile COPCs migrating from soil, LNAPL/waste material, the UTU, and the STU into indoor air.

On-Site Current/Future Construction Worker

Due to possible future site development and maintenance of the pipelines that traverse the Site, an on-site construction worker is assumed to be a current and future potentially exposed receptor. A construction worker is assumed to conduct work from the ground surface to the top of the first groundwater-bearing unit (i.e., UTU). Static water levels measured at the Site indicate the depth to the UTU ranges from about 6 to 15-feet bgs, with an average depth of about 9.6-feet bgs. Since the depth to the UTU varies considerably within the Site vicinity, it is assumed that an on-site construction worker conducts work to a depth of 10-feet bgs. A construction worker is assumed to be exposed to:

- Surface and subsurface soil (0 to10-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates;
- Waste materials (0 to10-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates; and
- Groundwater - UTU (Class 3 groundwater) via incidental ingestion, dermal contact and inhalation of volatile COPCs.

An on-site outdoor worker scenario represents the most conservative exposure for ingestion of groundwater (i.e., COPCs in the STU); an additional evaluation is not performed for the on-site

construction workers. Since the STU is conservatively evaluated as a drinking water source, the groundwater-to-ambient air pathway is not additionally quantified.

On-Site Current/Future Maintenance Worker

A current and future on-site maintenance worker is included as a potential current and future receptor to evaluate a receptor that may be involved in routine grounds keeping activities (such as mowing pipeline right-of-ways). A current and future on-site maintenance worker is assumed to be exposed to:

- Surface soil (0 to 2-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and soil particulates;
- Subsurface soil (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Waste materials (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Groundwater - UTU (Class 3 groundwater) via inhalation of volatile COPCs in ambient air;
- Sediment in the East Ditch via incidental ingestion and dermal contact; and
- Surface water in the East Ditch via incidental ingestion and dermal contact.

An on-site outdoor worker scenario represents the most conservative exposure for ingestion of groundwater (i.e., COPCs in the STU); an additional evaluation is not performed for the on-site maintenance workers. Since the STU is conservatively evaluated as a drinking water source, the groundwater-to-ambient air pathway is not additionally quantified.

On-site Current/Future Adolescent Trespasser

A current and future on-site adolescent trespasser is considered a potentially exposed receptor for Site. Due to the distance of the Site from residential communities, it is unlikely that children (under the age of 16 years) will trespass the Site. An on-site adolescent trespasser is assumed to be exposed to:

- Surface soil (0 to 2-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates;
- Subsurface soil (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Waste materials (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Groundwater - UTU (Class 3 groundwater) via inhalation of volatile COPCs in ambient air;
- Sediment in the East Ditch via incidental ingestion and dermal contact; and
- Surface water in the East Ditch via incidental ingestion and dermal contact.

An on-site outdoor worker scenario represents the most conservative exposure for ingestion of groundwater (i.e., COPCs in the STU); an additional evaluation is not performed for the on-site adolescent trespasser. Since the STU is conservatively evaluated as a drinking water source, the groundwater-to-ambient air pathway is not additionally quantified.

Off-Site Current/Future Outdoor Worker

The Off-Site Exposure Area is currently a commercial/industrial site, and is expected to be used for commercial/industrial purposes in the future. Therefore, a current and future off-site outdoor worker is considered a potentially exposed receptor at the Site. An off-site outdoor worker is anticipated to participate in routine outdoor activities, and is assumed to be exposed to:

- Groundwater - UTU (Class 3 groundwater) via inhalation of volatile COPCs in outdoor air; and
- Groundwater - STU (Class 2 groundwater) via ingestion.

Since the STU is conservatively evaluated as a drinking water source, the groundwater-to-ambient air pathway is not additionally quantified.

Off-Site Current/Future Construction Worker

A current and future off-site construction worker is assumed to be exposed to groundwater in the UTU (Class 3 groundwater) while working in a trench/excavation via incidental ingestion, dermal contact and inhalation of volatile COPCs. An off-site outdoor worker scenario represents the most conservative exposure for ingestion of groundwater (i.e., COPCs in the STU), an additional evaluation is not performed for the off-site construction workers. Since the STU is conservatively evaluated as a drinking water source, the groundwater-to-ambient air pathway is not additionally quantified.

4.2.5 Exposure Point Concentrations

An estimate of the EPC is required to calculate COPC intake or exposure concentrations. This section describes methodologies for determining EPCs for COPCs by exposure medium using available measurement data and fate and transport models (where applicable). In general, statistical methods, included in the USEPA's ProUCL data analysis software (USEPA, 2013b), were used to estimate 95% Upper Confidence Limit (UCL) of the mean for determining EPCs (where applicable). Where sufficient data were not available to support a statistical representation of the mean, the maximum detected concentration is used as the EPC. Hence, EPCs for both RME and CT scenarios are either the maximum reported concentration or the 95% UCL of the mean. The derivation of 95% UCLs is presented in Appendix C. The RAGS D Table 3 (Appendix A) summaries present the EPCs by exposure media. In addition, the determination of EPCs is discussed below by exposure media.

Surface Soil

EPCs for direct contact with surface soil are based on available measurement data. It is assumed that human contact with soil is spatially random. For the both the RME and CT scenarios, EPCs for direct contact with surface soil are either the maximum concentrations or the 95% UCLs of the mean for the detected COPCs. The maximum concentration is used when the frequency of the detection is less than 20 percent and/or the estimated UCL is below the arithmetic mean of the detected analytical results.

Subsurface Soil

EPCs for direct contact with subsurface soil are based on available measurement data. It is assumed

that human exposure via direct contact with soil is spatially random. For the both the RME and CT scenarios, EPCs for direct contact with subsurface soil are either the maximum concentrations or the 95% UCLs of the mean for the detected COPCs. The maximum concentration is used when the frequency of the detection is less than 20 percent and/or the estimated UCL is below the arithmetic mean of the detected analytical results.

Waste Materials

EPCs for direct contact with sludge and reworked soil/waste mixtures are based on available measurement data. It is assumed that human contact with waste materials is spatially random. For the both the RME and CT scenarios, EPCs for direct contact with waste materials are either the maximum concentrations or the 95% UCLs of the mean for the detected COPCs. The maximum concentration is used when the frequency of the detection is less than 20 percent and/or the estimated UCL is below the arithmetic mean of the detected analytical results.

Groundwater (UTU and STU)

EPCs for ingestion of and dermal contact with groundwater are based on measurement data. Intake for the dermal exposure route requires calculation of the absorbed dose per event (DA_{event}) to support calculation of the dermal absorbed dose, as described in RAGS D Table 4 (Appendix A). The estimation of DA_{event} for dermal contact with groundwater COPCs is presented in Appendix H. For both the RME and CT scenario, EPCs for groundwater are the maximum detected COPC concentrations for the UTU and STU. The data used for all groundwater exposure scenarios represent the most recent analytical results.

Outdoor Air

A particulate emission factor (PEF) is used to estimate concentrations of COPCs in ambient air from windblown dust from soil, as described in the RAGS D Table 4 (Appendix A). A site-specific PEF was developed based on the PEF equation provided in USEPA (2002a) (Appendix E-2). Volatilization factors (VFs) are used to estimate volatile concentrations in ambient air due to migration of volatile COPCs from soil or groundwater, as described in the RAGS D Table 4 (Appendix A). Soil constituent-specific VFs were developed based on the soil-to-ambient air equation presented in USEPA (2002a) and are provided in Appendix E-1. For the RME and CT scenarios, the EPCs used for the inhalation of soil vapors and/or particulates are the 95% UCLs of the mean. Groundwater constituent-specific VFs were developed based on the groundwater-to-ambient air equation presented in TCEQ (1999) and are provided in Appendix F. Chemical-specific VFs, which relate concentrations of volatile COPCs in groundwater to ambient air concentrations that may be inhaled by a construction worker in a trench, were calculated based on a model developed by the Virginia Department of Environmental Quality (VDEQ, 2012). The groundwater VFs for the construction worker in a trench scenario are presented in Appendix G. For the RME and CT scenarios, the EPCs used for the inhalation of groundwater vapors outdoor or in a trench are the maximum detected COPC concentrations.

Indoor Air

Soil gas data are used in the estimation of indoor air EPCs using the USEPA's Vapor Intrusion SCREEN Model for Soil Gas (USEPA, 2004b) [which is based on the Johnson and Ettinger Model]. The outputs from the Vapor Intrusion SCREEN soil gas model are used to estimate indoor air concentrations and are provided in Appendix I. For the RME and CT scenarios, the EPCs used for the inhalation of vapors in indoor air are the maximum detected COPC concentrations.

Surface Water

EPCs for incidental ingestion of and dermal contact with surface water in the East Ditch are based on available measurement data. Intake for the dermal exposure route requires calculation of the absorbed dose per event (DA_{event}) to support calculation of the dermal absorbed dose. The estimation of DA_{event} for dermal contact with surface water COPCs is presented in Appendix H. For the RME and CT scenarios, the EPCs used for the surface water pathway are the maximum detected COPC concentrations.

Sediment

Exposure concentrations for ingestion and dermal contact with sediments in the East Ditch are based on available measurement data. For the RME and CT scenarios, the EPCs used for the sediment pathway are the maximum detected COPC concentrations.

4.2.6 Calculation of Intake and Exposure Concentrations

In order to quantify exposure, exposure parameters are required to estimate chemical intake or exposure concentration. Exposure variables were selected for RME and CT scenarios. Exposure parameters recommended in RAGS Part A and B (USEPA, 1989; USEPA 1991a; USEPA 1991b), USEPA's Supplemental Soil Screening Guidance (USEPA, 2002a), USEPA's Dermal Risk Assessment Guidance (USEPA, 2004a), and USEPA's Inhalation Risk Assessment Guidance (USEPA, 2009) were generally selected. Where appropriate and applicable, professional judgment was used to select site-specific exposure parameters. The RME assumptions were provided in the Work Plan (URS, 2010). Both RME and CT parameter values are presented in the RAGS Part D Table 4 (Appendix A).

The standard equations recommended by USEPA guidance (USEPA, 1989; USEPA, 1991a; USEPA 1991b; USEPA, 2002a; and USEPA, 2004a) for estimating chemical intake via the ingestion and dermal exposure routes were used for the determination of COPC intake. The following is the generic algorithm used to calculate chemical intake (USEPA, 1989):

$$I = (EPC \times CR \times EF \times ED)/(BW \times AT)$$

Where:

I	=	Intake (milligram per kilogram-day [mg/kg-day])
EPC	=	Exposure point concentration (e.g., mg/kg for soil)
CR	=	Contact rate (e.g., mg/day for soil ingestion)

EF = Exposure frequency (days/year)

ED = Exposure duration (years)

BW = Body weight (kg)

AT = Averaging time (days); for carcinogens, it is based on a lifetime exposure of 70 years (average life expectancy), and for non-carcinogens, it is based on ED.

For the inhalation route, the standard equations recommended by USEPA (2009) for estimating exposure concentrations were used. The following is the generic algorithm used to calculate exposure concentration (USEPA, 2009):

$$EC = (CA \times ET \times EF \times ED)/(AT)$$

Where:

EC = Exposure concentration (milligram per cubic meter [mg/m^3])

CA = COPC concentration in air (mg/m^3)

ET = Exposure time (hours/day)

EF = Exposure frequency (days/year)

ED = Exposure duration (years)

AT = Averaging time (hours); for carcinogens, it is based on a lifetime exposure of 70 years (average life expectancy), and for non-carcinogens, it is based on ED.

Route-specific variations of the aforementioned generic intake and exposure algorithms were used to calculate intake or exposure concentrations for COPCs. The RAGS D Appendix A Tables 4.1 through 4.7 summarize the equations for calculating pathway-specific intake or exposure concentrations by receptor.

4.3 Toxicity Assessment

The toxicity assessment, evaluating the potential toxicity of the COPCs, is a key step in the BHHRA. This section summarizes the USEPA's process for developing carcinogenic and noncarcinogenic toxicity factors and identifies the hierarchy of toxicity sources used in the BHHRA. Toxicity profiles for the primary COPCs contributing to the overall cancer risks and/or non-cancer hazards (i.e., the risk drivers) are provided in Appendix L.

4.3.1 Toxicity Values for Noncarcinogens

RAGS D Tables 5-1 and 5-2 (Appendix A) present the toxicity values for noncarcinogens. Toxicity values used to evaluate noncarcinogenic effects (effects other than cancer) include the following:

- Oral reference dose (RfDo) in mg/kg-day; and
- Inhalation reference concentration (RfC) in mg/m^3.

Chronic oral RfDs and inhalation RfCs are estimates of the daily exposure to the human population

(including sensitive subgroups) that are likely to be without an appreciable risk of deleterious effects during a lifetime. Chronic RfDs and RfCs are specifically developed to be protective for long-term exposures, and are used to evaluate all potential exposure scenarios in this BHHRA (including short-term exposure scenarios such as a construction worker).

4.3.2 Toxicity Values for Carcinogens

RAGS D, Tables 6-1 and 6-2 (Appendix A) present the toxicity values for carcinogens and the carcinogenic weight of evidence classification. The toxicity values used to evaluate carcinogenic effects include the following:

- Cancer slope factor (CSF) in units of $(mg/kg\text{-}day)^{-1}$; and
- Inhalation unit risk (IUR) in units of $(\mu g/m^3)^{-1}$.

Weight of Evidence Classification (USEPA, 1986) and Hazard Descriptors under the USEPA's *Guidelines for Carcinogenic Risk Assessment* (USEPA, 2005) were determined for the Site COPCs. To determine the carcinogenic potential of a chemical, USEPA classifies the chemical into one of the following groups according to the weight of evidence from epidemiological studies and animal studies (USEPA, 1986):

Group A: Human carcinogen (sufficient evidence of carcinogenicity in humans);

Group B: Probable human carcinogen (B1 - limited evidence of carcinogenicity in humans; B2 - sufficient evidence of carcinogenicity in animals with inadequate or lack of evidence in humans);

Group C: Possible human carcinogen (limited evidence of carcinogenicity in animals and inadequate or lack of human data);

Group D: Not classifiable as to human carcinogenicity (inadequate or no evidence); or

Group E: Evidence of noncarcinogenicity for humans (no evidence of carcinogenicity in adequate studies).

USEPA's *Guidelines for Carcinogen Risk Assessment* (USEPA, 2005) emphasizes the importance of weighing all of the evidence in making conclusions about the human carcinogenic potential of a constituent and recommend the use of hazard descriptors as well as establishing the mode of action and emphasizing epidemiological data to facilitate clarity in describing carcinogenic conclusions. The following five descriptors are discussed in the guidelines:

- Carcinogenic to Humans;
- Likely to be Carcinogenic to Humans;
- Suggestive Evidence of Carcinogenic Potential;
- Inadequate Information to Assess Carcinogenic Potential; and
- Not Likely to be Carcinogenic in Humans.

Slope factors have been derived for oral and/or inhalation exposure since the carcinogenic potential of a constituent can be dependent on the route of exposure. The IUR is the quantitative estimate of incremental risk in terms of risk per $\mu g/m^3$ air breathed. In general, a CSF is a plausible upper-bound estimate of the probability of a response per unit intake of a chemical over a lifetime. The slope factor is used in risk assessments to estimate an upper-bound lifetime probability of an individual developing cancer as a result of exposure to a specific concentration of a potential carcinogen (USEPA, 1989). The calculation of a CSF entails applying mathematical models to extrapolate from the relatively high doses administered to experimental animals (or the exposures noted in epidemiologic studies) to the lower exposure levels expected for human contact in the environment. In accordance with USEPA guidance (2005), slope factors for COPCs with a mutagenic mode of action were not adjusted in the BHHRA because receptor populations under the age of 16 years were not identified as potentially exposed receptors at the Site.

4.3.3 Sources of Information for Toxicity Values

This section summarizes the hierarchy used to select the toxicity values used in the BHHRA. The sources of carcinogenic and noncarcinogenic toxicity factors were selected in accordance with the USEPA's toxicity factors hierarchy guidance (USEPA, 2003a). The hierarchy recommends the following sources in order of preference:

- **Tier 1:** USEPA's Integrated Risk Information System (IRIS), which is the preferred toxicity factors source. Values in IRIS have undergone an extensive peer-review process.

- **Tier 2:** Provisional Peer-Reviewed Toxicity Values (PPRTV). The Office of Research and Development, National Center for Environmental Assessment Superfund Health Risk Technical Support Center develops PPRTVs on a chemical-specific basis when requested by USEPA's Superfund Program.

- **Tier 3:** Other toxicity values include additional USEPA and non-USEPA sources of toxicity data. Priority is given to those sources of information that are the most current, have been peer-reviewed, and the basis is transparent. Examples of "other" toxicity information listed by USEPA (2003a) include: California Environmental Protection Agency toxicity values; Agency for Toxic Substances and Disease Registry Minimum Risk Levels; and USEPA's Health Effects Assessment Summary Table toxicity values.

Route-to-route extrapolations from oral toxicity values to derive inhalation values, and vice versa, were not made. For example, if there is an oral RfD for a COPC, but an inhalation RfC is not available, only the oral route is quantitatively evaluated in the BHHRA. USEPA recommends extrapolating dermal RfDs and CSFs from oral RfDs and CSFs, respectively, using gastrointestinal absorption factors (ABSgi) (USEPA, 2004a). For the determination of RfD_d, if the chemical-specific oral-to-dermal adjustment factor is less than 50 percent, the RfD_d is derived by multiplying the RfD_o by the oral-to-dermal adjustment factor. For compounds with an oral-to-dermal adjustment factor equal to or greater

than 50 percent, no adjustment is required, and the RfD_d equals the RfD_o. For the determination of CSF_d, if the chemical-specific oral-to-dermal adjustment factor is less than 50 percent, the CSF_d was derived by dividing the CSF_o by the oral-to-dermal adjustment factor. For compounds with an oral-to-dermal adjustment factor equal to or greater than 50 percent, no adjustment is required, and the CSF_d equals the CSF_o. Dermal GI absorption factors are included in Appendix D.

4.3.4 Chemical-Specific Considerations

This section discusses chemicals that have specific toxicity considerations based on USEPA toxicity assessment requirements, and these include the Site COPCs: lead, PAHs, and total PCBs.

Lead: No toxicity factors are currently available for lead. The USEPA's approach to estimating lead toxicity and risk are presented in the publications *Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil* (USEPA, 2003b).

PAHs: With the exception of benzo(a)pyrene, data for other PAHs are considered to be insufficient for the calculation of slope factors. USEPA has developed an "estimated order of potential potency" for the carcinogenic PAHs [benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene] (USEPA, 1993). USEPA's relative potency factors were used to estimate oral cancer risks for the carcinogenic PAHs.

PCBs: Total PCBs were evaluated using the cancer toxicity factors available in IRIS.

4.4 Risk Characterization

The final step in the BHHRA is the characterization of the potential risk and hazard associated with exposures to COPCs detected in media of concern at the Site. Risk characterization involves integrating the information developed in the exposure assessment and the toxicity assessment to estimate potential human health risk or hazard. The probabilities that adverse human health effects will occur are presented separately for non-cancer hazards and cancer risks due to differences in toxicological endpoints, relevant exposure averaging times, and risk characterization methods. Non-cancer hazards are expressed as a unitless ratio of the estimated intake or exposure concentration to an acceptable daily intake or reference concentration (i.e., hazard quotient, HQ). Cumulative exposure route- or target organ-specific non-cancer hazards represent the sum of individual HQs and are presented as hazard indices (HI). Cancer risks (CR) are expressed as unitless values in scientific notation.

4.4.1 Characterization of Carcinogenic Risks

Risks associated with exposure to chemicals classified as carcinogens are estimated as the incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure (USEPA, 1989).

For oral and dermal exposures, carcinogenic risk is calculated by multiplying the estimated daily intake or dose of a chemical (averaged over a lifetime) by a chemical-specific and route-specific CSF. The

calculation of carcinogenic risk for a chemical via the oral and dermal exposure routes is illustrated by the following equation:

$$Carcinogenic\ risk = I \times CSF$$

where:

I = Intake (mg/kg-day).

CSF = Chemical- and route-specific cancer slope factor ($[mg/kg\text{-}day]^{-1}$)

For inhalation exposures, carcinogenic risk is calculated by the following equation:

$$Carcinogen\ ic\ risk = EC \times IURx\ CF$$

where:

EC = Exposure concentration (mg/m^3).

IUR = Chemical- and route-specific cancer slope factor ($[\mu g/m^3]^{-1}$)

CF = Conversion factor (1000 μg/mg)

To assess exposure to multiple constituents, constituent-specific risks for all constituents associated with a specific pathway are summed. The pathway-specific risks for all pathways are then summed to determine the total cumulative risk for the receptor exposure scenario. The total cumulative risk estimate assumes that all carcinogenic COPCs affect the same target organ to produce the same toxicological endpoint (i.e., cancer), ignoring potential antagonistic or synergistic effects on different target organs.

In assessing cancer risks posed by potential exposure to chemicals at a site, the National Contingency Plan (NCP) establishes an excess cumulative cancer risk of 1E-06 as a "point of departure" for establishing remediation goals (USEPA, 1994). An excess cumulative cancer risk lower than 1E-06 is not addressed by the NCP. USEPA clarified its position on risk management decisions and the role of the baseline risk assessment as follows (USEPA, 1991c):

Where the cumulative carcinogenic site risk to an individual based on reasonable maximum exposure for both current and future land use is less than 1E-04, and the non-carcinogenic HI is less than 1, action generally is not warranted unless there are adverse environmental impacts.

Therefore, it is USEPA's general policy to consider cumulative cancer risks up to 1E-04 as acceptable.

4.4.2 Characterization of Noncarcinogenic Hazards

Noncarcinogenic health hazards are evaluated by calculating HQs and HIs. For oral and dermal exposures, the derivation of HQ is calculated by comparing the estimated daily intakes of COPCs, which are averaged over the period of exposure, to chemical- and route-specific RfDs. The HQ-RfD relationship for oral and dermal exposures is illustrated by the following equation:

$$HQ = \frac{I}{RfD}$$

where:

HQ = Hazard quotient

I = Intake (mg/kg-day)

RfD = Chemical- and route-specific reference dose (mg/kg-day)

For inhalation exposures, the HQ is determined by comparing the estimated exposure concentration to the chemical-specific inhalation RfC, as illustrated in the following equation:

$$HQ = \frac{EC}{RfC}$$

where:

HQ = Hazard quotient

EC = Exposure concentration (mg/m^3)

RfC = Chemical-specific Reference Concentration (mg/m^3)

Estimated HQs for noncarcinogenic effects are generated on a constituent-by-constituent basis for each relevant exposure pathway and route. To assess exposure to multiple constituents by multiple pathways, the constituent-specific HQs are summed for all constituents associated with a specific pathway to determine the pathway-specific HI. HIs for all pathways are then summed to determine the total cumulative HI for the receptor exposure scenario. If the total cumulative HI for a receptor exposure scenario is greater than unity (1), the HI is segregated by critical effect and mechanism of action (USEPA, 1989). HQs for constituents that affect the same target organ are summed to derive target organ/endpoint specific HIs. Target organ/endpoint specific HIs that are one or less indicate there is less likelihood that an adverse health effect will occur.

The methodology used to evaluate noncarcinogenic health hazards, unlike the methodology used to evaluate carcinogenic risks, is not a quantitative measure of risk (i.e., it does not result in a probability for potential occurrence of adverse noncarcinogenic health effects). The HQ or HI is not a mathematical prediction of the incidence of severity of those effects (USEPA, 1989). If an HQ or HI exceeds unity (one), noncarcinogenic health effects could potentially occur under the defined exposure conditions. Note that the determination of a RfD assumes a margin of safety and, therefore, an HQ or HI greater than one does not necessarily indicate that an adverse noncarcinogenic health effect will occur; hence, an HI less than or equal to 1 indicates that it is unlikely adverse noncarcinogenic health effects will occur.

4.4.3 Presentation of Risks Estimations

Quantitative estimates of cancer risks and non-cancer hazard are calculated for all potentially exposed

human receptors that may utilize the Site using both RME and CT assumptions. Tables 7.1 through 7.11 in Appendices A (RME) and B (CT) present the RAGS, Part D format tables for calculation of cancer risks and non-cancer hazard for each receptor. Tables 9.1 through 9.11 in Appendices A (RME) and B (CT) present the RAGS, Part D format tables, summarizing receptor risks and hazards for the COPCs. The risk and hazard estimates are compared to USEPA's acceptable cancer risk management range of 1×10^{-4} (one excess cancer per ten thousand persons) to 1×10^{-6}(one excess cancer per one million persons) and a non-cancer hazard index, segregated by target organ, of less than or equal to 1 (40 Code of Federal Regulations [CFR] 300.430(e)(2)(i)(A)). Tables 10.1 through 10.4 in Appendices A (RME) and B (CT) present the RAGS, Part D format tables, summarizing receptor risks and hazards for the COPCs for exposure scenarios that exceed the USEPA's acceptable risk range (10^{-4} to 10^{-6}) and/or hazard level of one.

Chemical-specific ARARs are also considered, where appropriate. Examples of ARARs include MCLs, SDWS, ambient water quality criteria, and applicable air quality standards. ARARs are considered because the intent is not to meet remedial (cleanup) goals that are more stringent than ARARs.

4.4.4 Groundwater Class 3 Evaluation

The UTU at the Site meets the TCEQ's Class 3 groundwater designation. It is not currently used as a water resource, and is not likely to be used in the future; hence, the UTU is evaluated based on its Class 3 groundwater designation by comparison of detected COPC concentrations to the TCEQ's TRRP commercial/industrial PCLs for a Class 3 groundwater ($^{GW}GW_{Class3}$) (which are based on a non-cancer HQ of 1 and acceptable cancer risk of 1×10^{-5}).

4.4.5 Soil COPCs Leaching to Groundwater Evaluation

The potential for detected soil COPCs to leach to the UTU is evaluated by comparison to either TRRP or Site-specific commercial/industrial 30-acre source area PCLs for the protection of soil constituents leaching to a Class 3 groundwater ($^{GW}Soil_{Class\ 3}$). The TCEQ's Tier 1 PCLs for carcinogenic constituents are based on one-in-one hundred thousand cancer risk (1×10^{-5}). Site-specific soil-to-groundwater leaching criteria were calculated for lead, mercury, and selenium using the TCEQ's soil leachate model (TCEQ, 1999) and site-specific data and information for soil pH and type assuming a non-cancer HQ of 1 and acceptable cancer risk of 1×10^{-5} (Appendix J). The selenium calculation also included an adjustment for the difference between the thickness of the affected soil (assumed 5-feet bgs) and the depth to groundwater (assumed 10-feet bgs).

In addition, the absence or presence of a detected soil COPC in the UTU was also used as a line of evidence to demonstrate the potential for leaching from soil to the underlying groundwater.

4.5 Uncertainty Analysis

The purpose of the uncertainty analysis is to provide a summary of the factors that may significantly influence the risks estimated and assess the contribution of these factors to under- or over-estimate risks. Every step in the BHHRA process requires making assumptions, all of which can contribute to

uncertainty in the risks estimated. The USEPA's guidance documents on risk assessments provide systematic methods for estimating potential health risks posed by chemical exposures. Despite the advanced state of current risk assessment methodologies, uncertainties and limitations are inherent in the risk assessment process. Uncertainty can lead to an over- or under-estimation of potential risk. The uncertainty analysis for this BHHRA is primarily qualitative. Uncertainties associated with each key step of the risk assessment process, including data evaluation and screening, exposure assessment, toxicity assessment, and risk characterization are evaluated.

5.0 SOUTH PIT EXPOSURE AREA

This section documents the results of the human health risk assessment performed for the South Pit Exposure Area, including the exposure area background, identification of COPCs, exposure assessment, and risk characterization.

5.1 South Pit Exposure Area Background

The South Pit was originally used for sand mining and subsequently was developed into a disposal pit for drilling muds. Aerial photographs indicate that the Site appeared to have been developed by 1956 with excavation occurring in the southern part of the Site in the vicinity of the North and South Pits. By 1957, the pits contained liquids which persisted through at least 1962. The South Pit appeared to be incrementally backfilled until 1973 when it was completely backfilled and the initial development of the southern portion of the Site as a laydown area had begun. By 1997, the Site appeared as it is presently (URS, 2014). Based on a review of aerial photographs, it appears that the South Pit occupied parts of Lots 5, 6, and 7, Block 1 Goldston Addition. The South Pit Exposure Area currently includes a heavy equipment repair shop and adult video store located on Lots 6 and 7, respectively. No buildings or other surficial features associated with South Pit currently exist on the Site.

Below are key conclusions from the RI Report (URS, 2014) for the South Pit Exposure Area:

- The primary wastes remaining at the Site are the LNAPL in groundwater and residual waste material within the former South Pit.
- The presence of benzene in soils and groundwater in the vicinity of the South Pit is associated primarily with the historical Brine Service Company operations.
- Elevated metals concentrations in the surface soils are associated with the caliche and gravel fill overlying native soils and not with Site activities.
- The source of the metals, PAHs, and pesticides in the surface soil samples is believed to be related to post-closure Site activities (i.e., historical such as backfilling or sandblasting and current operations) and not the Brine Service Company operations.

Environmental media evaluated for the South Pit Exposure Area are: surface and subsurface soils, waste materials, soil gas, groundwater in the UTU and STU, and sediment and surface water in the East Ditch. Investigative samples collected from all media of concern within the South Pit Exposure Area were summarized in the RI Report (URS, 2014). Figure 4 shows the location of the South Pit Exposure Area, including the soil and groundwater STU and UTU samples collected in the RI. In addition to samples collected within the South Pit boundary, as stated in the approved work plans, data from off-site soil samples (ESSB13, ESSB14, and ESSB15) were included in the risk calculations. Figure 5 shows the location of soil background samples. The surface water and sediment samples collected in the East Ditch are shown on Figure 6, including the upstream background sample locations and the background samples collected along Up River Road. The soil gas samples are shown on Figure 7. Appendix K includes summary tables of the background and Site data for media of concern.

5.2 South Pit Exposure COPCs

This section presents the detected COPCs that were identified for the South Pit Exposure Area based on the screening comparison described in Section 4.1.5. For the screening evaluation, the maximum reported concentration for each constituent was used. Detected constituents present at concentrations exceeding screening criteria are retained for further analysis in the BHHRA. Constituents that were not detected in any samples collected in a media of concern are identified as non-detect COPCs and are discussed in the Uncertainty Analysis (Section 9.0). The following sections present a discussion of the findings for the South Pit Exposure Area by exposure media.

5.2.1 Soil/Waste Material COPCs

Appendix A (Tables 2.1 through and 2.4) presents the data evaluation and screening for surface soil (0 to 2-feet bgs), surface and subsurface soil (0 to 10-feet bgs), subsurface soil (>2-feet bgs), and all soils in the South Pit Exposure Area, respectively, and identify the detected COPCs screened for further evaluation. Surface soil background concentrations are also summarized in Table 2.1 in Appendix A. Appendix A (Tables 2.9 through 2.11) present the data screening for waste materials (>2 to 10-feet bgs), waste materials (>2-feet bgs), and all waste in the South Pit Exposure Area, respectively, and identify the detected COPCs screened for further evaluation. No waste materials were identified at depths less than 2-feet bgs. Table 5-1 summarizes the detected soil and waste COPCs that require further evaluation for the South Pit Exposure Area.

Table 5-1 South Pit Exposure Area Detected Soil and Waste Materials COPCs

COPC	Surface Soil 0 to 2-feet bgs	Surface and Subsurface Soil 0 to 10-feet bgs	Subsurface Waste > 2 to 10-feet bgs	Subsurface Soil Vapors in Outdoor Air >2-feet bgs	Subsurface Waste Vapors in Outdoor Air >2-feet bgs	All Soils Leaching to Class 3 Groundwater	All Waste Leaching to Class 3 Groundwater
Metals							
Arsenic	X	X	X				
Lead						X	X
Mercury	X	X	X	X	X	X	X
Pesticides							
alpha-BHC			X				X
beta-BHC							X
Heptachlor epoxide	X	X	X		X		X
Polychlorinated Biphenyls (PCBs)							
Total PCBs	X	X		X			
Volatile Organic Compounds (VOCs							
Benzene		X	X		X	X	X
Ethylbenzene			X				
Methylene chloride							X
1,3,5-Trimethylbenzene			X		X		
Semivolatile Organic Compounds (SVOCs)							
Benz(a)anthracene	X	X	X				
Benzo(a)pyrene	X	X	X				
Benzo(b)fluoranthene	X	X	X				
Dibenz(a,h)anthracene	X	X	X				
Indeno(1,2,3-cd)pyrene	X	X					
Naphthalene			X				
1-Methylnaphthalene			X			X	X
3&4 Methylphenol							X

5.2.2 Groundwater COPCs

Appendix A (Tables 2.12 and 2.13) present the data evaluation and screening for the UTU and STU samples collected in the RI, respectively, and identify the detected COPCs screened for further evaluation. Table 5-2 summarizes the detected groundwater COPCs for the South Pit Exposure Area.

Table 5-2 South Pit Exposure Area Detected Groundwater COPCs

COPC	UTU (Class 3)	STU (Class 2)
Metals		
Arsenic	X	X
Cobalt		X
Manganese		X
Pesticides		
alpha-BHC	X	X
beta–BHC		X
Dieldrin	X	X
4,4'-DDD		X
Heptachlor		X
Volatile Organic Compounds (VOCs)		
Benzene	X	X
Semivolatile Organic Compounds (SVOCs)		
3&4-Methylphenol	X	

The five UTU constituents are COPCs for protection of a Class 3 groundwater resource; none of the detected groundwater constituents exceed their screening criteria for migration of vapors from the UTU to ambient air.

As shown on Table 5-2, nine detected constituents are identified as COPCs for the STU (Class 2 groundwater resource). Note that the benzene and heptachlor concentrations do not exceed the MCLs.

5.2.3 Surface Water and Sediment COPCs

Appendix A (Tables 2.18 and 2.19) presents the data evaluation and screening for the sediment and surface water samples collected in the RI, respectively, and identifies the detected COPCs screened for further evaluation. Sediment and surface water background concentrations for the East Ditch and the drainage ditch that parallels Up River Road are also summarized in Appendix A (Tables 2.18 and 2.19), respectively. Table 5-3 summarizes the detected surface water and sediment COPCs for the East Ditch.

Table 5-3 South Pit Exposure Area Detected Sediment and Surface Water COPCs

COPC	Surface Water	Sediment
Metals		
Arsenic	X	
Volatile Organic Compounds (VOCs)		
Aldrin	X	
Semivolatile Organic Compounds (SVOCs)		
Benz(a)anthracene		X
Benzo(a)pyrene		X
Benzo(b)fluoranthene		X
Dibenz(a,h)anthracene		X
Indeno(1,2,3-cd)pyrene		X

Five PAHs are identified as detected sediment COPCs: benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(123-cd) pyrene. All maximum detected sediment concentrations were reported at one sample location (EDDSD09) collected at the East Ditch culvert under Up River Road. The maximum sediment concentrations for these PAHs are less than the background concentrations for samples collected in the drainage ditch along Up River Road (Appendix A Table 2.18). Except for benzo(a)pyrene, the COPC sediment concentrations are within an order of magnitude of the screening criteria.

Two constituents are identified as detected surface water COPCs: arsenic and aldrin. Arsenic was detected in all surface water samples and all detected concentrations exceed its screening criterion. Arsenic concentrations detected in surface water samples collected in the East Ditch are less than the surface water background concentrations for the East Ditch upstream and are comparable to Up River Road concentrations (Appendix A Table 2-19). Only one reported surface water concentration for aldrin slightly exceeds its screening criterion.

5.2.4 Soil Gas COPCs

Appendix A (Table 2.20) presents the data evaluation and screening for the soil gas samples collected in the RI and identifies the COPCs screened for further evaluation. Soil gas samples SG-13, SG-22, and SG-33 were collected adjacent to existing buildings (i.e., the Adult Video Store and the Roberts Equipment Building) located in the South Pit Exposure Area. The sample with the highest soil gas concentrations was SG-33, which was located on the Robert's property. Soil gas background concentrations are also summarized in Appendix A (Table 2-20). Soil gas concentrations for samples SG-13, SG-22, and SG-33 are higher than the soil gas concentrations reported for the background sample (SG-04). Table 5-4 summarizes the detected soil gas COPCs that require further evaluation for the South Pit Exposure Area.

Table 5-4 South Pit Exposure Area Soil Gas Detected COPCs

COPC	SG-13	SG-22	SG-33
Benzene		X	X
Ethylbenzene		X	X
TPH (C5-C8) Aliphatics	X	X	X

5.3 South Pit Exposure Assessment

Figure 11 presents the human health CSEM for all exposure areas, and depicts the current understanding of the known and suspected contaminant sources, potential transport mechanisms and migration pathways, and potentially exposed human receptors. The RAGS D Table 1 (Appendix A) details the rationale for the selection of exposure pathways and routes for all exposure areas. The following subsections review the exposure assessment by media for the South Pit Exposure Area.

5.3.1 Soils

Exposures via incidental ingestion, dermal contact, and inhalation of COPCs in surface soil (0 to 2-feet bgs) are considered complete exposure routes for a current and future on-site outdoor worker, on-site maintenance worker, and on-site adolescent trespasser. During intrusive construction activities, a current and future on-site construction worker is assumed to be potentially exposed to surface and subsurface soils while working in a trench to a depth of up to 10-feet bgs via incidental ingestion, dermal contact, and inhalation. Human receptors working or traversing the South Pit Exposure Area could be exposed to COPCs migrating from subsurface soil to ambient air; hence, inhalation of volatile COPCs in ambient air due to migration of vapors from subsurface soil (>2-feet bgs) is considered a complete exposure pathway for current and future on-site outdoor workers, on-site maintenance workers, and on-site adolescent trespassers. All soil is defined as soils overlying the UTU in the South Pit Exposure Area; leaching of COPCs in the soil to the UTU is a complete pathway.

5.3.2 Waste Material

No waste materials were identified in the upper two feet of soils within the South Pit Exposure Area; hence, direct contact with waste materials are not evaluated for a current and future on-site outdoor worker, on-site maintenance worker, and on-site adolescent trespasser. A current and future on-site construction worker could be exposed to waste materials in the subsurface during intrusive construction activities, and is assumed to be potentially exposed to waste materials to a depth of up to 10-feet bgs. Human receptors working or traversing the South Pit Exposure Area could be exposed to COPCs migrating from subsurface waste to ambient air; hence, inhalation of volatile COPCs in ambient air due to migration of vapors from subsurface waste (>2-feet bgs) is considered a complete exposure pathway for current and future on-site outdoor workers, on-site maintenance workers, and on-site adolescent trespassers. All waste is defined as waste overlying the UTU in the Soil Pit Exposure Area; leaching of COPCs in waste to the UTU is a complete pathway.

5.3.3 Groundwater

The UTU is designated as a Class 3 groundwater (non-potable) resource; the UTU is evaluated based on

its Class 3 groundwater designation and the potential for volatile COPCs in the UTU to migrate to ambient air. In addition, because construction work is assumed to take place to a depth of 10-feet bgs at the Site, a construction worker is assumed to be exposed to groundwater in the UTU while working in a trench/excavation via incidental ingestion, dermal contact, and inhalation.

Since the STU is designated as Class 2 groundwater (potentially potable) resource, it is conservatively evaluated as a drinking water source. An on-site outdoor worker is assumed to be exposed to COPCs in the STU via ingestion. It is assumed that tap water in the South Pit Exposure Area is not routinely used for bathing and, therefore, dermal contact is not evaluated. An on-site outdoor worker scenario represents the most conservative exposure for ingestion of groundwater (i.e., COPCs in the STU); an evaluation is not additionally performed for current and future on-site construction worker, on-site maintenance worker, and on-site adolescent trespasser. Since the STU is conservatively evaluated as a drinking water source, the groundwater-to-ambient air pathway is not additionally quantified.

5.3.4 Sediment/Surface Water

Sediment and surface water in the East Ditch are potential exposure media for human receptors that may maintain or trespass the East Ditch Area. Incidental ingestion, dermal contact, and inhalation are potential routes of exposure for surface water and sediment. A quantitative evaluation of the inhalation route is considered unnecessary because no sufficiently volatile COPCs are screened for further evaluation for the sediment or surface water exposure pathways. A current and future on-site maintenance worker and on-site adolescent trespasser are assumed to be exposed to COPCs in sediments and surface water in the East Ditch via incidental ingestion and dermal contact.

5.3.5 Soil Gas

Sufficiently volatile COPCs in soil, groundwater, and/or LNAPL/waste materials could migrate into indoor air. Inhalation of COPCs emanating from these media into indoor air is considered a potentially complete exposure pathway, and is evaluated using soil gas data. A current and future on-site indoor worker is assumed to be exposed to COPCs in indoor due to subsurface vapor intrusion.

5.4 South Pit Area Risk Characterization

Appendix A (Tables 3.1 through 3.4) summarizes the EPCs for the detected COPCs screened in the South Pit Exposure Area for further evaluation in surface soil (0 to 2-feet bgs), surface and subsurface soils (0 to 10-feet bgs), subsurface soil (>2-feet bgs), and all soils, respectively. Appendix A (Tables 3.9 through 3.11) summarizes the EPCs for the detected COPCs screened in the South Pit Exposure Area for waste materials (>2 to 10-feet bgs), waste materials (>2-feet bgs), and all waste, respectively. Appendix A (Tables 3.12 and 3.13) summarizes the EPCs for the detected COPCs in the South Pit Exposure Area UTU and STU, respectively. Appendix A (Tables 3.17 and 3.18) summarize the EPCs for the detected COPCs in the East Ditch sediment and surface water, respectively. Appendix A (Table 3.19) summarizes the EPCs for the detected soil gas COPCs for the South Pit Exposure Area (i.e., soil gas samples SG-13, SG-22, and SG-33). The applicable non-cancer and cancer toxicity values are included in Appendix A (Tables 5-1 and 5-2 and Tables 6-1 and 6-2, respectively). The risk calculation tables for the South Pit

Exposure Area are provided in Appendices A (RME) and B (CT) (Tables 7.1 through 7.5, 9.1 through 9.5, and 10.1 and 10.2). Tables 5-5 through 5-9 summarize the RME and CT estimates of cancer risk and non-cancer hazard for the current and future on-site industrial worker, on-site construction worker, on-site maintenance worker, and on-site adolescent trespasser, respectively. Although both RME and CT scenarios are evaluated in the BHHRA, USEPA's policy is to place more weight (emphasis) on the findings of the RME scenario when making risk management decisions. Therefore, the discussion of the results focuses on cancer risk and non-cancer hazard estimates for the RME scenarios, as well as chemical-specific ARARs (where applicable).

5.4.1 On-Site Current and Future Outdoor Worker

A current and future on-site outdoor worker is assumed to be exposed to:

- Surface soil (0 to 2-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates;
- Subsurface soil (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Waste materials (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Groundwater - UTU (Class 3 groundwater) via inhalation of volatile COPCs in ambient air; and
- Groundwater - STU (Class 2 groundwater) via ingestion.

The RME and CT exposure parameters and applicable intake equations for the South Pit Exposure Area current and future on-site outdoor worker are summarized in Appendix A (Tables 4.1a through 4.1g). Table 5-5 summarizes the estimated RME and CT cancer risks and non-cancer hazards by exposure media for the South Pit Exposure Area on-site outdoor worker.

Table 5-5 South Pit Exposure Area Summary of RME and CT Cancer Risk and Non-Cancer Hazard Estimates for the Current and Future On-Site Outdoor Worker

Exposure Pathway	RME		CT	
	Cancer Risk (CR)	Non-cancer Hazard (HI)	Cancer Risk (CR)	Non-cancer Hazard (HI)
Surface Soil (0 to 2-feet bgs) Exposure Pathways				
Incidental Ingestion	3.0E-06	0.029	1.1E-06	0.029
Dermal Contact	3.2E-06	0.035	1.2E-07	0.0035
Inhalation of Vapor and Particulates	4.2E-09	0.00017	1.5E-09	0.00017
Total Surface Soil	6.2E-06	0.065	1.2E-06	0.033
Subsurface Soil (>2-feet bgs) Exposure Pathway				
Inhalation of Volatiles in Ambient Air	5.7E-08	0.0068	2.1E-08	0.0068
Waste Materials (>2-feet bgs) Exposure Pathways				
Inhalation of Volatiles in Ambient Air	1.0E-05	0.13	3.6E-06	0.13
Groundwater (UTU) Exposure Pathway				
Inhalation of VOCs in ambient air	1.8E-06	0.021	6.3E-07	0.021
Groundwater (STU) Exposure Pathway				
Incidental Ingestion	9.4E-05	0.88	3.4E-05	0.88
Multi-Pathway Total				
All Media, Exposure Pathways and Routes	**1.1E-04**	**1.1**	3.9E-05	**1.1**

As shown on Table 5-5, for each exposure media, the estimated cancer risks for the RME and CT scenarios for the South Pit Exposure Area on-site outdoor worker do not exceed the USEPA's acceptable cancer risk management range of 1×10^{-4} to 1×10^{-6}; however, for the RME scenario, the cumulative cancer risk for all media and exposure pathways combined (1.1E-04) slightly exceeds the upper bound of the acceptable cancer risk management range of 1E-04. The estimated RME cancer risks for potential outdoor worker exposures to detected COPCs in surface soil (0 to 2-feet bgs), subsurface soil (>2-feet bgs), waste materials (>2-feet bgs), UTU, and STU in the South Pit Exposure Area are 6.2E-06, 5.7E-08, 1.0E-05, 1.8E-06, and 9.4E-05, respectively (Appendix A Tables 7.1 and 9.1). The COPCs identified as contributing a constituent-specific risk exceeding 1×10^{-6} considering all exposure media and complete exposure pathways are:

- Arsenic in surface soil via ingestion (CR=1.4E-06) and in the STU via ingestion (CR=9.3E-05);
- Benzo(a)pyrene in surface soil via dermal contact (CR=1.2E-06); and
- Benzene in waste (CR=9.8E-06) via inhalation of vapors migrating from waste to ambient air and in the UTU via inhalation of vapors migrating from groundwater to ambient air (CR=1.8E-06).

As shown on Table 5-5, for each exposure media, the estimated non-cancer hazards for the RME and CT scenarios for the on-site outdoor worker do not exceed the USEPA's acceptable non-cancer HI of 1. The estimated RME non-cancer hazards for potential outdoor worker exposures to detected COPCs in surface soil (0 to 2-feet bgs), subsurface soil (>2-feet bgs), waste materials (>2-feet bgs), UTU, and STU in the South Pit Exposure Area are 0.065, 0.0068, 0.13, 0.021, and 0.88, respectively (Appendix A Tables 7.1

and 9.1). The cumulative non-cancer hazard (HI=1.1) for all media and exposure pathways combined exceeds the HI of 1 for both the RME and CT scenarios. The primary COPCs contributing to the overall non-cancer HI are:

- Arsenic and cobalt in groundwater in the STU via ingestion (0.58 and 0.26, respectively); and
- Benzene in waste via inhalation of vapors migrating from the waste to ambient air (0.12).

No organ-specific HIs exceed unity (1) for the South Pit Exposure Area on-site outdoor worker; hence, the "all media and routes" HI for the on-site outdoor worker is acceptable because the non-cancer health effects do not affect the same target organs (Appendix A Table 9.1).

Appendices A (RME Table 10.1) and B (CT Table 10.1) present the exposure media and the COPCs that contribute to the estimated overall cancer risks exceeding the USEPA's acceptable cancer risk management range (1×10^{-4} to 1×10^{-6}) and non-cancer HI of 1 for the South Pit Exposure Area current and future on-site outdoor worker. Arsenic, the primary COPC contributing to the overall cancer risk and non-cancer hazard for the South Pit Exposure Area on-site outdoor worker, has a MCL. The maximum detected arsenic concentration (0.0177 mg/L) in the STU slightly exceeds its MCL (0.01 mg/L).

5.4.2 On-Site Current and Future Indoor Worker

A current and future on-site indoor worker is assumed to be exposed to soil gas vapors migrating from the UTU, STU, subsurface waste materials, and soils via inhalation of volatile COPCs in indoor air. The RME and CT exposure parameters and applicable intake equation for the on-site indoor worker are summarized in Appendix A (Table 4.3a). Sample SG-33 was collected on the Robert's property; SG-22 was collected within the parking lot of the Adult Video Store; and SG-13 was collected immediately adjacent to the Adult Video Store. The locations of active soil gas samples were based on findings of a passive soil gas assessment (URS, 2014).

Table 5-6 South Pit Exposure Area Summary of RME and CT Cancer Risk and Non-Cancer Hazard Estimates for the Current and Future On-Site Indoor Worker

Exposure Pathway	RME		CT	
	Cancer Risk (CR)	Non-cancer Hazard (HI)	Cancer Risk (CR)	Non-cancer Hazard HI
Indoor Air Exposure Pathways				
Inhalation of VOCs (SG-22)Adult Video Store	1.9E-05	0.42	7.0E-06	0.42
Inhalation of VOCs (SG-13)Adult Video Store	---	0.015	---	0.015
Inhalation of VOCs (SG-33) Robert's Equipment	2.9E-05	0.60	1.E-05	0.60

The estimated cancer risks and non-cancer hazards for the RME and CT scenarios do not exceed the USEPA's acceptable cancer risk management range of 1×10^{-4} to 1×10^{-6} and non-cancer HI of 1 (Appendices A and B, Tables 7.2a, 7.2b, and 7.2c). The estimated RME cancer risks for the on-site indoor worker in the South Pit Exposure Area range from 1.9E-05 to 2.9E-05. The COPC identified as contributing a constituent-specific risk exceeding 1×10^{-6} is benzene in soil gas samples SG-22 (1.9E-05) and SG-33 (2.8E-05) (Appendix A Tables 9.2b and 9.2c). The estimated RME non-cancer hazards for

potential indoor worker exposures range from 0.015 to 0.6 (Appendix A Tables 7.2a, 7.2b, and 7.2c).

5.4.3 On-Site Current and Future Construction Worker

A current and future on-site construction worker is assumed to be exposed to:

- Surface and subsurface soils (0 to 10-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates;
- Waste materials (>2 to 10-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates; and
- Groundwater (UTU Class 3 groundwater) via incidental ingestion, dermal contact and inhalation of volatile chemicals while working in a trench/excavation.

The RME and CT exposure parameters and applicable intake equations for the South Pit Exposure Area current and future on-site construction worker are summarized in Appendix A (Tables 4.4a through 4.4i). Table 5-7 summarizes the estimated RME and CT cancer risks and non-cancer hazards by exposure media for the South Pit Exposure Area current and future on-site construction worker.

Table 5-7 South Pit Exposure Area Summary of RME and CT Cancer Risk and Non-Cancer Hazard Estimates for the Current and Future On-Site Construction Worker

Exposure Pathway	RME		CT	
	Cancer Risk (CR)	Non-cancer Hazard (HI)	Cancer Risk (CR)	Non-cancer Hazard (HI)
Surface and Subsurface Soil (0 to 10-feet bgs) Exposure Pathways				
Incidental Ingestion	4.9E-07	0.13	1.5E-07	0.039
Dermal Contact	1.3E-07	0.038	4.2E-08	0.013
Inhalation of Vapor and Particulates	9.1E-11	0.000089	9.1E-11	0.000089
Total Surface and Subsurface Soil	6.2E-07	0.17	1.9E-07	0.052
Waste Materials (>2-10-feet bgs) Exposure Pathways				
Incidental Ingestion	1.0E-06	0.16	3.1E-07	0.049
Dermal Contact	3.0E-07	0.033	1.0E-07	0.011
Inhalation of Vapor and Particulates	7.6E-11	0.000058	7.6E-11	0.000058
Total Waste	1.3E-06	0.20	4.1E-07	0.060
Groundwater (UTU) Exposure Pathways				
Incidental Ingestion	5.4E-05	**20**	5.4E-05	**20**
Dermal Contact	1.2E-05	**8**	1.2E-05	**8**
Inhalation of Vapors Trench	1.6E-06	0.44	1.6E-06	0.44
Total Groundwater (UTU)	6.8E-05	**28**	6.8E-05	**28**
Multi-Pathway Total				
All Media, Exposure Pathways and Routes	7.0E-05	**28**	6.9E-05	28

The estimated cumulative cancer risks for the RME (CR=7.0E-05) scenarios for the South Pit Exposure Area on-site construction worker do not exceed the USEPA's acceptable cancer risk range of 1x 10^{-4} to 1 x 10^{-6} for all exposure media and pathways combined. The estimated RME cancer risks for potential

construction worker exposures to detected COPCs in surface and subsurface soils (0 to10-feet bgs), waste materials (0 to10-feet bgs), and the UTU are 6.2E-07, 1.3E-06, and 6.8E-05, respectively (Appendix A Tables 7.3 and 9.3). The COPCs identified as contributing a constituent-specific risk exceeding 1 x 10^{-6} are:

- Arsenic (CR=4.8E-05), dieldrin (CR=1.1E-06), and benzene (CR=4.3E-06) in the UTU via ingestion;
- Arsenic (CR=3.2E-06), alpha-BHC (CR=2.1E-06), dieldrin (CR=2.5E-06), and benzene (CR=4.4E-06) in the UTU via dermal contact; and
- Benzene (CR=1.5E-06) via inhalation of vapors migrating from the UTU to ambient air.

As shown on Table 5-7, the estimated non-cancer hazards for the RME (HI=28) and CT (HI=28) scenarios for the South Pit Exposure Area current and future on-site construction worker exceed the USEPA's acceptable non-cancer HI of 1. The estimated RME non-cancer hazards for potential construction worker exposures to detected COPCs in surface and subsurface soils (0 to 10-feet bgs), waste materials (>2 to 10-feet bgs), and the UTU in the South Pit Exposure Area are 0.17, 0.20, and 28, respectively (Appendix A Tables 7.3 and 9.3). The primary COPCs contributing to the overall non-cancer hazard are:

- 3&4-Methylphenol (HI=11), arsenic (HI=7.5), and benzene (HI=1.4) in the UTU via ingestion; and
- 3&4-Methylphenol (HI=5.9) and benzene (HI=1.4) in the UTU via dermal contact.

As shown in Appendix A (RME Table 9.3), the following target organ-specific non-cancer HIs exceed an HI of 1 for the on-site construction worker exposures to the UTU:

Target Organ/System	Surface Soil Hazard Index
Blood	3.2E+00
Nervous System	2.5E+01
Developmental	8.1E+00
Respiratory	1.7E+01
Vascular System	8.1E+00
Weight	1.7E+01
Skin	8.1E+00
Cardiovascular	8.1E+00

Appendices A (RME Table 10.2) and B (CT Table 10.2) present the exposure medium and the COPCs that indicate non-cancer hazards exceeding the USEPA's acceptable non-cancer HI of 1 for the South Pit Exposure Area current and future on-site construction worker. The primary COPCs contributing to the overall non-cancer hazard are arsenic, benzene, and 3&4-methylphenol in the UTU via the ingestion and dermal exposure routes. Note that the non-cancer hazards (HI=28) estimated for the construction worker scenario are conservative because they are derived using chronic toxicity factors rather than sub-chronic toxicity factor, which are more appropriate for the hazard characterization of short-term scenarios such as

the construction worker. Sub-chronic toxicity factors are typically an order of magnitude lower than chronic toxicity factors. Hence, the non-cancer hazard for the construction worker is expected to be about 10-fold lower, but likely still above an HI of 1.

5.4.4 On-Site Current and Future Maintenance Worker

An on-site current and future maintenance worker is assumed to be exposed to:

- Surface soils (0 to 2-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates;
- Subsurface soil and waste materials (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Groundwater - UTU (Class 3 groundwater) via inhalation of volatile COPCs in ambient air; and
- Sediment and surface water in the East Ditch via incidental ingestion and dermal contact.

The RME and CT exposure parameters and applicable intake equations for the South Pit Exposure Area current and future on-site maintenance worker are summarized in Appendix A (Tables 4.6a through 4.6j). Table 5-8 summarizes the estimated RME and CT cancer risks and non-cancer hazards by exposure media for the South Pit Exposure Area current and future on-site maintenance worker.

Table 5-8 South Pit Exposure Area Summary of RME and CT Cancer Risk and Non-Cancer Hazard Estimates for the Current and Future On-Site Maintenance Worker

Exposure Pathway	RME		CT	
	Cancer Risk (CR)	Non-cancer Hazard(HI)	Cancer Risk (CR)	Non-cancer Hazard (HI)
Surface Soil (0 to 2-feet bgs) Exposure Pathways				
Incidental Ingestion	5.9E-08	0.0014	5.9E-08	0.0014
Dermal Contact	6.1E-08	0.0017	6.1E-09	0.00017
Inhalation of Vapor and Particulates	2.0E-11	0.0000021	2.0E-11	0.0000021
Total Surface Soil	1.2E-07	0.0031	6.5E-08	0.0016
Subsurface Soil (> 2-feet bgs) Exposure Pathway				
Inhalation of Volatiles in Ambient Air	2.7E-10	0.000081	2.7E-10	0.000081
Waste Materials (>2-feet bgs) Exposure Pathways				
Inhalation of Volatiles in Ambient Air	4.8E-08	0.0016	4.8E-08	0.0016
Groundwater (UTU) Exposure Pathway				
Inhalation of VOCs in ambient air	8.5E-09	0.00025	8.5E-09	0.00025
Surface Water Exposure Pathways				
Incidental Ingestion	1.6E-07	0.0025	1.6E-07	0.0025
Dermal	6.8E-08	0.001	6.8E-08	0.001
Total Surface Water	2.3E-07	0.0035	2.3E-07	0.0035
Sediment Exposure Pathways				
Incidental Ingestion	1.8E-07	---	1.8E-07	---
Dermal	3.1E-07	---	3.1E-08	---
Total Sediment	5.0E-07	---	2.1E-07	---
Multi-Pathway Total				
All Media, Exposure Pathways and Routes	9.0E-07	0.0085	5.6E-07	0.007

As shown on Table 5-8, the estimated cumulative cancer risks non-cancer hazards for the RME (CR=9.0E-07 and HI=0.0085) scenario for the South Pit Exposure Area on-site maintenance worker does not exceed the USEPA's acceptable cancer risk management range of 1×10^{-4} to 1×10^{-6} and acceptable non-cancer HI of 1, considering all exposure media and pathways combined. The estimated RME cancer risks for potential maintenance worker exposures to detected COPCs in the surface soil (0 to 2-feet bgs), subsurface soil (>2-feet bgs), waste materials (>2-feet bgs), UTU, East Ditch sediment, and East Ditch surface water are 1.2E-07, 2.7E-10, 4.8E-08, 8.5E-09, 5.0E-07, and 2.3E-07, respectively (Appendix A Tables 7.4 and 9.4). No constituent-specific risk exceeds 1×10^{-6} considering all exposure media and complete exposure pathways. The estimated RME non-cancer hazards for potential maintenance worker exposures to detected COPCs in the surface soil (0 to 2-feet bgs), subsurface soil (>2-feet bgs), waste materials (>2-feet bgs), UTU, and East Ditch surface water are 0.0031, 0.000081, 0.0016, 0.00025, and 0.0035, respectively (Appendix A Tables 7.4 and 9.4). Non-cancer hazard estimates were not calculated for potential exposures to sediment in the East Ditch because the detected COPCs do not have published non-cancer toxicity factors.

5.4.5 On-Site Current and Future Adolescent Trespasser

A current and future on-site adolescent trespasser is considered a potentially exposed receptor for the South Pit Exposure Area, and is assumed to be exposed to:

- Surface soils (0 to 2-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates;
- Subsurface soil (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Waste materials (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Groundwater - UTU (Class 3 groundwater) via inhalation of volatile COPCs in ambient air;
- Sediments in the East Ditch via incidental ingestion and dermal contact; and
- Surface water in the East Ditch via incidental ingestion and dermal contact.

The RME and CT exposure parameters and applicable intake equations for the South Pit Exposure Area current and future on-site adolescent trespasser are summarized in Appendix A (Tables 4.7a through 4.7j). Table 5-9 summarizes the estimated RME and CT cancer risks and non-cancer hazards by exposure media for the South Pit Exposure Area current and future on-site adolescent trespasser.

Table 5-9 South Pit Exposure Area Summary of RME and CT Cancer Risk and Non-Cancer Hazard Estimates for the Current and Future On-Site Adolescent Trespasser

Exposure Pathway	RME		CT	
	Cancer Risk (CR)	Non-cancer Hazard (HI)	Cancer Risk (CR)	Non-cancer Hazard (HI)
Surface Soil (0 to 2-feet bgs) Exposure Pathways				
Ingestion	7.9E-07	0.019	9.1E-08	0.0044
Dermal Contact	1.1E-06	0.029	1.6E-08	0.00091
Inhalation of Vapor and Particulates	1.8E-10	0.000018	1.0E-11	0.0000021
Total Surface Soil	1.9E-06	0.048	1.1E-07	0.0053
Subsurface Soil (>2-feet bgs) Exposure Pathway				
Inhalation of Volatiles in Ambient Air	2.4E-09	0.0007	1.4E-10	0.000081
Waste Materials (>2-feet bgs) Exposure Pathway				
Inhalation of Volatiles in Ambient Air	4.1E-07	0.014	2.4E-08	0.0016
Groundwater (UTU) Exposure Pathway				
Inhalation of VOCs in ambient air	7.3E-08	0.0022	4.2E-09	0.00025
Surface Water Exposure Pathways				
Ingestion	2.2E-06	0.034	1.2E-07	0.0039
Dermal	6.3E-07	0.0093	3.8E-08	0.0012
Total Surface Water	2.8E-06	0.043	1.6E-07	0.005
Sediment Exposure Pathways				
Ingestion	2.5E-06	---	2.9E-07	---
Dermal	5.5E-06	---	8.5E-08	---
Total Sediment	8.0E-06	---	3.7E-07	---
Multi-Pathway Total				
All Media, Exposure Pathways, and Routes	1.3E-05	0.11	6.7E-07	0.012

The estimated cumulative cancer risks and non-cancer hazards for the RME (CR=1.3E-05 and HI=0.11) scenario for the South Pit Exposure Area on-site adolescent trespasser do not exceed the USEPA's acceptable cancer risk management range of 1×10^{-4} to 1×10^{-6} and acceptable non-cancer HI of 1, considering all exposure media and pathways. The estimated RME cancer risks for potential adolescent trespasser exposures to detected COPCs in the surface soil (0 to 2-feet bgs), subsurface soil (>2-feet bgs), waste materials (>2-feet bgs), UTU, East Ditch sediment, and East Ditch surface water are 1.9E-06, 2.4E-09, 4.1E-07, 7.3E-08, 8.0E-06, and 2.8E-06, respectively (Appendix A Tables 7.5 and 9.5). The COPCs identified as contributing a constituent-specific risk exceeding 1×10^{-6} are:

- Arsenic in surface water in the East Ditch via ingestion (2.1E-06); and
- Benzo(a)pyrene in sediment in the East Ditch via ingestion (1.7E-06) and dermal contact (3.7E-06).

Estimated RME non-cancer hazard for potential adolescent trespasser exposures to detected COPCs in the surface soil (0 to 2-feet bgs), subsurface soil (>2-feet bgs), waste materials (>2-feet bgs), UTU, and East Ditch surface water are 0.048, 0.0007, 0.014, 0.022, and 0.043, respectively (Appendix A Tables 7.9 and

9.9). Non-cancer hazard estimates were not calculated for potential exposures to sediment in the East Ditch because the detected COPCs do not have published non-cancer toxicity factors.

5.4.6 Leaching from Soils or Waste to Groundwater

The potential for detected soil or waste COPCs to leach to the UTU is evaluated by comparison to commercial/industrial 30-acre source area criteria for the protection of soil constituents leaching to a Class 3 groundwater ($^{GW}Soil_{Class\ 3}$). Site-specific soil-to-groundwater leaching criteria were calculated for lead and mercury using the TCEQ's soil leachate model (TCEQ, 1999) and site-specific data and information for soil pH and type assuming a non-cancer HQ of 1 and acceptable cancer risk of 1×10^{-5} (Appendix J). Table 5-10 shows the detected COPCs for leaching from soil or waste to the UTU in the South Pit Exposure Area.

The maximum detected concentration for three of the detected soil/waste COPCs (benzene, heptachlor epoxide, and 3&4-methylphenol) exceed applicable commercial/industrial soil PCLs for protection of soil constituents leaching to a Class 3 groundwater. This finding is consistent with the findings for the evaluation of the South Pit Exposure Area UTU; two of these detected soil/waste COPCs (benzene and 3&4-methylphenol) are detected in the UTU at concentrations exceeding their applicable Class 3 groundwater criteria. Heptachlor epoxide concentrations in the UTU are approximately two orders of magnitude lower than the applicable Class 3 groundwater criteria.

Table 5-10 South Pit Exposure Area Evaluation of Soil and Waste COPCs Leaching to the UTU

Detected COPCs for Leaching from Soil/Waste to the UTU	Maximum Detected Soil Concentration (mg/kg)	Maximum Detected Waste Concentration (mg/kg)	Commercial/Industrial Leaching from Soils to Class 3 Groundwater Criteria (mg/kg)	Site-Specific Leaching from Soils to Class 3 Groundwater Criteria (mg/kg)
Lead	359	215	150	3500
Mercury	23	5.27	0.39	400
alpha-BHC	Not applicable	0.55	0.89	Not applicable
beta-BHC	Not applicable	0.83	3.2	Not applicable
Heptachlor epoxide	Not applicable	**3.8**	**2.9**	Not applicable
Benzene	**6.0**	**240**	**1.3**	Not applicable
Methylene chloride	Not applicable	0.74	0.65	Not applicable
1-Methylnaphthalene	53	250	330	Not applicable
3&4-Methylphenol[a]	Not applicable	**110**	**94**	Not applicable

[a] criteria is the lower of the value for 3-methylphenol and 4-methylphenol.

5.4.7 Class 3 Groundwater Evaluation

Table 5-11 shows the detected COPCs identified for the South Pit Exposure Area UTU. Since the UTU is designated a Class 3 groundwater (non-potable) resource, the applicable standards for comparison are the TRRP commercial/industrial Class 3 groundwater PCLs. The maximum detected concentration for arsenic, benzene, and 3&4-methylphenol in the South Pit Exposure Area UTU exceed their TRRP commercial/industrial Class 3 groundwater PCLs.

Table 5-11 South Pit Exposure Area Evaluation of the UTU (Class 3 Groundwater)

Detected UTU COPCs	Maximum Detected Groundwater Concentration (mg/L)	TRRP Commercial/Industrial Class 3 Groundwater PCLs (mg/L)
Arsenic	**2.4**	1.0
Benzene	**5.8**	0.5
3&4-Methylphenol	**57**	37
alpha-BHC	0.0075	0.032
Dieldrin	0.0049	0.013

5.5 South Pit Exposure Area Summary of Results

Based on the available Site data and information, the following summarizes the human health risk assessment for the South Pit Exposure Area:

1. Surface soil, subsurface soil, waste materials, soil gas, groundwater in the UTU and STU, and sediment and surface water in the East Ditch are the media of concern for the South Pit Exposure Area.
2. Exposure scenarios evaluated for the South Pit Exposure Area are:
    - Current and future on-site outdoor worker via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates in surface soil (0 to 2-feet bgs), inhalation of volatile COPCs migrating from subsurface soil and waste materials (>2-feet bgs), inhalation of volatile COPCs migrating from the UTU to ambient air, and ingestion of groundwater in the STU;
    - Current and future on-site indoor worker via inhalation of volatile chemicals in indoor air (vapor intrusion);
    - Current and future on-site construction worker via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates in surface and subsurface soil and waste materials (0 to 10-feet bgs), and incidental ingestion, dermal contact, and inhalation of volatile COPCs in the UTU while working in a trench;
    - Current and future on-site maintenance worker via incidental ingestion, dermal contact, and inhalation of volatile COPC and particulates in surface soil (0 to 2-feet bgs), inhalation of volatile COPCs migrating from subsurface soil and waste materials (>2-feet bgs) to ambient air, inhalation of volatile COPC migrating from the UTU to ambient air, and incidental ingestion and dermal contact with sediment and surface water in the East Ditch;
    - Current and future on-site adolescent trespasser via incidental ingestion, dermal contact, and inhalation of volatile COPC and particulates in surface soil (0 to 2-feet bgs),

inhalation of volatile chemicals migrating from subsurface soil and waste materials (>2-feet bgs) to ambient air, inhalation of volatile COPC migrating from the UTU to ambient air, and incidental ingestion and dermal contact with sediment and surface water in the East Ditch;

- Commercial/industrial Class 3 groundwater resource; and
- Leaching of COPCs in soils or waste to the underlying UTU.

3. For the current and future on-site outdoor worker [Appendix A (RME) and B (CT) Tables 7.1, 9.1, and 10.1]:
    - The estimated cumulative non-cancer hazards for the RME (HI =1.1) scenario slightly exceed the USEPA's acceptable non-cancer HI of 1 for all applicable media and exposure pathway and routes. The estimated cumulative cancer risks for the RME (CR=1.1E-04) scenario slightly exceed the USEPA's acceptable excess cancer risk management range (1×10^{-4} to 1×10^{-6}) for all applicable media and exposure pathway and routes.
    - No organ-specific HIs exceed 1; hence, the "all media and routes" HI for the on-site outdoor worker is acceptable because the non-cancer health effects do not affect the same target organs (Appendix A Table 9.1).
    - The primary COPC contributing to the overall cancer risk and non-cancer hazard is arsenic. The maximum detected arsenic concentration (0.0177 mg/L) in the STU slightly exceeds its MCL (0.01 mg/L).
4. The estimated RME cancer risks and non-cancer hazards for the current and future on-site indoor worker are within the USEPA's acceptable cancer risk management range of 1×10^{-4} to 1×10^{-6} and non-cancer HI of 1. The estimated RME cancer risks for inhalation of detected COPCs in indoor air range from 1.9E-05 to 2.9E-05, and the estimated RME non-cancer hazards range from 0.015 to 0.6 [Appendices A (RME) and B (CT) Tables 7.2 and 9.2].
5. For the current and future on-site construction worker [Appendices A (RME) and B (CT) Tables 7.3, 9.3, and 10.2]:
    - The estimated cumulative cancer risks for the RME (CR=7.0E-05) scenario does not exceed the USEPA's acceptable cancer risk management range (1×10^{-4} to 1×10^{-6}) for all applicable media and exposure pathways.
    - The estimated non-cancer hazards for the RME (HI=28) scenario exceeds the USEPA's non-cancer HI of 1 for all applicable media and exposure pathways. The target organ-specific non-cancer hazard estimates for the RME scenario also exceed 1 (Appendix A Table 9.3).
    - The exposure scenario contributing to overall non-cancer hazard is incidental ingestion, dermal contact, and inhalation of COPCs in the UTU. The primary COPCs contributing

to the overall non-cancer hazard are: arsenic, benzene, and 3&4-methyphenol in the UTU via the ingestion and dermal exposure routes. Note that the non-cancer hazards (HI=28) estimated for the construction worker scenario are conservative because they are derived using chronic toxicity factors rather than sub-chronic toxicity factors, which are more appropriate for the hazard characterization of short-term scenarios (such as the construction worker); sub-chronic toxicity factors are typically an order of magnitude lower than chronic toxicity factors. Hence, the non-cancer hazard for the construction worker is expected to be about 10-fold lower, but likely still above an HI of 1.

6. The estimated cumulative cancer risks and non-cancer hazards for the RME and CT scenarios for the on-site maintenance worker and on-site adolescent trespasser do not exceed the USEPA's acceptable cancer risk management range (1×10^{-4} to 1×10^{-6}) and non-cancer HI of 1 for all applicable media and exposure pathway and routes [Appendices A (RME) and B (CT) Tables 7.4, 7.5, 9.4, and 9.5].

7. The maximum detected concentration for three detected soil/waste COPCs (benzene, heptachlor epoxide, and 3&4-methylphenol) exceed applicable commercial/industrial soil criteria for protection of soil constituents leaching to a Class 3 groundwater-bearing unit. This finding is consistent with the findings for the evaluation of the South Pit Exposure Area UTU. Two of these detected soil/waste COPCs (benzene and 3&4-methylphenol) are detected in the UTU at concentrations exceeding their applicable Class 3 groundwater PCLs. Heptachlor epoxide concentrations in the UTU are approximately two orders of magnitude lower than the applicable Class 3 groundwater criteria.

8. The maximum detected concentration for arsenic, benzene, and 3&4-methylphenol in the South Pit Exposure Area UTU exceed their TRRP commercial/industrial Class 3 groundwater PCLs.

6.0 NORTH PIT EXPOSURE AREA

This section documents the results of the human health risk assessment performed for the North Pit Exposure Area, including the exposure area background, identification of COPCs, exposure assessment, and risk characterization.

6.1 North Pit Exposure Area Background

The North Pit was originally used for sand mining. Aerial photographs indicate that the Site appeared to have been developed by 1956 with excavation occurring in the southern part of the Site in the vicinity of the North and South Pits. By 1957, the pits contained liquids which persisted (intermittently for the North Pit as depicted in the 1959 aerial photograph) through at least 1962. By 1965, the area of the North Pit was backfilled (URS, 2014). Based on a review of aerial photographs, the North Pit occupied portions of Lots 3 and 4 and the southern part of Lot 8B. The North Pit Exposure Area currently includes a tire repair shop (Lots 2, 3 and 4) and several pipeline easements. No buildings or other surficial features associated with pits currently exist on the Site.

Below are key conclusions from the RI Report (URS, 2014) for the North Pit Exposure area:

- The North Pit does not contain waste material.
- It appears from field observations of soil borings that the pit consists mostly of backfill which supports the historical use of the North Pit as a storm water overflow structure to the South Pit.
- Elevated metals concentrations in the surface soils are associated with the caliche and gravel fill overlying native soils and not with Site activities.
- The source of the metals, PAHs, and pesticides in the surface soil samples is believed to be related to post-closure Site activities (i.e., historical such as backfilling or sandblasting and current operations) and not the Brine Service Company operations.
- No affected groundwater has been identified in the vicinity of the North Pit.

As discussed in the RI Report (URS, 2014), VOC concentrations exceeded the groundwater protection standard in three borings (ENSB05, ENSB08, and ENSB10) located east of the inferred boundary of the North Pit on the trucking facility property (Lot 8B) (Figure 4). This area of impacted soils is not associated with the North Pit as shown by delineation borings NPSB07, NPSB12, and ENSB07 located on the eastern edge of the historical North Pit. Since this off-Site area is not associated with the North Pit and historical operations, data for locations ENSB05, ENSB08, ENSS10/ENSB10 were not included in the data set for the North Pit area risk calculations. In addition, data for off-Site delineation samples, ENSB04, ENSS11/ENSB11, ENSB12, ENSB13, ENSB14, ENSB15, ENSB16, and ENSB17 were not included in the data used for the human health risk assessment for North Pit Exposure Area. Appendix K contains the data for the off-Site samples that were excluded for the risk assessment (Soil Analytical Data Summary Off-Site Samples).

Environmental media evaluated for the North Pit Exposure Area are: surface soil and subsurface soil,

soil gas, groundwater in and STU, and sediment and surface water in the East Ditch. Figure 4 shows the location of the North Pit Exposure Area, including the soil and groundwater STU and UTU locations sampled in the RI. Figure 5 shows the location of soil background samples. The most recent groundwater analytical data collected (February 2014) for UTU monitor wells and STU monitor wells are used in the human health risk assessment for the North Pit Exposure Area. The surface water and sediment samples collected in the East Ditch are shown on Figure 6, including the upstream background sample locations and the background samples collected along Up River Road. The soil gas sample locations are shown on Figure 7. Appendix K includes summary tables of the background and Site data for media of concern.

6.2 North Pit Exposure Area COPCs

This section presents the detected COPCs that were identified for the North Pit Exposure Area based on the screening comparison described in Section 4.1.5. For the screening evaluation, the maximum reported concentration for each constituent was used. Detected constituents present at concentrations exceeding screening criteria are retained for further analysis in the BHHRA. Constituents that were not detected in any samples collected in a media of concern are identified as non-detect COPCs and are discussed in the Uncertainty Analysis (Section 9.0). The following sections present a discussion of the findings for the North Pit Exposure Area by exposure media.

6.2.1 Soil COPCs

Appendix A (Tables 2.5 through 2.8) presents the data evaluation and screening for surface soil (0 to 2-feet bgs), surface and subsurface soil (0 to 10-feet bgs), subsurface soil (>2-feet bgs), and all soils in the North Pit Exposure Area, respectively, and identify the detected COPCs screened for further evaluation. Surface soil background concentrations are also summarized in Appendix A (Table 2.5). Table 6-1 summarizes the detected soil COPCs for the North Pit Exposure Area.

Table 6-1 North Pit Exposure Area Detected Soil COPCs

COPC	Surface Soil 0 to 2-feet bgs	Surface and Subsurface Soil 0 to 10-feet bgs	Subsurface Soil Vapors in Outdoor Air >2-feet bgs	All Soils Leaching to Class 3 Groundwater
Metals				
Arsenic	X	X		
Lead	X	X		X
Mercury	X	X	X	X
Selenium				X
Semivolatile Organic Compounds (SVOCs)				
Benzo(a)pyrene	X	X		
bis(2-Ethylhexyl)phthalate	X	X		
1-Methylnaphthalene				X

6.2.2 Groundwater COPCs

Appendix A (Tables 2.14 and 2.15) presents the data evaluation and screening for the UTU and STU samples collected in the RI, respectively, and identify the detected COPCs screened for further evaluation. No detected constituents in the North Pit Exposure Area UTU (Class 3 groundwater) exceed applicable screening criteria; therefore, no COPCs were identified for further evaluation in the BHHRA. Table 6-2 summarizes the detected groundwater COPCs for the North Pit Exposure Area. Both arsenic and heptachlor have MCLs, which are not exceeded (ARARs are shown in Appendix A Table 2.15). As shown in Appendix A (Table 2.15), the maximum detected alpha-BHC concentration is just slightly exceeding its screening criterion which is the USEPA residential USEPA RSL for tap water.

Table 6-2 North Pit Exposure Area Detected Groundwater COPCs

COPC	STU (Class 2)
Metals	
Arsenic	X
Pesticides	
alpha-BHC	X
Heptachlor	X

6.2.3 Surface Water and Sediment COPCs

Appendix A (Tables 2.18 and 2.19) presents the data evaluation and screening for the sediment and surface water samples, and identifies the detected COPCs screened for further evaluation. Sediment and surface water background concentrations for the East Ditch and the drainage ditch that parallels Up River Road are also summarized in Appendix A (Tables 2.18 and 2.19, respectively). Table 6-3 summarizes the detected surface water and sediment COPCs for the East Ditch.

Table 6-3 North Pit Exposure Area Detected Sediment and Surface Water COPCs

COPC	Surface Water	Sediment
Metals		
Arsenic	X	
Volatile Organic Compounds (VOCs)		
Aldrin	X	
Semivolatile Organic Compounds (SVOCs)		
Benz(a)anthracene		X
Benzo(a)pyrene		X
Benzo(b)fluoranthene		X
Dibenz(a,h)anthracene		X
Indeno(1,2,3-cd)pyrene		X

Five PAHs are identified as detected sediment COPCs: benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(123-cd) pyrene. All maximum detected sediment concentrations were reported at one sample location (EDDSD09) collected at the East Ditch

culvert under Up River Road. The maximum sediment concentrations for these PAHs are less than the background concentrations for samples collected in the drainage ditch along Up River Road (Appendix A Table 2.18). Except for benzo(a)pyrene, the COPC sediment concentrations are within an order of magnitude of the screening criteria.

Two constituents are identified as detected surface water COPCs: arsenic and aldrin. Arsenic was detected in all surface water samples and all detected concentrations exceed its screening criterion. Arsenic concentrations detected in surface water samples collected in the East Ditch are less than the surface water background concentrations for the East Ditch upstream and are comparable to Up River Road concentrations (Appendix A Table 2-19). Only one reported surface water concentration for aldrin slightly exceeds its screening criterion.

6.2.4 Soil Gas COPCs

Appendix A (Table 2.20) presents the data evaluation and screening for the soil gas sample collected on the Wingfoot property and identifies the COPCs screened for further evaluation. Detected constituent concentrations do not exceed applicable screening criteria, and therefore, no detected soil gas COPCs were identified for the North Pit Exposure Area (Appendix A Table 2.20). Soil gas background concentrations are also summarized in Appendix A (Table 2.20). The soil gas concentrations for sample SG-49 is overall consistent with the soil gas concentrations reported for the background sample (SG-04). The locations of active soil gas samples were based on findings of a passive soil gas assessment (URS, 2014).

6.3 North Pit Area Exposure Assessment

Figure 11 presents the human health CSEM for all exposure areas, and depicts the current understanding of the known and suspected contaminant sources, potential transport mechanisms and migration pathways, and potentially exposed human receptors. The RAGS D Table 1 (Appendix A) details the rationale for the selection of exposure pathways and routes for all exposure areas. The following subsections review the exposure assessment by media for the North Pit Exposure Area.

6.3.1 Soils

Exposures via incidental ingestion, dermal contact, and inhalation of COPCs in surface soil (0 to 2-feet bgs) are considered complete exposure routes for a current and future on-site outdoor worker, on-site adolescent trespasser, and on-site maintenance worker. During intrusive construction activities, a current and future on-site construction worker is assumed to be potentially exposed to surface and subsurface soils while working in a trench to a depth of up to 10-feet bgs via incidental ingestion, dermal contact, and inhalation. Human receptors working or traversing the North Pit Exposure Area could be exposed to COPCs migrating from subsurface soil to ambient air; hence, inhalation of volatile COPCs in ambient air due to migration of vapors from subsurface soil (>2-feet bgs) is considered a complete exposure pathway for current and future on-site outdoor workers, on-site maintenance workers, and on-site adolescent trespassers. All soil is defined as soils overlying the UTU in the North Pit Exposure Area; leaching of COPCs in soil to the UTU is considered a complete pathway.

6.3.2 Groundwater

No constituents in the North Pit Exposure Area UTU exceed the applicable screening criteria; therefore, no COPCs were identified for further evaluation in the BHHRA. Since the STU is designated as a Class 2 groundwater resource, it is conservatively evaluated as a drinking water source. An on-site outdoor worker is assumed to be exposed to COPCs in the STU via ingestion. It is assumed that tap water in the North Pit Exposure Area is not routinely used for bathing and, therefore, dermal contact is not evaluated. Since an on-site outdoor worker scenario represents the most conservative exposure for ingestion of groundwater (i.e., COPCs in the STU), an evaluation is not additionally performed for current and future on-site construction worker, on-site maintenance worker, and on-site adolescent trespasser. Since the STU is conservatively evaluated as a drinking water source, the groundwater-to-ambient air pathway is not additionally quantified.

6.3.3 Sediment/Surface Water

Sediment and surface water in the East Ditch are potential exposure media for human receptors that may maintain or trespass the East Ditch Area. Incidental ingestion, dermal contact, and inhalation are potential routes of exposure for surface water and sediment. A quantitative evaluation of the inhalation route is considered unnecessary because no sufficiently volatile COPCs are screened for further evaluation for the sediment or surface water exposure pathways. A current and future on-site maintenance worker and on-site adolescent trespasser are assumed to be exposed to COPCs in sediments and surface water in the East Ditch via incidental ingestion and dermal contact.

6.4 North Pit Area Risk Characterization

Appendix A (Tables 3.5 through 3.8) summarizes the EPCs for the detected COPCs screened for further evaluation in surface soil (0 to 2-feet bgs), surface and subsurface soils (0 to 10-feet bgs), subsurface soils (>2-feet bgs), and all soils in the North Pit Exposure Area, respectively. Appendix A (Table 3.14) summarizes the EPCs for the detected COPCs for the North Pit Exposure Area STU. Appendix A (Tables 3.17 and 3.18) summarizes the EPCs for the detected COPCs screened for further evaluation in the East Ditch sediment and surface water. The applicable non-cancer and cancer toxicity values are included in Appendix A (Tables 5-1 and 5-2 and Tables 6-1 and 6-2, respectively). The risk calculation tables for the North Pit Exposure Area are provided in Appendices A (RME) and B (CT) (Tables 7.6 through 7.9 and 9.6 through 9.9). Tables 6-4 through 6-7 summarize the cancer risk and non-cancer hazard estimates for the RME and CT scenarios for the current and future on-site outdoor worker, on-site construction worker, on-site maintenance worker, and on-site adolescent trespasser, respectively. Although both RME and CT scenarios are evaluated in the BHHRA, USEPA's policy is to place more weight (emphasis) on the findings of the RME scenario when making risk management decisions. Therefore, the discussion of the results focus on cancer risk and non-cancer hazard estimates for the RME scenarios.

6.4.1 On-Site Current and Future Outdoor Worker

A current and future on-site outdoor worker is assumed to be exposed to:

- Surface soil (0 to 2-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates;
- Subsurface soil (>2-feet bgs) via inhalation of volatile COPCs in ambient air; and
- Groundwater - STU (Class 2) via ingestion.

The RME and CT exposure parameters for the on-site outdoor worker are summarized in Appendix A (Tables 4.1a through 4.1f). Table 6-4 summarizes the estimated cancer risks and non-cancer hazards for the RME and CT scenario by exposure media for the North Pit Exposure Area current and future on-site outdoor worker.

Table 6-4 North Pit Exposure Area Summary of RME and CT Cancer Risk and Non-Cancer Hazard Estimates for the Current and Future On-Site Outdoor Worker

Exposure Pathway	RME		CT	
	Cancer Risk (CR)	Non-Cancer Hazard (HI)	Cancer Risk (CR)	Non-Cancer Hazard (HI)
Surface Soil (0 to 2-feet bgs) Exposure Pathways				
Incidental Ingestion	1.9E-06	0.026	6.9E-07	0.026
Dermal Contact	1.1E-06	0.033	3.8E-08	0.0033
Inhalation of Vapor and Particulates	5.0E-09	0.00023	1.8E-09	0.00023
Total Surface Soil	3.0E-06	0.059	7.3E-07	0.029
Subsurface Soil >2-feet bgs) Exposure Pathway				
Inhalation of Volatiles in Ambient Air	---	0.027	---	0.027
Groundwater (STU) Exposure Pathway				
Ingestion	4.9E-05	0.3	1.8E-05	0.3
Multi-Media Pathway Total				
All Media, Exposure Pathways and Routes	5.2E-05	0.39	1.8E-05	0.36

As shown on Table 6-4, the estimated cumulative cancer risks and non-cancer hazards for the RME (CR=5.2E-05 and HI=0.39) scenario for the North Pit Exposure Area on-site outdoor worker does not exceed the USEPA's acceptable cancer risk management range of 1×10^{-4} to 1×10^{-6} and acceptable non-cancer HI of 1, considering all exposure media and pathways. The estimated RME cancer risks for potential outdoor worker exposures to detected COPCs in surface soil (0 to 2-feet bgs) and the STU are 3.0E-06 and 4.9E-05, respectively (Appendix A Tables 7.6 and 9.6). Estimated cancer risk was not calculated for potential exposures to vapors emanating from subsurface soil because mercury, the only detected COPC, does not have a published inhalation carcinogenic toxicity factor. The estimated RME non-cancer hazard for potential exposures to COPCs in surface soil (0 to 2-feet bgs), subsurface soil (>2-feet bgs), and the UTU are 0.059, 0.027, and 0.3, respectively (Appendix A Tables 7.6 and 9.6). The COPC identified as contributing a constituent-specific risk exceeding 1×10^{-6} for the North Pit Exposure Area on-site outdoor worker, considering all exposure media and pathways, is arsenic in surface soil via ingestion (1.8E-06) and in the STU via ingestion (4.9E-05) (Appendix A Tables 7.6 and 9.6). The maximum detected arsenic concentration (0.0093 mg/L) in the North Pit Exposure Area STU

is below the MCL (0.01 mg/L).

Lead is a detected COPC in the North Pit Exposure Area surface soil. As mentioned in Section 4.3.4, no toxicity factors are currently available for lead. Potential outdoor worker exposure to lead in surface soil is assessed by comparison of the 95% UCL of the mean to its commercial/industrial soil screening criterion. The calculation of the 95% UCL for lead in surface soil (0 to 2-feet bgs) in the North Pit Exposure Area is provided in Appendix C and the 95% UCL is shown in Appendix A (Table 3.5). The 95% UCL (288 mg/kg) for lead in surface soil is less than its commercial/industrial soil screening criterion of 800 mg/kg; hence, potential exposure of outdoor workers to lead in surface soil in the North Pit Exposure Area is estimated to be below acceptable levels of risk and hazard.

6.4.2 On-Site Current and Future Construction Worker

No waste materials were identified in the North Pit Exposure Area and no detected COPCs were identified in the North Pit Exposure Area UTU. Since the on-site outdoor worker represents the most conservative exposure for ingestion of groundwater in the STU, a quantitative assessment is not additionally conducted for the construction worker. A current and future on-site construction worker in the North Pit Exposure Area is assumed to be exposed only to surface and subsurface soils (0 to 10-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates. The RME and CT exposure parameters and applicable intake equations for the on-site construction worker are summarized in Appendix A (Tables 4.4a through 4.1c). Table 6-5 summarizes the estimated cancer risks and non-cancer hazards for the RME and CT scenarios for the North Pit Exposure Area on-site construction worker.

Table 6-5 North Pit Exposure Area Summary of RME and CT Cancer Risk and Non-Cancer Hazard Estimates for the On-Site Construction Worker

Exposure Pathway	RME		CT	
	Cancer Risk (CR)	Non-Cancer Hazard (HI)	Cancer Risk (CR)	Non-Cancer Hazard (HI)
Surface and Subsurface Soil (0 to 10-feet bgs) Exposure Pathway				
Incidental Ingestion	1.2E-07	0.033	3.6E-08	0.0099
Dermal Contact	1.3E-08	0.0082	4.4E-09	0.0027
Inhalation of Vapor and Particulates	4.9E-11	0.000055	4.9E-11	0.000055
Pathway Total				
All exposure routes	1.3E-07	0.041	4.1E-08	0.013

As shown on Table 6-5, the estimated cumulative cancer risks and non-cancer hazards for the RME (CR =1.3E-07 and HI =0.041) scenario for the North Pit Exposure Area on-site construction worker does not exceed the USEPA's acceptable cancer risk management range of 1×10^{-4} to 1×10^{-6} and acceptable non-cancer HI of 1 for potential exposures to surface and subsurface soils (0 to 10-feet bgs). As shown in Appendix A (RME Tables 7.7 and 9.7), no constituent-specific risk exceeds 1×10^{-6} for potential exposures to surface and subsurface soils.

Lead is a detected COPC in the North Pit Exposure Area surface and subsurface soils. Potential

construction worker exposure to lead in surface and subsurface soils (0 to 10-feet bgs) is assessed by comparison of the 95% UCL of the mean to its applicable commercial/industrial soil screening criterion. The calculation of the 95% UCL for lead in surface and subsurface soils in the North Pit Exposure Area is provided in Appendix C and the 95% UCL is included in Appendix A (Table 3.6). The 95% UCL (178 mg/kg) for lead in surface and subsurface soils is less than the commercial/industrial screening criterion (800 mg/kg); hence, potential exposure of construction workers to lead in surface and subsurface soils in the North Pit Exposure Area is estimated to be below acceptable levels of risk and hazard.

6.4.3 On-Site Current and Future Maintenance Worker

An on-site current and future maintenance worker in the North Pit Exposure Area is assumed to be exposed to:

- Surface soil (0 to 2-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates;
- Subsurface soil (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Sediment in the East Ditch via incidental ingestion and dermal contact; and
- Surface water in the East Ditch via incidental ingestion and dermal contact.

The RME and CT exposure parameters and applicable intake equations for the North Pit Exposure Area on-site maintenance worker are summarized in Appendix A (Tables 4.6a through 4.6d and 4.6f through 4.6i). Table 6-6 summarizes the estimated cancer risks and non-cancer hazards by exposure media for the RME and CT scenarios for the North Pit Exposure Area on-site maintenance worker.

As shown on Table 6-6, the estimated cumulative cancer risks and non-cancer hazards for the RME (CR=7.8E-07and HI=0.0067) scenario for the North Pit Exposure Area on-site maintenance worker does not exceed the USEPA's acceptable cancer risk management range of 1×10^{-4} to 1×10^{-6} and acceptable non-cancer HI of 1for all exposure media and pathways combined.

The estimated RME cancer risks for potential maintenance worker exposures to detected COPCs in the surface soil (0 to 2-feet bgs), East Ditch sediment, and East Ditch surface water are 5.7E-08, 5.0E-07, and 2.3E-07, respectively (Appendix A Tables 7.8 and 9.8). As shown in Appendix A (RME Tables 7.8 and 9.8), no constituent-specific risk exceeds 1×10^{-6} considering all exposure media and pathways. Estimated cancer risk was not calculated for potential exposures to vapors emanating from subsurface soil because mercury, the only detected COPC, does not have a published inhalation carcinogenic toxicity factor. The estimated RME non-cancer hazard for potential maintenance worker exposures to detected COPCs in the surface soil (0 to 2-feet bgs), subsurface soil (>2-feet bgs), and East Ditch surface water are 0.0028, 0.00032, and 0.0035, respectively (Appendix A Tables 7.8 and 9.8). Non-cancer hazard estimates were not completed for potential exposures to sediment in the East Ditch because the detected COPCs do not have published non-cancer toxicity factors.

Lead is a detected COPC in the North Pit Exposure Area surface soil. The 95% UCL (288 mg/kg) for

lead in the North Pit Exposure Area surface soil is less than the commercial/industrial soil screening criterion of 800 mg/kg; hence, potential exposure of maintenance worker to lead in surface soil in the North Pit Exposure Area is estimated to be below the acceptable level of risk and hazard.

Table 6-6 North Pit Exposure Area Summary of RME and CT Cancer Risk and Non-Cancer Hazard Estimates for the Current and Future On-Site Maintenance Worker

Exposure Pathway	RME		CT	
	Cancer Risk (CR)	Non-cancer Hazard (HI)	Cancer Risk (CR)	Non-cancer Hazard (HI)
Surface Soil (0 to 2-feet bgs) Exposure Pathways				
Incidental Ingestion	3.7E-08	0.0012	3.7E-08	0.0012
Dermal Contact	2.0E-08	0.0016	2.0E-09	0.00016
Inhalation of Vapor and Particulates	2.4E-11	0.0000028	2.4E-11	0.0000028
Total Surface Soil	5.7E-08	0.0028	3.9E-08	0.0014
Subsurface Soil >2-feet bgs) Exposure Pathway				
Inhalation of Volatiles in Ambient Air	---	0.00032	---	0.00032
Sediment Exposure Pathways				
Incidental Ingestion	1.8E-07	---	1.8E-07	---
Dermal Contact	3.1E-07	---	3.1E-08	---
Total Sediment	5.0E-07	---	1.8E-07	---
Surface Water Exposure Pathways				
Incidental Ingestion	1.6E-07	0.0025	1.6E-07	0.0025
Dermal Contact	6.8E-08	0.001	6.8E-08	0.001
Total Surface Water	2.3E-07	0.0035	2.3E-07	0.0035
Multi-Media Pathway Total				
All Media, Exposure Pathways and Routes	7.8E-07	0.0067	4.8E-07	0.0052

6.4.4 On-Site Current and Future Adolescent Trespasser

An on-site current and future adolescent trespasser in the North Pit Exposure area is assumed to be exposed to:

- Surface soil (0 to 2-feet bgs) via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates;
- Subsurface soil (>2-feet bgs) via inhalation of volatile COPCs in ambient air;
- Sediment in the East Ditch via incidental ingestion and dermal contact; and
- Surface water in the East Ditch via incidental ingestion and dermal contact.

The RME and CT exposure parameters and applicable intake equations for the North Pit Exposure Area current and future on-site adolescent trespasser are summarized in Appendix A (Tables 4.7a through 4.7d, and 4.7f through 4j). Table 6-7 summarizes the estimated cancer risks and non-cancer hazards for the RME and CT scenarios by exposure media for the North Pit Exposure Area on-site adolescent trespasser.

Table 6-7 North Pit Exposure Area Summary of RME and CT Cancer Risk and Non-Cancer Hazard Estimates for the Current and Future On-Site Adolescent Trespasser

Exposure Pathway	RME		CT	
	Cancer Risk (CR)	Non-cancer Hazard (HI)	Cancer Risk (CR)	Non-cancer Hazard (HI)
Surface Soil (0 to 2-feet bgs) Exposure Pathways				
Incidental Ingestion	5.0E-07	0.017	5.7E-08	0.0038
Dermal Contact	3.5E-07	0.028	5.4E-09	0.00085
Inhalation of Vapor and Particulates	2.1E-10	0.000024	1.2E-11	0.0000028
Total Surface Soil	8.5E-07	0.044	6.3E-08	0.0047
Subsurface Soil >2-feet bgs) Exposure Pathway				
Inhalation of Volatiles in Ambient Air	---	0.0028	---	0.00032
Surface Water Exposure Pathways				
Incidental Ingestion	2.2E-06	0.034	1.2E-07	0.0039
Dermal	6.3E-07	0.0097	3.8E-08	0.0012
Total Surface Water	2.8E-06	0.043	1.6E-07	0.005
Sediment Exposure Pathways				
Incidental Ingestion	2.5E-06	---	2.9E-07	---
Dermal	5.5E-06	---	8.5E-08	---
Total Sediment	8.0E-06	---	3.7E-07	---
Multi-Media Pathway Total				
All Media, Exposure Pathways, and Routes	1.2E-05	0.090	6.0E-07	0.010

As shown on Table 6-7, the estimated cumulative cancer risks for the RME (CR=1.2E-05 and HI =0.090) scenario for the North Pit Exposure Area on-site adolescent trespasser does not exceed the USEPA's acceptable cancer risk management range of $1x\ 10^{-4}$ to 1×10^{-6} and acceptable non-cancer HI of 1 for all exposure media and pathways combined. The estimated RME cancer risks for potential adolescent trespasser exposures to detected COPCs in the surface soil (0 to 2-feet bgs), East Ditch sediment, and East Ditch surface water are 8.5E-07, 8.0E-06, and 2.8E-06, respectively (Appendix A Tables 7.6 and 9.6). Estimated cancer risk was not calculated for potential exposures to vapors emanating from subsurface soil because mercury, the only detected COPC, does not have a published inhalation carcinogenic toxicity factor. As shown in Appendix A (RME Tables 7.9 and 9.9), the COPCs identified as contributing a constituent-specific risk exceeding 1×10^{-6}, considering all exposure media and pathways are:

- Arsenic in surface water in the East Ditch via ingestion (2.1E-06); and
- Benzo(a)pyrene in sediment in the East Ditch via ingestion (1.7E-06) and dermal contact (3.7E-06).

The estimated RME non-cancer hazard for potential adolescent trespasser exposures to detected COPCs in the surface soil (0 to 2-feet bgs), subsurface soil (>2-feet bgs), and East Ditch surface water are 0.044, 0.0028, and 0.043, respectively (Appendix A Tables 7.9 and 9.9). Non-cancer hazard

estimates were not completed for potential exposures to sediment in the East Ditch because the detected COPCs do not have published non-cancer toxicity factors.

Lead is a detected COPC in the North Pit Exposure Area surface soil. The 95% UCL (288 mg/kg) for lead in the North Pit Exposure Area surface soil is less than the commercial/industrial soil screening criterion of 800 mg/kg and the USEPA residential RSL of 400 mg/kg. Therefore, potential exposure of adolescent trespasser to lead in surface soil in the North Pit Exposure Area is estimated to be below the acceptable level of risk and hazard.

6.4.5 Leaching from Soils to Groundwater

The potential for detected soil COPCs to leach to the UTU is evaluated by comparison to commercial/industrial 30-acre source area criteria for the protection of soil constituents leaching to a Class 3 groundwater ($^{GW}Soil_{Class\ 3}$). Site-specific soil-to-groundwater leaching criteria were calculated for lead, mercury and selenium using the TCEQ's soil leachate model (TCEQ, 1999) and site-specific data and information for soil pH and type assuming a non-cancer HQ of 1 and acceptable cancer risk of 1×10^{-5} (Appendix J). Table 6-8 shows the detected COPCs for leaching from soil to the UTU in the North Pit Exposure Area.

Table 6-8 North Pit Exposure Area Evaluation of Soil COPCs Leaching to the UTU

Detected COPCs for Leaching from Soil to the UTU	Maximum Detected Soil Concentration (mg/kg)	Commercial/Industrial Leaching from Soils to Class 3 Groundwater Criteria (mg/kg)	Site-Specific Leaching from Soils to Class 3 Groundwater Criteria (mg/kg)
Lead	1800	150	3500
Mercury	58.1	0.39	400
Selenium	157	110	230
1-Methylnaphthalene	41	330	NA
NA – Not applicable			

No COPC concentrations exceed applicable commercial/industrial soil criteria for protection of soil constituents leaching to Class 3 groundwater. In addition, none of these COPCs are detected in the UTU at concentrations exceeding their applicable Class 3 groundwater screening criteria. As indicated in Section 6.2, no detected COPCs were identified for the North Pit Exposure Area UTU.

6.5 North Pit Exposure Area Summary of Results

Based on the available Site data and information, the following summarizes the human health risk assessment for the North Pit Exposure Area:

1. Surface soil, subsurface soil, groundwater in the STU, and sediment and surface water in the East Ditch are the media of concern for the North Pit Exposure Area.
2. Groundwater in the UTU and soil gas in North Pit Exposure Area are not media of concern for the North Pit Exposure Area.

3. Exposure scenarios evaluated for the North Pit Exposure Area are:

    - Current and future on-site outdoor worker via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates in surface soil (0 to 2-feet bgs), inhalation of volatile COPCs migrating from subsurface soil (>2-feet bgs) to ambient air, and ingestion of groundwater in the STU;
    - Current and future on-site construction worker via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates in surface and subsurface soil (0 to 10-feet bgs) while working in a trench;
    - Current and future maintenance worker via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates in surface soil (0 to 2-feet bgs), inhalation of volatile COPCs migrating from subsurface soil (>2-feet bgs) to ambient air, and incidental ingestion and dermal contact with sediment and surface water in the East Ditch;
    - Current and future adolescent trespasser via incidental ingestion, dermal contact, and inhalation of volatile COPCs and particulates in surface soil (0 to 2-feet bgs), inhalation of volatile COPCs migrating from subsurface soil (>2-feet bgs) to ambient air, and incidental ingestion and dermal contact with sediment and surface water in the East Ditch; and
    - Leaching of COPCs in soils to the underlying UTU.

4. The estimated cumulative cancer risks and non-cancer hazards for the RME and CT scenarios for the current and future on-site outdoor worker, on-site construction, on-site maintenance worker, and on-site adolescent trespasser do not exceed the USEPA's acceptable cancer risk management range (1×10^{-4} to 1×10^{-6}) and non-cancer hazard index of 1 for all applicable media and exposure pathway and routes [Appendices A (RME) and B (CT) Tables 7.6 through 7.9 and 9.6 through 9.9].

5. Lead is a detected COPC in soil in the North Pit Exposure Area. As mentioned in Section 4.3.4, no toxicity factors are currently available for lead. Potential human receptor exposure to lead in soil is assessed by comparison of the 95% UCL of the mean to the applicable soil screening criterion. The 95% UCL for lead in soil is less than the USEPA residential and commercial/industrial soil screening criteria of 400 and 800 mg/kg, respectively; hence, potential receptor exposure to lead in soil is below an acceptable level of risk and hazard for commercial land use.

6. No COPC concentrations exceed applicable commercial/industrial soil criteria for protection of soil constituents leaching to Class 3 groundwater.

7.0 OFF-SITE EXPOSURE AREA

This section documents the results of the human health risk assessment performed for the Off-Site Exposure Area, including the exposure area background, identification of COPCs, exposure assessment, and risk characterization.

7.1 Off-Site Exposure Area Background

The Off-Site Exposure Area includes an equipment yard on Southern Minerals Road, formerly owned by J. I. Hailey, located directly east of the southern portion of the Site. The equipment yard was purchased in 2013 by EF90 LLC for the construction of a tank terminal facility.

Groundwater within the vicinity of the South Pit is impacted by LNAPL and dissolved phase constituents. The UTU and STU have a hydraulic flow gradient to the north to northeast. Temporary and permanent monitoring wells were installed off-site for downgradient delineation of the on-site groundwater. Based on the geologic interpretations, the temporary well data, and the dry permanent well (MWGW21), delineation of the impacted groundwater is complete downgradient in the UTU.

Groundwater in the UTU and STU are the media of concern for the Off-Site Exposure Area. The location of the temporary and permanent monitor wells installed in the UTU and STU are shown on Figure 4. The most recent groundwater analytical data collected (January 2013 through February 2014) for the UTU monitor wells (i.e., MWGW18, TWGWEF01, TWGWEF02, TWGWEF04, TWGWEF05, and TWGWEF10) and STU monitor wells (i.e., MWGW17, MWGW19, and MWGW204) are used in the human health risk assessment for the Off-Site Exposure Area.

7.2 Off-Site Exposure Area COPCs

This section presents the detected COPCs that were identified for the Off-Site Exposure Area based on the screening comparison described in Section 4.1.5. For the screening evaluation, the maximum reported concentration for each constituent was used. Detected constituents present at concentrations exceeding screening criteria are retained for further analysis in the BHHRA. Constituents that were not detected in any samples collected in a medium of concern are identified as non-detect COPCs and are discussed in the Uncertainty Analysis (Section 9.0). The following sections present a discussion of the findings for the Off-Site Exposure Area by exposure media.

Appendix A (Tables 2.16 and 2.17) presents the data evaluation and screening for the UTU and STU samples collected in the RI, respectively, and identifies the detected COPCs screened for further evaluation in the Off-Site Exposure Area. Table 7-1 summarizes the detected groundwater COPCs for the Off-Site Exposure Area. One detected constituent, benzene, in the UTU (Class 3 groundwater) was identified as a COPC. Benzene exceeds the screening criterion for protection of a Class 3 groundwater, but does not exceed its screening criterion for migration of vapors from groundwater to ambient air. The maximum detected benzene concentration in UTU is within an order of magnitude of its screening criterion.

Nineteen detected constituents in the STU (Class 2 water-bearing unit) were identified as COPCs

(Table 7-1). Several COPCs screened for further evaluation in the Off-Site Exposure Area STU have MCLs, which are not exceeded (ARARs are included in Appendix A Table 2.17).

Table 7-1 Off-Site Exposure Area Detected Groundwater COPCs

COPC	UTU (Class 3)	STU (Class 2)
Metals		
Arsenic		X
Cobalt		X
Manganese		X
Pesticides		
beta-BHC		X
4,4'-DDE		X
Dieldrin		X
Heptachlor		X
Heptachlor epoxide		X
gamma-BHC		X
Volatile Organic Compounds		
Benzene	X	X
Ethylbenzene		X
Dibromochloromethane		X
Naphthalene		X
1,2,4-Trimethylbenzene		X
Semivolatile Organic Compounds		
Benz(a)anthracene		X
2,4-Dimethylphenol		X
4,6-Dinitro-2-methylphenol		X
Naphthalene		X
1-Methylnaphthalene		X
Pentachlorophenol		X

7.3 Off-Site Area Exposure Assessment

Figure 11 presents the human health CSEM for all exposure areas, and depicts the current understanding of the known and suspected contaminant sources, potential transport mechanisms and migration pathways, and potentially exposed human receptors. The RAGS D Table 1 (Appendix A) details the rationale for the selection of exposure pathways and routes for all exposure areas.

The UTU in the Off-Site Exposure Area is not currently used as a water resource, and is not likely to be used in the future. The UTU is evaluated based on its Class 3 groundwater designation. In addition, an off-site construction worker is assumed to be exposed to COPCs in the UTU via incidental ingestion, dermal contact, and inhalation of volatile COPCs in ambient air while conducting work in a trench. Because the STU meets the TCEQ's Class 2 groundwater designation, it is conservatively evaluated as a drinking water source. An off-site outdoor worker is assumed to be exposed to COPCs in the STU

via ingestion. It is assumed that tap water is not routinely used for bathing and, therefore, dermal contact with COPCs in the STU is not evaluated. Since an off-site outdoor worker scenario represents the most conservative exposure for ingestion of groundwater (i.e., COPCs in the STU), an evaluation is not additionally performed for off-site construction workers. Since the STU is conservatively evaluated as a drinking water source, the groundwater-to-ambient air pathway is not additionally quantified.

7.4 Off-Site Area Risk Characterization

Appendix A (Tables 3.15 and 3.16) summarizes the EPCs for detected COPCs screened for further evaluation in the Off-Site Exposure Area UTU and STU, respectively. The applicable non-cancer and cancer toxicity values are included in Appendix A (Tables 5-1 and 5-2 and Tables 6-1 and 6-2, respectively). The risk calculation tables for the Off-Site Exposure Area are provided in Appendices A (RME) and B (CT) (Tables 7.10 to 7.11 and 9.10 to 9.11). Tables 7-2 and7-3 summarize the RME and CT cancer risk and non-cancer hazard estimates for the current and future off-site outdoor worker and off-site construction worker, respectively. Although both RME and CT scenarios are evaluated in the BHHRA, USEPA's policy is to place more weight (emphasis) on the RME scenario results when making risk management decisions. Therefore, the discussion of the results focus on cancer risk and non-cancer hazard estimates for the RME scenarios, as well as chemical-specific ARARs (where applicable).

7.4.1 Off-Site Current and Future Outdoor Worker

A current and future off-site outdoor worker is anticipated to participate in routine outdoor activities in the Off-Site Exposure Area, and is assumed to be exposed to:

- Groundwater - UTU (Class 3 groundwater) via inhalation of volatile COPCs in ambient air; and
- Groundwater - STU (Class 2 groundwater) via ingestion.

The RME and CT exposure parameters and applicable intake equations for the Off-Site Exposure Area current and future off-site outdoor worker are summarized in Appendix A (Tables 4.2a and 4.2b). Table 7-2 summarizes the estimated cancer risks and non-cancer hazards for RME and CT scenarios by exposure media for the Off-Site Exposure Area current and future off-site outdoor worker.

Table 7-2 Off-Site Exposure Area Summary of RME and CT Cancer Risk and Non-Cancer Hazard Estimates for the Current and Future Off-Site Outdoor Worker

Exposure Pathway	RME		CT	
	Cancer Risk (CR)	Non-Cancer Hazard (HI)	Cancer Risk (CR)	Non-Cancer Hazard (HI)
Groundwater (UTU) Exposure Pathway				
Inhalation of VOCs in ambient air	1.1E-06	0.013	3.8E-07	0.013
Groundwater (STU) Exposure Pathway				
Ingestion	**5.7E-04**	**4.6**	**2.1E-04**	**4.6**
Multi-Media Pathway Total				
All Exposure Pathways and Routes	**5.7E-04**	**4.6**	**2.1E-04**	**4.6**

The estimated cancer risks for the RME (CR=1.1E-06) and CT (CR=3.8E-07) scenarios for the off-site outdoor worker do not exceed the USEPA's acceptable cancer risk management range of 1×10^{-4} to 1×10^{-6} for inhalation of volatile COPCs migrating from the UTU to ambient air. The estimated cancer risks for the RME (CR=5.7E-04) and CT (CR=2.1E-04) scenarios for the off-site outdoor worker exceed the USEPA's acceptable cancer risk management range of 1×10^{-4} to 1×10^{-6} for ingestion of COPCs in the STU. As shown in Appendix A (RME Tables 7.10 and 9.10), the COPCs identified as contributing a constituent-specific risk exceeding 1×10^{-6}, considering all exposure media and complete exposure pathways are:

- Arsenic (CR=5.6E-04), heptachlor epoxide (CR=6.0E-06), benzene (CR=3.76E-06), and ethylbenzene (CR=2.2E-06) in the STU via ingestion; and
- Benzene (CR=1.1E-06) via inhalation of COPCs migrating from the UTU to ambient air.

As shown on Table 7-2, the estimated non-cancer hazards for the RME and CT scenarios for the off-site outdoor worker (HI = 0.013) do not exceed the USEPA's acceptable non-cancer HI of 1 for inhalation of volatile COPCs migrating from the UTU to ambient air. The estimated non-cancer hazards for the RME and CT scenarios for the off-site outdoor worker (HI =4.6) exceed the USEPA's acceptable non-cancer HI of 1 for ingestion of COPCs in the STU. As shown in Appendix A (Tables 7.10 and 9.10), the primary COPC contributing to the overall non-cancer hazard is arsenic in the STU via ingestion (HQ =3.5). The target organ-specific HI only exceeds 1 for the target organs or systems (i.e., skin and vascular system) that are affected by arsenic (Appendix A Table 9.10).

Appendices A (RME Table 10.3) and B (CT Table 10.3) present the exposure medium and the COPC that indicate estimated cancer risks and non-cancer hazards exceeding the USEPA's acceptable cancer risk management range (1×10^{-4} to 1×10^{-6}) and non-cancer hazard index of 1 for the Off-Site Exposure Area current and future off-site outdoor worker. The primary COPC contributing to the overall cancer risk and non-cancer hazard is arsenic in the STU via ingestion. The maximum detected arsenic concentration (0.11 mg/L) in the STU exceeds its MCL (0.01 mg/L).

7.4.2 Off-Site Current and Future Construction Worker

A current and future off-site construction worker is assumed to be exposed to detected COPCs in the UTU (Class 3 groundwater) while working in a trench via incidental ingestion, dermal contact and inhalation of volatile COPCs. The RME and CT exposure parameters and applicable intake equations for the Off-Site Exposure Area current and future off-site construction worker are summarized in Appendix A (Tables 4.5a through 4.5c). Table 7-3 summarizes the estimated cancer risks and non-cancer hazards for RME and CT scenarios for the Off-Site Exposure Area current and future off-site construction worker.

Table 7-3 Off-Site Exposure Area Summary of RME and CT Cancer Risk and Non-Cancer Hazard Estimates for the Off-Site Current and Future Construction Worker

Exposure Pathway	RME		CT	
	Cancer Risk (CR)	Non-Cancer Hazard (HI)	Cancer Risk (CR)	Non-Cancer Hazard (HI)
Groundwater (UTU) Exposure Pathways				
Incidental Ingestion	2.6E-06	0.82	2.6E-06	0.82
Dermal Contact	2.6E-06	0.84	2.6E-06	0.84
Inhalation of Vapors (Trench Scenario)	8.9E-07	0.27	8.9E-07	0.27
Pathway Total				
All Exposure Routes	6.1E-06	**1.9**	6.1E-06	**1.9**

As shown in Table 7-3, the estimated cancer risks for the RME and CT scenarios for the off-site construction worker (CR=6.1E-06) do not exceed the USEPA's acceptable cancer risk management range of 1 x 10^{-4} to 1 x 10^{-6} for exposures to COPCs in the UTU (incidental ingestion, dermal and inhalation combined). The estimated non-cancer hazards for the RME and CT scenarios for the off-site construction worker (HI =1.9) exceed the USEPA's acceptable non-cancer hazard index of 1 for exposures to COPCs in the UTU. As shown in Appendix A (Tables 7.11 and 9.11), benzene is the only COPC contributing to the cancer risk and non-cancer hazard for the off-site construction worker scenario (primarily associated with the ingestion and dermal exposure routes). The organ-specific HI exceeds 1 for the primary target organ (i.e., blood) that is affected by benzene. Appendix A (RME Table 10.4) presents the exposure medium and the COPC that indicate an estimated non-cancer hazard exceeding the USEPA's a non-cancer hazard index of 1 for the Off-Site Exposure Area off-site construction worker. Note that the non-cancer hazards estimated for the construction worker scenarios are conservative because they are derived using chronic toxicity factors rather than sub-chronic toxicity factors, which are more appropriate for the hazard characterization of short-term exposure scenarios (such as the construction work); sub-chronic toxicity factors are typically an order of magnitude lower than chronic toxicity factors. Hence, the non-cancer hazard for the construction worker is expected to be about 10-fold lower, and likely could be less than an HI of 1 (for the off-site construction worker).

7.4.3 Class 3 Groundwater Evaluation

Benzene is the only detected COPC in the Off-Site Exposure Area UTU. Since the UTU meets the

TCEQ's Class 3 groundwater designation, the applicable standard for benzene is the TRRP commercial/industrial Class 3 groundwater PCL (0.5 mg/L). The maximum detected benzene concentration (3.5 mg/L) in the UTU exceeds its commercial/industrial Class 3 groundwater PCL.

7.5 Off-Site Exposure Area Summary of Results

Based on the available Site data and information, the following summarizes the human health risk assessment for the Off-Site Exposure Area:

1. Groundwater in the UTU and STU are the media of concern.
2. Exposure scenarios evaluated for the Off-Site Exposure Area are:
    - Current and future off-site outdoor worker via inhalation of volatile COPCs in the UTU migrating to ambient air and ingestion of COPCs in the STU; and
    - Current and future off-site construction worker via incidental ingestion, dermal contact, and inhalation of volatile COPCs in the UTU while working in a trench.
3. For the current and future off-site outdoor worker [Appendices A (RME) and B (CT) Tables 7.10, 9.10, and 10.3]:
    - The estimated cumulative cancer risks and non-cancer hazards for the RME (CR=1.1E-06 and HI=0.013) and CT (CR=3.8E-07 and HI=0.013) scenarios do not exceed the USEPA's acceptable cancer risk management range (1×10^{-4} to 1×10^{-6}) and non-cancer HI of 1 for inhalation of volatile COPCs in the UTU migrating to ambient air.
    - The estimated cumulative cancer risks and non-cancer hazards for the RME (CR=5.7E-04 and HI 4.6) and CT (CR=2.1E-04 and HI =4.6) scenarios exceed the USEPA's acceptable cancer risk management range (1×10^{-4} to 1×10^{-6}) and non-cancer HI of 1 for ingestion of COPCs in the STU. The primary COPC contributing to the overall cancer risk is arsenic. The maximum detected arsenic concentration (0.11 mg/L) in the STU exceeds its MCL (0.01 mg/L).
4. For the current and future off-site construction worker [Appendices A (RME) and B (CT) Tables 7.11, 9.11, and 10.4]:
    - The estimated cumulative cancer risk for the RME and CT scenarios (CR=6.1E-06) does not exceed the USEPA's acceptable cancer risk management range (1×10^{-4} to 1×10^{-6}) for exposures to COPCs in the UTU (via incidental ingestion, dermal contact, and inhalation combined).
    - The estimated non-cancer hazard for the RME and CT scenarios (HI =1.9) exceeds the USEPA's non-cancer HI of 1 for exposures to COPCs in the UTU (via incidental ingestion, dermal contact, and inhalation combined). The COPC contributing to the overall non-cancer hazard is benzene primarily via ingestion and dermal contact.
5. Benzene is the only detected COPC in the Off-Site Exposure Area UTU. The maximum

detected benzene concentration (3.5 mg/L) in the UTU exceeds its commercial/industrial Class 3 groundwater PCL (0.5 mg/L).

8.0 LNAPL QUALITATIVE ASSESSMENT

This section presents a qualitative assessment of the potential for exposure to LNAPL at the Site. LNAPL and residual waste material were observed within the former South Pit. The former North Pit does not contain waste material or LNAPL. LNAPL was not observed in the Off-Site Exposure Area.

As shown on Figure 35 and in Table 3 of the RI Report (URS, 2014), LNAPL was observed in the South Pit Exposure Area permanent monitor wells MWGW01, MWGW09, and MWGW10. In addition, LNAPL was observed in temporary monitor wells TWGW-02 and TWGW-03. LNAPL was gauged one time in permanent monitor well MWGW02. The residual waste material in the South Pit Exposure Area is characterized as: sludge-like, exhibiting a non-granular, oily, viscous or grease-like consistency or a reworked soil/waste mixture such as hydrocarbons in a granular soil matrix.

Based on the Site data and information presented in URS (2014), LNAPL is in contact with the UTU (i.e., the Class 3 groundwater) in the South Pit Exposure Area, and waste materials are present in the South Pit Exposure Area at depths greater than 2-feet bgs. The UTU is not used as a water resource, and is not expected to be used in the future; hence, human receptor contact with LNAPL in the UTU is not likely. LNAPL was not observed in contact with the STU (i.e., the Class 2 unit) in the South Pit Exposure Area. In addition, no LNAPL and/or waste materials were observed in surface water or sediment in the East Ditch. A quantitative evaluation was completed for human receptor exposures to the sludge and reworked soil/waste mixtures and soil gas in the South Pit Exposure Area using the chemical analytical data for detected COPCs. The detected sludge and reworked soil/waste and soil gas COPCs and estimated RME and CT cancer risks and non-cancer hazards are discussed for the applicable receptors and exposure pathways and routes in Section 5.0 (South Pit Exposure Area).

Based on the recoverability and physical characteristics of the LNAPL (density similar to water and highly viscous); LNAPL is not anticipated to be migrating (URS, 2014). The LNAPL is stable and non-mobile as indicated by presence within the historical footprint of the South Pit and lack of migration outside the footprint in the 50 years since pit closure (URS, 2014). Given these characteristics (stable, not migrating or mobile), LNAPL in the South Pit Exposure Area is expected to remain within the boundaries of the former South Pit.

9.0 UNCERTAINTY ASSESSMENT

The purpose of the uncertainty analysis is to provide a summary of the factors that may significantly influence the estimated cancer risks and non-cancer hazards and assess the contribution of these factors to under- or over-estimate risks and/or hazards. The uncertainty assessment is intended to identify key uncertainties so that the level of confidence in the risk and hazard estimates can be considered in risk management decisions.

Every step in the BHHRA process requires making assumptions, all of which can contribute to uncertainty in the risks and hazards estimated. The USEPA's guidance documents on risk assessments provide systematic methods for estimating potential human health risks posed by chemical exposures. Despite the advanced state of current human risk assessment methods, uncertainties are inherent to the risk assessment process. The following subsections present a discussion of the uncertainties associated with each step of the risk assessment process as they pertain to the Site, including:

- Data evaluation and screening;
- Exposure assessment;
- Toxicity assessment; and
- Risk characterization.

9.1 Uncertainties Associated with Data Evaluation and Screening

Uncertainties are introduced in the first step of the risk assessment process if samples do not represent Site media, if analytical methods are not adequate for Site constituents and matrices, if substantial amounts of analytical data are qualified or rejected, and if constituents are included in the risk assessment that are not related to historical Site operations.

Uncertainties can also be introduced into the COPC identification process if evaluations such as background comparisons for inorganic constituents, frequency of detection, and a weight-of-evidence evaluation of the relationship of a constituent to the Site are utilized to eliminate analytes for the screening process. For example, a frequency of detection or weight-of-evidence approach could have been used to eliminate an analyte from being identified as a COPC and retained in the risk assessment. Rather a conservative approach of evaluating all detected analytes was utilized regardless of the frequency of detection of weight-of-evidence evaluation. Not including analytes as COPCs could have potentially resulted in an underestimation of risk.

9.1.1 Samples Representing Site Media

The primary sources of uncertainty associated with the data are typically related to the sampling and analysis procedures. Sample locations were identified in the RI/FS Work Plan using a probability based design and systematic grid sampling with a random start using Visual Sampling Plan Version 6.0 (Battelle, 2010). However, bias (over-estimation) could be introduced into the BHHRA since sample collection depths were chosen based on displayed characteristics indicative of being affected by COPCs

(visual observations, field screening using an organic vapor meter, or other criteria). In the BHHRA, it is assumed that samples collected are representative of the areas to which human receptors could be exposed. However, the collected samples may not be representative, due to biases in sampling and/or to random variability of samples. Random variability of media sampled may result in over- or under-estimation of chemical concentrations and, thus, the Site risks and hazards.

9.1.2 Analytical Methods

Samples collected in the RI were analyzed using USEPA-approved methods and the analytical data were validated to assess their usability in the BHHRA. In order to achieve lower reporting limits than stated in the USEPA-approved methods, all detections above the method detection limit were reported as "J" values. As needed to meet project objectives, analyte concentrations were quantified using low-level measurements (such as larger injection volumes, modification of the calibration curve to achieve a lower method quantitation limit [MQL], or selected ion monitoring).

Sample analysis is subject to uncertainties associated with the level of precision and accuracy. Since the analytical methods used for the RI are appropriate for the constituents that are known or suspected to be present (based on the historical Site operations), the potential for not identifying a COPC in media of concern is expected to be low.

9.1.3 Data Quality

With limited exceptions, the analytical data are usable for the purposes of identifying COPCs and determining EPCs for quantifying risks and hazards in the BHHRA. Due to the large amount of data obtained for the RI (approximately 90,406 analytes), individual sample/analyte results are not discussed below. Only significant findings that may impact the usability of the data are discussed.

Low Bias

The use of flagged data increases the level of uncertainty associated with the EPC used in the risk assessment, resulting in a concentration that may be either biased high or low.

The quality control criteria for laboratory control sample recoveries for VOCs and SVOCs are 60-140% recovery. The LCS recoveries for many analytes, especially phenolic compounds and other reactive SVOCs, were less than 60%. While recoveries less than 60% for these compounds are acceptable for a general use method such as SW-846 8270, the quality control criteria are set to evaluate where significant biases exist in the data set that may affect the identification of COPCs and the evaluation of risk to human health. The table below lists those analytes for which greater than 20% of the data set is qualified as estimated with a low bias (JL).

Analyte	Number/ Percent qualified as "JL"	Analyte	Number/ Percent qualified as "JL"
Benzaldehyde	377 / 61	2-Chlorophenol	154 / 25
Pentachlorophenol	236 / 38	2,4,5-Trichlorophenol	154 / 25
2,4-Dinitrophenol	193 / 31	Phenol	154 / 25

Analyte	Number/ Percent qualified as "JL"	Analyte	Number/ Percent qualified as "JL"
2,4-Dimethylphenol	185 / 30	2-Nitrophenol	154 / 25
4,6-Dinitro-2-methylphenol	161 / 26	2-Methylphenol	153 / 24
4-Nitrophenol	158 / 26	2-Nitrophenol	153 / 24
2,4-Dichlorophenol	156 /25	2-Methylphenol	151 / 24
4-Chloro-3-methylphenol	155 / 25	3&4-Methylphenol	151 / 24
2,4,6-Trichlorophenol	155 / 25		

High Bias

Portions of the data set may overestimate the risk to human health due to high bias in the data. Data for approximately 115 analytes are qualified as estimated with a high bias (JH). Note that only detected analytes are qualified. Since nondetect analytes are not qualified, there still may be bias in the data set. Less than 0.2% of the analyte data are qualified as estimated with a high bias.

Nondetects

The data validator only assigned "U" flags to results that meet the criteria for evaluating blanks (URS, 2010). The presence and concentrations of analytes may be overestimated if these analytes were introduced into the sample during field or laboratory activities. The table below lists those analytes for which greater than 5% of the dataset are qualified as nondetect (U). Detections of the analytes listed below should be used with caution in evaluating risk, since these analytes may not be present in the samples or may be present at concentrations lower than stated in the analytical reports.

Analyte	Number/ Percent qualified as "U"	Analyte	Number/ Percent qualified as "U"
Zinc	107 / 17	Naphthalene	47 / 7.6
Thallium	71 / 12	Methylene chloride	40 / 6.5
Selenium	56 / 9.1		

Rejected Data

In total, data for 19 individual analytes (approximately 0.2% of the data) from eleven samples (approximately 1.8% of the samples) were rejected. Rejected analytes were: aldrin, caprolactam, 4-chloroaniline, 3,3'-dichlorobenzidine, hexachlorocyclopentadiene, n-nitrosodiphenylamine, pentachlorophenol, and styrene.

As discussed in the Quality Assurance Project Plan, the completeness requirement for the laboratory measurements is 95 percent for aqueous samples and 90 percent for soil samples. The completeness requirements for the project are met.

The use of flagged data increases the level of uncertainty associated with the determination of EPCs. Overall, however, the quality of the data was sufficient for the purposes of conducting the BHHRA.

9.1.4 Comparison of SDLs and MQLs to Human Health Screening Criteria

This section evaluates the constituents with maximum SDLs that exceed human health screening criteria as shown in Appendix A Tables 2.1 through 2.20. Constituents with maximum detection limits that exceed the human health screening criteria are shaded yellow in the Appendix A Tables 2.1 through 2.20.

In order to achieve lower reporting limits and to minimize under–estimation of risk, all detections above the method detection limit were reported as "J" values. The SDL is the method detection limit adjusted to reflect sample-specific actions, such as dilution or change in aliquots for analysis and sample-specific characteristics, such as moisture content. The MQL is the lowest non-zero standard concentration in the laboratory's initial calibration curve. Therefore, the MQL is method specific. Generally, the MQL is five to ten times higher than the MDL.

As needed to meet project objectives, analyte concentrations were quantified using low-level measurements (such as larger injection volumes, modification of the calibration curve, or selected ion monitoring). Since an analyte was excluded from the quantitative risk assessment if the analyte was not detected in an exposure medium, the contribution to the uncertainty for this process was evaluated by comparing the maximum SDLs to applicable human health screening criteria. In addition, SDLs were compared to the MQL criteria developed during the data quality objective planning process and specified in the RI/FS Work Plan (URS, 2010). Potential bias are due to 1) elimination of those analytes with SDLs and MQLs exceeding the human health screening criteria even in "clean" environmental samples (i.e., no dilution or matrix interference) and to elimination of analytes or 2) data with elevated SDLs due to sample interferences (i.e., dilution due to matrix effects or to obtain concentrations within the instrument calibration range).

Elimination of Analytes with SDLs and MQLs Exceeding Human Health Screening Criteria

Even with method and reporting modifications, SDLs for certain analytes exceed the human health screening criteria. This may result in an under-estimation of risk, if based on Site history the analyte would be expected to be present.

No analytes were reported with SDLs that routinely exceeded the human health screening criteria in the majority of soil samples. n-Nitroso-di-n-propylamine was the only analyte reported from soil analyses with a sample MQL (0.0066 mg/kg) exceeding the leaching from soils to Class 3 groundwater screening criteria of 0.00395 mg/kg. SDLs for n-nitroso-di-n-propylamine in soils evaluated for this pathway ranged from 0.002 to 0.26 mg/kg (Appendix A Tables 2-4 and 2.8). Based on Site usage for drilling fluids disposal, n-nitroso-di-n-propylamine would not be expected to be identified in sample media. Small amounts of n-nitroso-di-n-propylamine are produced as a side reaction during some manufacturing processes, as a contaminant in some weed killers, and during the manufacture of some rubber products (ATSDR, 2014b); neither processes were identified during the review of the Site history.

No analyte MQLs exceed the groundwater Class 3 and migration of volatile compounds to ambient air screening criteria for the UTU samples (Appendix A Tables 2.12, 2.14, and 2.16). As discussed below, individual analyte/sample SDLs exceed the groundwater Class 3 and migration of volatile compounds to ambient air screening criteria for the UTU samples due to matrix interferences.

Numerous analytes were reported in STU groundwater samples with MQLs exceeding the ingestion of groundwater screening criteria (Appendix A Tables 2.13, 2.15, and 2.17). These include thallium and cyanide, pesticides (aldrin, dieldrin, and toxaphene), PCBs, VOCs (1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,2-dibromoethane, 1,2-dichloroethane, bromodichloromethane, carbon tetrachloride, chloroform, cis-1,3-dichloropropene, dibromochloromethane, naphthalene, and vinyl chloride), and SVOCs (2,6-dinitrotoluene, 4-bromophenyl phenyl ether, 4-chlorophenyl phenyl ether, benzo(a)pyrene, benzo(b)fluoranthene, bis(2-chloroethyl)ether, dibenz(a,h)anthracene, hexachlorobenzene, indeno(1,2,3-cd)pyrene, n-nitroso-di-n-propylamine, and pentachlorophenol). Other than 1,2-dibromoethane, most of the non-detect analytes in the STU have MCLs or SDWS that are not exceeded. Based on Site usage for drilling fluids disposal, 1,2-dibromoethane would not be expected to be identified in sample media. 1,2-Dibromoethane was used as a pesticide in soil, and on citrus, vegetable, and grain crops. Another major use was as an additive in leaded gasoline (ATSDR, 2014a).

The MQL for naphthalene in the soil gas samples (500 $\mu g/m^3$) slightly exceeds the migration of soil vapors from soil gas to indoor air screening criteria (360 $\mu g/m^3$). The naphthalene SDLs for SG-22 and SG-33 range from 5100 to 9700 $\mu g/m^3$. The screening criteria for the non-detect COPCs are based on 10^{-6} cancer risk (which is conservative). The exclusion of the non-detect soil gas COPCs from the quantitative risk evaluation is not likely to underestimate risks and hazards.

Five analyte MQLs exceed direct contact screening criteria for surface water samples (Appendix A Table 2.19). These analytes are dieldrin, 1,2-dibromoethane, 4-bromophenyl phenyl ether, 4-chlorophenyl phenyl ether, and dibenz(a,h)anthracene. Only dibenz(a,h)anthracene is potentially associated with historical Site operations. The maximum SDLs for these analytes are within an order of magnitude of their respective screening criteria, and the screening criteria are based on 10^{-6} cancer risk (which is conservative). The exclusion of the non-detect surface water COPCs from the quantitative risk evaluation is not likely to underestimate risks and hazards.

No analyte MQLs exceed the direct contact screening criteria for the sediment samples (Appendix A Table 2.18).

Elimination of Analytes with Elevated SDLs Due to Matrix Interferences

Several non-detect analytes were identified in soil and/or waste samples with maximum SDLs exceeding the applicable screening criteria. Constituents with maximum detection limits that exceed the human health screening criteria are shaded yellow in Appendix A Tables 2.1 through 2.7 and Tables 2.9 through 2.11. The maximum soil SDLs are within an order of magnitude of applicable screening criteria, except for n-nitroso-di-n-propylamine. The maximum waste SDLs are within an order of magnitude of applicable screening criteria, except for 1,2-dibromoethane, cis-1,3-dichloropropene

(leaching pathway only), 2,4-dinitrotoluene (leaching pathway only), 2,6-dinitrotoluene (leaching pathway only), 4-bromophenyl phenyl ether, 4-chlorophenyl phenyl ether, bis(2-chloroethyl) ether (leaching pathway only), and n-nitroso-di-n-propylamine. Based on Site usage for drilling fluids disposal, these analytes would not be expected to be identified in sample media. The screening criteria for most of the non-detect COPCs are based on 10^{-6} cancer risk (which is conservative). Given the maximum detection limits for non-detect soil/waste COPCs are generally within an order of magnitude of conservative screening criteria, their exclusion from the quantitative risk evaluation is not likely to underestimate risks and hazards.

A number of constituents in the STU were identified with maximum SDLs exceeding the ingestion of groundwater screening criteria. Constituents with maximum detection limits that exceed the human health screening criteria are shaded yellow in Appendix A Tables 2.13, 2.15, and 2.17). Most of the constituents have MCLs and/or MQLs that are not exceeded. In addition, the screening criteria used are conservative since they are based on residential land use and 10^{-6} cancer risk (where applicable). These findings suggest that exclusion of the non-detect COPCs in the STU from the quantitative risk evaluation is not likely to underestimate risks and hazards.

Five analytes were identified in soil gas samples with maximum SDLs exceeding the migration of soil vapors from soil gas to indoor air screening criteria (Appendix A Table 2.20). The maximum detection limits for the non-detect COPCs are within an order of magnitude of their respective screening criteria, and most of the screening criteria for the non-detect COPCs are based on 10^{-6} cancer risk (which is conservative). The exclusion of the non-detect soil gas COPCs from the quantitative risk evaluation is not likely to underestimate risks and hazards.

The maximum SDL for n-nitroso-di-n-propylamine in the East Ditch sediment exceeds the direct contact with sediment screening level (Appendix A Table 2.18). The maximum detection limit for n-n-nitroso-di-n-propylamine is lower than the sediment background level for Up River Road. Given its maximum detection limit only slightly exceeds the screening criterion, which is based on 10^{-6} cancer risk (which is conservative), predicted risks and hazards for exposures to sediment in the East Ditch are not expected to be underestimated.

9.1.5 Selection of Screening Criteria

Data screening is a common data reduction step used to identify COPCs in quantitative risk assessments. It allows the risk evaluation to focus on those constituents that are likely to have the greatest potential impact on the overall risk and to eliminate constituents that are expected to pose negligible risk. The screening criteria selected for the data screening step will influence the COPCs identified for further evaluation in the risk characterization step.

Applicable screening criteria were determined based on the current land use and reasonable anticipated future land use. The Site is currently used for commercial/industrial use and is expected to remain commercial/industrial in the future. The potential for exposure to a residential receptor is not anticipated because the Site is within an industrial area of Corpus Christi, Texas; no on-site residences

exist, and the closest off-site residential community ((b) (6) [redacted]) is located more than a ½-mile from the Site. Hence, commercial/industrial risk-based screening criteria are considered appropriate for screening the Site data to identify COPCs for further evaluation in the BHHRA. This approach is protective for all potentially exposed receptors given that the screening criteria protective of a standard industrial worker scenario would also be protective of other human receptor populations that utilize the Site at lower exposure frequencies and shorter durations.

The screening criteria used in the BHHRA are primarily the RSLs and PCLs published by USEPA (2013a) and TCEQ (2012b) for commercial/land use, respectively (see Sections 4.1.4 and 4.1.5). Since the TCEQ's PCLs for carcinogenic constituents are based on $1x10^{-5}$ and the RSLs are based on $1x10^{-6}$, for consistency, the TCEQ PCLs for carcinogens were reduced by an order of magnitude prior to use in the screening process. As a conservative measure, the USEPA tap water RSLs were used as the criteria for screening constituents reported in the STU (potentially usable water-bearing unit). The USEPA does not provide RSLs for tap water for commercial/industrial land use; the tap water RSLs are based on residential land use only. TRRP groundwater commercial/industrial PCLs are available for Class 1 and 2 groundwater resources; however, they include ARARs (i.e., MCLs and SDWS). Use of the USEPA tap water values for screening the constituents in the STU is conservative.

Screening criteria for the vapor intrusion into indoor air pathway were developed by adjusting commercial/industrial ambient air screening levels published by USEPA (2002b and 2011) and the Massachusetts Department of Environmental Protection (MassDEP, 2011) using the default attenuation factor (i.e., 0.001) recommended for commercial buildings by California Environmental Protection Agency (CalEPA, 2011). This approach is consistent with USEPA (2002b) and other state guidance documents.

Since conservative and appropriate screening criteria were used in the BHHRA, it is less likely that any detected or non-detected constituents were incorrectly screened from further evaluation due to the selection of screening criteria.

9.1.6 Essential Nutrients

Surface water samples were analyzed for hardness (calcium and magnesium) to provide data for the calculation of Site-specific surface water criteria for the screening-level ecological risk assessment; calcium and magnesium were not listed as analytical parameters in the RI/FS Work Plan. Essential nutrients are not expected to be toxic at the levels typically encountered in environmental media. TCEQ (2001) and (2007) indicate that environmental concentrations of certain nutrients (calcium, magnesium, potassium, sodium, and phosphorus) are not expected to be a health concern. Based on this guidance, calcium and magnesium were eliminated as COPCs in surface water in the BHHRA. The exclusion of calcium and magnesium from the BHHRA is not likely to result in under-estimation of risk since these compounds are generally non-toxic at levels observed in the environment. Hence, the impact is expected to be negligible.

9.1.7 Inclusion of Constituents that Might Not be Site-Related

Background concentrations were not used to eliminate constituents as COPCs. As a consequence, constituents that are not related to the Site may have been evaluated in the BHHRA. For example, concentrations of a few pesticides detected in surface soil and surface water and PAHs in sediment in the East Ditch could have been contributed by other sources (e.g., current Site operations and/or non-point). However, the inclusion of these constituents as COPCs in the BHHRA increased conservatism and reduced uncertainty.

9.2 Exposure Assessment Uncertainties

The exposure assessment is the qualitative or quantitative evaluation of the magnitude, frequency, duration, and route of exposure to COPCs that were detected in affected media. This requires understanding of the environmental setting and the exposure pathways by which human receptors may potentially be exposed to COPCs. The following are potential sources of uncertainty with the exposure assessment used in the BHHRA.

9.2.1 Exposure Parameters

In order to quantify exposure, exposure parameters are required to estimate chemical intake or exposure concentration for each potential exposed receptor. For this BHHRA, exposure parameters recommended in RAGS Part A and B (USEPA, 1989, USEPA, 1991a; USEPA, 1991b), USEPA's Supplemental Soil Screening Guidance (USEPA, 2002a), USEPA's Dermal Risk Assessment Guidance (USEPA, 2004a), and USEPA's Inhalation Risk Assessment Guidance (USEPA, 2009) were generally selected. Where appropriate and applicable, professional judgment was used to select site-specific exposure parameters. Hence, overall, the RME and CT assumptions used in BHHRA are conservative. Given that most of the exposure assumptions were selected from USEPA sources, it is less likely that the risks and hazards were underestimated.

9.2.2 Modeling Environmental Transport and Fate

Fate and transport models (along with the assumptions) were obtained from USEPA and state agency sources (USEPA, 2002a; USEPA, 2004b; TCEQ, 1999; and VDEQ, 2012). The fate and transport models used to predict concentrations of COPCs in ambient air from windblown dust and migration of volatile COPCs from soil were obtained from USEPA (2002a). The equation used to predict concentrations of COPCs in ambient air due to migration of volatile COPCs from groundwater was obtained from TCEQ (1999). The construction in a trench model, published by the VDEQ (VDEQ, 2012), was used to estimate concentrations in ambient air due to migration of volatile COPCs from groundwater into a trench.

Estimated indoor air concentrations due to migration of COPCs in indoor were estimated using the USEPA's Vapor Intrusion SCREEN Model for Soil Gas (USEPA, 2004b), which is based on the Johnson and Ettinger Model. Overall, the cancer risks and non-cancer hazards (estimated using the USEPA's VI SCREEN Model) are conservative. The USEPA's vapor intrusion models are anticipated to overestimate the risks for indoor exposures for petroleum hydrocarbons because they

are readily degraded in aerobic environments, and attenuation due to aerobic biodegradation or other processes are not factored in the USEPA VI models (USEPA, 2011).

Given that the fate and transport models used to predict EPCs in the BHRRA are from authoritative sources typically used in quantitative risk assessments, it is less likely that the risks and hazard were underestimated.

9.2.3 Exposure Point Concentrations

In general, statistical methods, included in the USEPA's ProUCL data analysis software (USEPA, 2013b), were used to estimate 95% UCL of the mean for determining EPCs for COPCs in surface and subsurface soil and waste materials (where applicable). Maximum detected concentrations were used as the EPCs for groundwater in the UTU and STU, soil gas, surface water and sediment. Since EPCs for both RME and CT scenarios are either the maximum reported concentration or the 95% UCL of the mean, it is unlikely that risks and hazards are underestimated.

9.3 Toxicity Assessment Uncertainties

The sources of carcinogenic and noncarcinogenic toxicity factors were selected in accordance with the USEPA's toxicity factors hierarchy guidance (USEPA, 2003a). Toxicity assessment uncertainties relate to the methodology by which cancer and non-cancer toxicity criteria (i.e., CSFs/URFS and RfDs/RfCs) are developed. Toxicity factors are predicted values for the most sensitive subpopulations and incorporate safety factors that are generally conservative. However, in general, the available scientific information is insufficient to provide a thorough understanding of all the potential toxic characteristics of the chemicals to which humans are potentially exposed. Sources of uncertainty related to toxicity data are:

- Use of dose-response data from experiments on homogenous, sensitive animal populations to predict effects in heterogeneous human populations with wide range of sensitivities.
- Extrapolation of toxicity data from: 1) high dose animal studies to low dose human exposures; 2) acute or sub-chronic toxicity studies to chronic exposure scenarios; and 3) one exposure route to another (e.g., from ingestion to dermal absorption). [Note that route-to-route extrapolations from oral toxicity values to derive inhalation values, and vice versa, were not made in accordance with USEPA (2009)].
- Lack of toxicity data: 3&4-methylphenol, lead, and TPH (C_5-C_8 aliphatics) are the only three detected COPCs where toxicity values were not available from USEPA (2003a) hierarchy of sources.
    - Toxicity values are available for 3-methylphenol and 4-methylphenol; the lower of the toxicity values was used in the toxicity assessment.
    - No toxicity factors are currently available for lead. In the BHHRA, potential human receptor exposure to lead in soil is assessed by comparison to applicable soil screening criterion developed by USEPA.

  - n-hexane was used as a surrogate for TPH (C_5-C_8 aliphatics); the use of n-hexane as a surrogate for TPH (C_5-C_8 aliphatics) is consistent with the TCEQ's Development of Human Health PCLs for Total Petroleum Hydrocarbon Mixtures Guidance (TCEQ, 2010a).

- Use of chronic toxicity factors to evaluate short-term exposure durations. The non-cancer hazards estimated for the construction worker scenarios are conservative because they were derived using chronic toxicity factors rather than sub-chronic toxicity factors, which are more appropriate for the hazard characterization of short-term exposure scenarios; sub-chronic toxicity factors are typically an order of magnitude lower than chronic toxicity factors. Hence, the non-cancer hazard for the construction worker is expected to be about 10-fold lower.

Overall, the uncertainties indicated for the toxicity assessment are not expected to result in an underestimation of risks and hazards since conservative approaches were generally used.

9.4 Risk Characterization Uncertainties

Risk characterization uncertainties include possible synergistic or antagonistic effects of exposure to multiple chemicals and applicability of cancer risk estimation methodology to less than lifetime exposure durations. These uncertainties are generic to the risk assessment process and not specific to the Site.

Overall, because conservative approaches were used in each step of the risk assessment process, the calculated cancer risks and non-cancer hazards are unlikely to under-estimate the potential Site risks for current and future human receptors.

10.0 CONCLUSIONS

The BHHRA evaluation described in the RI/FS Work Plan is complete. This report documents the BHHRA for the Brine Service Company Superfund Site. The following subsections present the:

- Basis for conclusions;
- Key findings of the BHHRRA by exposure area; and
- Summary, including prioritization of exposure media for remedial action (based on estimated risks and hazards).

10.1 Basis for Conclusions

USEPA has established an acceptable cancer risk management range of 10^{-4} (one in ten thousand excess cancer risk) to 10^{-6} (one in one million excess cancer risk) for Superfund sites. For noncarcinogens, target organ/endpoint HI of one or less indicate that it is unlikely adverse noncarcinogenic health effects will occur. Therefore, it is generally USEPA's policy to consider cumulative cancer risks up to 1×10^{-4} and a non-cancer HI of 1 or less as acceptable. The cancer risks and non-cancer hazards estimated for potentially exposed human receptors evaluated in the BHHRA were compared to the USEPA's acceptable risk management range (1×10^{-4} to 1×10^{-6}) and non-cancer HI of 1 to support remedial decision-making (i.e., determine the need for remediation of affected media at the Site). Although both RME and CT scenarios are evaluated in the BHHRA, USEPA's policy is to place more emphasis on the RME scenario results when making risk management decisions. Therefore, the discussion of the results focus on cancer risk and non-cancer hazard estimates for the RME scenarios. Chemical-specific ARARs (e.g., MCLs) are also considered in the risk characterization, where appropriate.

10.2 BHHRA Key Findings

The key findings of the BHHRA are presented below by the three Exposure Areas (i.e., South Pit Exposure Area, North Pit Exposure Area, and Off-Site Exposure Area) evaluated.

10.2.1 South Pit Exposure Area

Media of concern for the South Pit Exposure Area are: surface soil, subsurface soil, soil gas, LNAPL, and waste materials, groundwater in the UTU and STU, and sediment and surface water in the East Ditch. Based on the exposure setting and affected media, five human receptors (outdoor worker, indoor worker, construction worker, maintenance worker, and adolescent trespasser) were evaluated for potential exposures to detected COPCs in applicable media of concern. The estimated RME and CT cancer risks and non-cancer hazards for the South Pit Exposure Area are summarized in Tables 5-5 through 5-9 and detailed in Appendices A (RME) and B (CT), Tables 7.1 through 7.5, 9.1 through 9.5, and 10.1 through 10.2.

The key findings of the BHHRA for the South Pit Exposure Area are:

1. The estimated RME cancer risk for the current and future on-site construction worker

(CR=7.0E-05) is within the USEPA's acceptable cancer risk management range (1x 10^{-4} to 1 x 10^{-6}) for all applicable exposure media, pathways, and routes. However, the estimated RME non-cancer hazard (HI =28) exceeds the non-cancer HI of 1 for all applicable exposure media, pathways, and routes. The COPCs contributing to the overall non-cancer hazard are: arsenic, benzene, and 3&4-methylphenol via ingestion and dermal contact. Note that the non-cancer hazard estimated for the construction worker is conservative because it is derived using chronic toxicity factors rather than sub-chronic toxicity factors, which are more appropriate for the hazard characterization of short-term exposure scenarios (such as the construction work); sub-chronic toxicity factors are typically an order of magnitude lower than chronic toxicity factors. Hence, the non-cancer hazard for the construction worker is expected to be about 10-fold lower, but likely still above an HI of 1.

2. The estimated RME cancer risk and non-cancer hazard for the current and future outdoor worker (CR=1.1E-04 and HI =1.1) slightly exceed the upper bound of the USEPA's acceptable cancer risk management range (1x 10^{-4} to 1 x 10^{-6}) and non-cancer HI of 1, considering all applicable exposure media, pathways, and routes. However, no organ-specific HIs exceed 1; hence, the "all media and pathways" HI (1.1) for the on-site outdoor worker is acceptable because the non-cancer health effects do not affect the same target organs. The primary COPC contributing to the overall cancer risk and non-cancer hazard is arsenic in the UTU via ingestion. The maximum detected arsenic concentration (0.0177 mg/L) in the STU slightly exceeds its MCL (0.01 mg/L).

3. The estimated RME cancer risks and non-cancer hazards for the current and future on-site indoor worker, current and future on-site maintenance worker, and on-site adolescent trespasser are within the USEPA's acceptable cancer risk management range (1x 10^{-4} to 1 x 10^{-6}) and non-cancer HI of 1.

4. The maximum detected concentration for three detected soil/waste COPCs (benzene, heptachlor epoxide, and 3&4-methylphenol) exceed applicable commercial/industrial soil criteria for protection of soil constituents leaching to a Class 3 groundwater-bearing unit. This finding is consistent with the findings for the evaluation of the South Pit Exposure Area UTU. Two of these detected soil/waste COPCs (benzene and 3&4-methylphenol) are detected in the UTU at concentrations exceeding their applicable Class 3 groundwater PCLs. Heptachlor epoxide concentrations in the UTU are approximately two orders of magnitude lower than the applicable Class 3 groundwater criteria.

5. The maximum detected concentration for arsenic, benzene, and 3&4-methylphenol in the South Pit Exposure Area UTU exceed their TRRP commercial/industrial Class 3 groundwater PCLs.

10.2.2 North Pit Exposure Area

Media of concern for the North Pit Exposure Area are: surface soil, subsurface soil, groundwater in the STU, and sediment and surface water in the East Ditch; no LNAPL or waste materials were identified

in the RI for the North Pit Exposure Area. Soil gas concentrations detected in the North Pit Exposure Area are representative of background. Based on the exposure setting and affected media, four human receptors (outdoor worker, construction worker, maintenance worker, and adolescent trespasser) were evaluated for potential exposures to detected COPCs in the applicable media of concern. The estimated RME and CT cancer risks and non-cancer hazards for the North Pit Exposure Area are summarized in Tables 6-4 through 6-7 and detailed in Appendices A (RME) and B (CT), Tables 7.6 through 7.9 and 9.6 through 9.9.

The key findings of the BHHRA for the North Pit Exposure Area are:

1. All detected COPCs in UTU and soil gas samples were screened from further evaluation in the BHHRA.
2. The estimated RME cancer risks and non-cancer hazards for the current and future on-site outdoor worker (CR=5.2E-05 and HI=0.39), on-site construction worker (CR=1.3E-07 and HI=0.041), on-site maintenance worker (CR=7.8E-07 and HI=0.0067), and on-site adolescent trespasser (CR=1.2E-05 and HI=0.09) are within the USEPA's acceptable cancer risk management range ($1x\ 10^{-4}$ to $1\ x\ 10^{-6}$) and non-cancer HI of 1 for all applicable exposure media, pathways, and routes combined.
3. Lead is a detected COPC in soil. No toxicity factors are currently available for lead. Potential human receptor exposure to lead in soil is assessed by comparison of the 95% UCL of the mean to applicable soil screening criterion. The 95% UCL for lead in soil is less than the residential and commercial/industrial soil screening criteria of 400 and 800 mg/kg; respectively. Potential human receptor exposure to lead in soil is below an acceptable level of risk and hazard.
4. No concentrations exceed applicable commercial/industrial soil PCLs for protection of soil constituents leaching to a Class 3 groundwater.

10.2.3 Off-Site Exposure Area

Media of concern are for the Off-Site Exposure Area are groundwater in the UTU and STU due to off-site migration of impacted groundwater from the South Pit. Based on the exposure setting and affected media, two human receptors (outdoor worker and construction worker) were evaluated for potential exposures to detected COPCs in the UTU and STU. The estimated RME and CT cancer risks and non-cancer hazards for the Off-Site Exposure Area are summarized in Tables 7-2 and 7-3 and detailed in Appendices A (RME) and B (CT) Tables 7.10, 7.11, 9.10, 9.11, and 10.3, and 10.4.

The key findings of the BHHRA for the Off-Site Exposure Area are:

1. The estimated RME cancer risk (CR=1.1E-06) and non-cancer hazard (HI=0.013) for the current and future off-site outdoor worker is within the USEPA's acceptable cancer risk management range ($1x\ 10^{-4}$ to $1\ x\ 10^{-6}$) and non-cancer HI of 1 for inhalation of volatile COPCs in the UTU migrating to ambient air.
2. The estimated RME cancer risk (5.7E-04) and non-cancer hazard (HI=4.6) for the current and

future off-site outdoor worker exceed the upper bound of the USEPA's acceptable cancer risk management range (1x 10^{-4} to 1 x 10^{-6}) and the acceptable non-cancer HI of 1 for ingestion of COPCs in the STU. The primary COPC contributing to the overall cancer risk and hazard is arsenic. The maximum detected arsenic concentration (0.11 mg/L) in the STU exceeds its MCL (0.01 mg/L), which is a chemical-specific ARAR.

3. The estimated RME cancer risk (CR=6.1E-06) for the current and future off-site construction worker is within the USEPA's acceptable cancer risk management range (1x 10^{-4} to 1 x 10^{-6}) for exposures to COPCs in the UTU via incidental ingestion, dermal contact, and inhalation combined. The estimated RME non-cancer hazard (HI =1.9) exceeds the USEPA's non-cancer HI of 1. The COPC contributing to the overall non-cancer hazard is benzene primarily via ingestion and dermal contact. Note that the non-cancer hazard estimated for the construction worker is conservative because it is derived using chronic toxicity factors rather than sub-chronic toxicity factors, which are more appropriate for the hazard characterization of short-term exposure scenarios (such as the construction work). Sub-chronic toxicity factors are typically an order of magnitude lower than chronic toxicity factors. Hence, the non-cancer hazard for the construction worker is expected to be about 10-fold lower.

4. The maximum detected benzene concentration (3.5 mg/L) in the UTU exceeds its TRRP commercial/industrial Class 3 groundwater PCL (0.5 mg/L).

10.3 Summary

Exposure media are prioritized based on the potential to migrate or leach to other environmental media (e.g., groundwater in the UTU and STU) or magnitude of risk and/or hazard estimated for RME scenarios. The overall conclusion is that the following exposure media (in order of prioritization) are estimated to present a risk and/or hazard:

- LNAPL and waste materials in the South Pit Exposure Area;
- Groundwater in the STU in the Off-Site Exposure Area;
- Groundwater in the UTU in the South Pit Exposure Area;
- Groundwater in the UTU in the Off-Site Exposure Area; and
- Groundwater in the STU in the South Pit Exposure Area.

Using the exposure point concentrations, conservative values for daily intake calculations (Appendix A Tables 4.1 to 4.7), and USEPA toxicity data (Appendix A Tables 5.1 through 5.2 and Tables 6.1 through 6.2), the estimated RME cancer risk is above the USEPA's upper bound cancer risk range (1 x 10^{-4}) and/or the non-cancer hazard estimate is exceeds one for one or more of the receptors evaluated in the exposure areas listed above or a COPC concentration exceeds the MCL (arsenic in the South Pit STU). In addition, the BHHRA concludes that the following exposure media are estimated to not present a risk or hazard:

- Surface and subsurface soil in the North Pit Exposure Area;
- Groundwater in the UTU and STU in the North Pit Exposure Area;
- Surface and subsurface soils in the South Pit Exposure Area;
- Soil gas (vapor) in the South Pit and North Pit Exposure Areas;
- Surface water in the East Ditch; and
- Sediment in the East Ditch.

Using the exposure point concentrations, conservative values for daily intake calculations (Appendix A Tables 4), and USEPA toxicity data (Appendix A Tables 5.1 through 5.2 and Tables 6.1 through 6.2), the estimated RME cancer risk is within or below USEPA's acceptable cancer risk range (1×10^{-6} to 1×10^{-4}) and the non-cancer hazard estimate is less than one for all of the receptors evaluated in the exposure areas listed above.

The BHHRA described in the Work Plan has been completed. This report documents the results of the BHHRA. The results of this BHHRA will be used to develop preliminary remedial goals, remedial action objectives, and remedial alternatives for the next step of the RI/FS process: the Feasibility Study.

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FIGURES

FIGURES

Figure 1 Site Location Map

Figure 2 Site Map

Figure 3 Sample Location Map

Figure 4 Soil Boring and Monitoring Well Locations

Figure 5 Background Sample Locations

Figure 6 Surface Water and Sediment Locations

Figure 7 Soil Gas Sample Locations

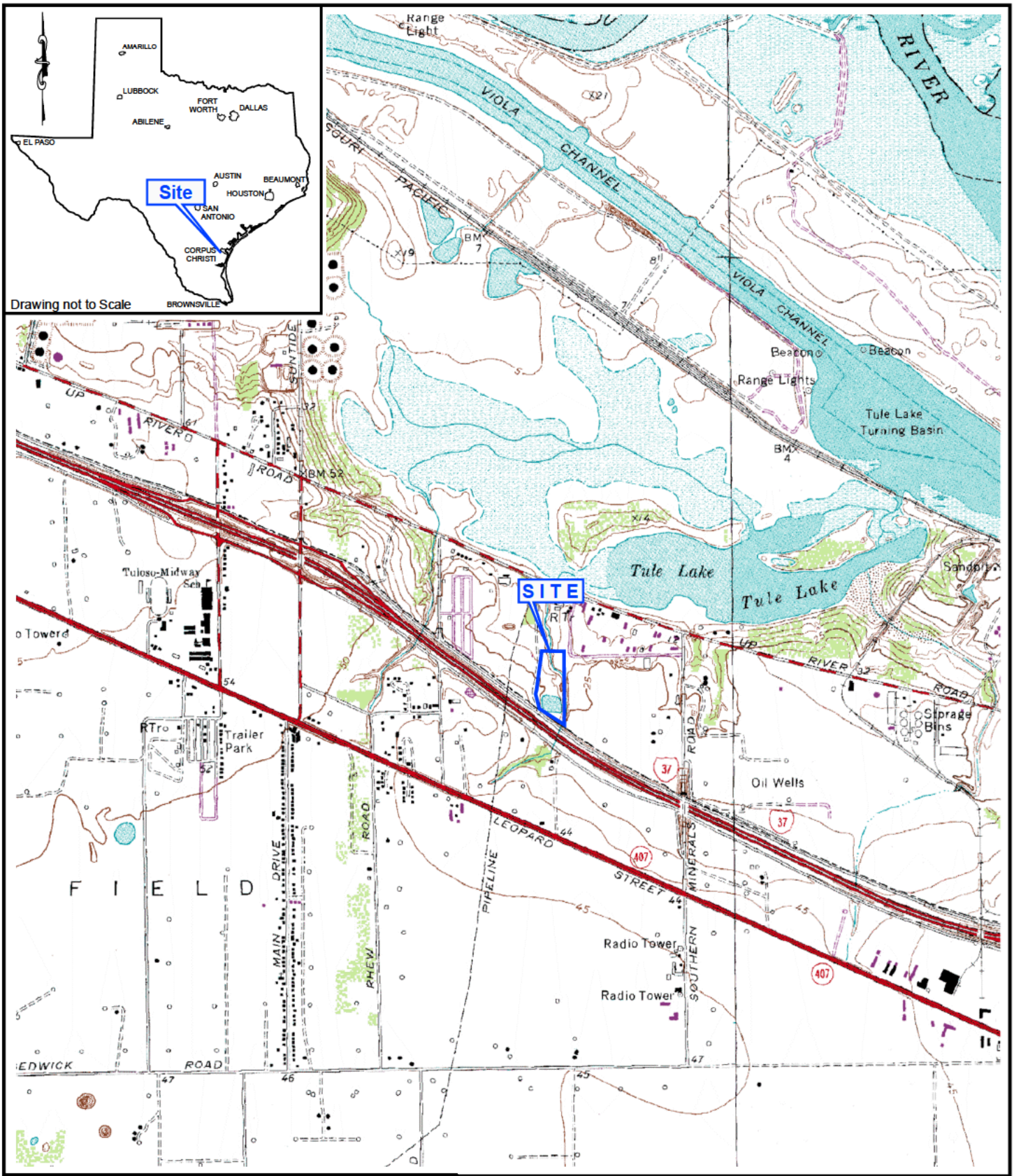
Figure 8 Potentiometric Surface Map Upper Transmissive Unit – February 2014

Figure 9 Potentiometric Surface Map Second Transmissive Unit – March 2012

Figure 10 Total Dissolved Solids in Temporary and Permanent Monitoring Wells

Figure 11 Human Health Conceptual Site Exposure Model

Figure 12 Generalized Site Stratigraphic Model



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APPROXIMATE SCALE IN FEET
SCALE= 1:24000

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

Title: **SITE LOCATION MAP**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure:
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NORTHWEST DITCH

UP RIVER ROAD

LOT 1A

LOT 8A

LOT 1B

LOT 2

LOT 8B

NORTH PIT

LOT 3

LOT 4

SOUTH PIT

LOT 5

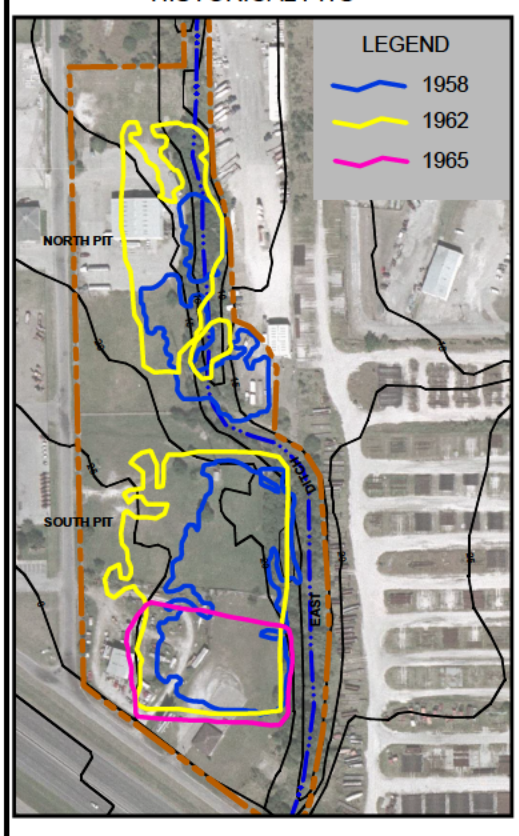
LOT 6

LOT 7

EAST DITCH

IH-37

HISTORICAL PITS



LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- SITE BOUNDARY
- LOT BOUNDARY
- EXTENT OF HISTORICAL PITS
- DOWNSTREAM AOC LIMIT OF INVESTIGATION

Source:

U.S.G.S. High Resolution Orthoimagery for he Corpus Christi, Texas Urban Area, 2007.

Topographic Elevation Contours from he U.S.G.S. 7.5-minute Series Topographic Quadrangle Maps for Annaville and Corpus Christi, Texas, 1975.

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APPROXIMATE SCALE IN FEET

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Scale:	Drawn by:	Date:
As Shown	SJF	6-9-14
	Chk'd by: BPB	Date: 6-9-14

Title: **Site Map**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

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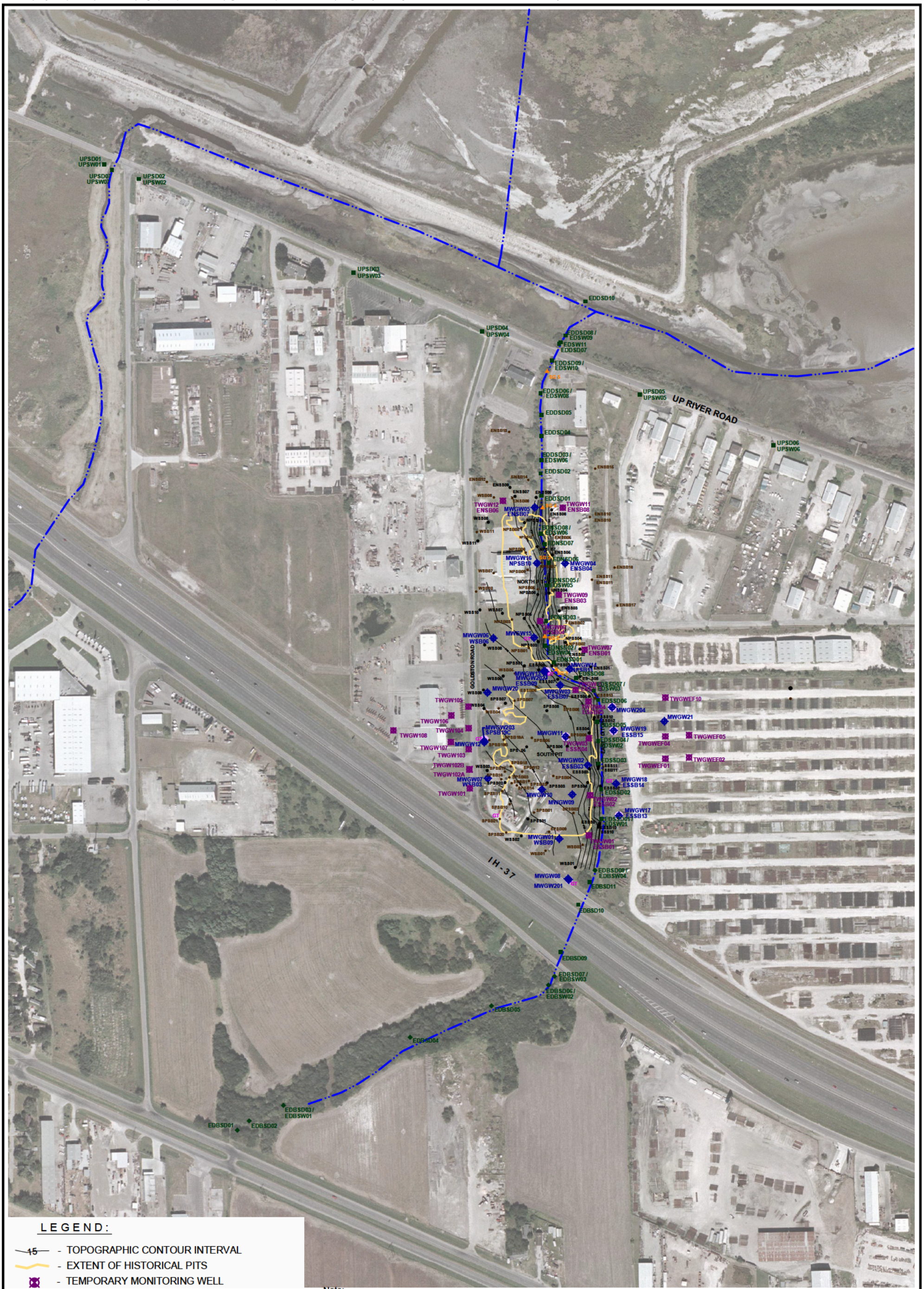

LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- TEMPORARY MONITORING WELL
- PERMANENT MONITORING WELL (UTU)
- PERMANENT MONITORING WELL (STU)
- GT - GEOTECHNICAL ANALYSIS
- SURFACE SOIL SAMPLE LOCATION
- SUBSURFACE SOIL BORING SAMPLE LOCATION
- 2012 WATER GAUGE SAMPLE LOCATION
- SURFACE WATER / SEDIMENT SAMPLE LOCATION
- BACKGROUND SAMPLE LOCATION

Note:

UTU - Upper Transmissive Unit
STU - Second Transmissive Unit

Source:

U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Frontier Surveying.

0 175 350 700

APPROXIMATE SCALE IN FEET

URS
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Title: **Sample Location Map**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure No.:
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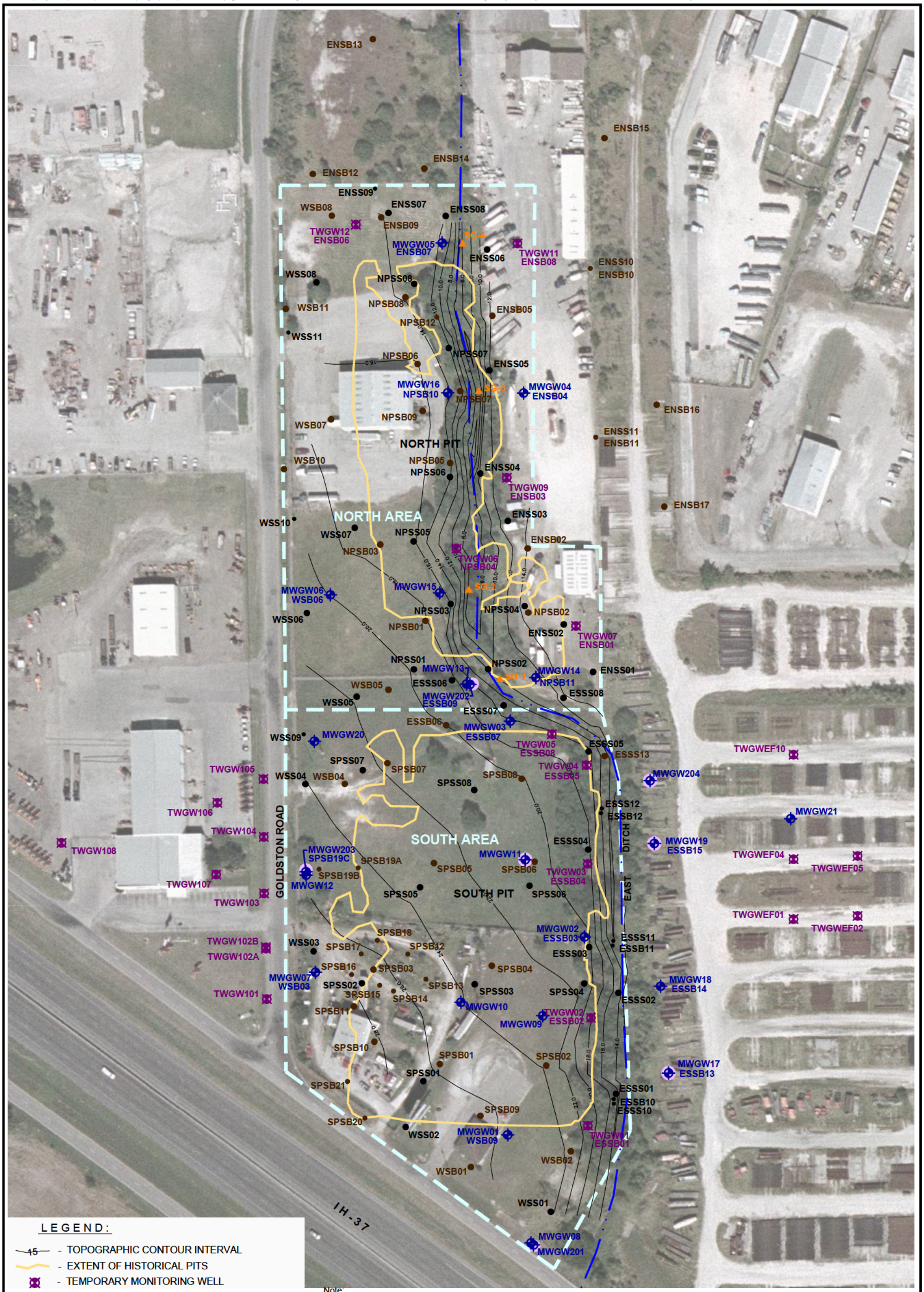

LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- TEMPORARY MONITORING WELL
- PERMANENT MONITORING WELL (UTU)
- PERMANENT MONITORING WELL (STU)
- SURFACE SOIL SAMPLE LOCATION
- SUBSURFACE SOIL BORING SAMPLE LOCATION
- 2012 WATER GAUGE SAMPLE LOCATION
- BOUNDARY FOR SAMPLES ASSIGNED TO NORTH AND SOUTH PIT AREAS

Note:
UTU - Upper Transmissive Unit
STU - Second Transmissive Unit

Source:
U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Frontier Surveying.

0 65 130 260
APPROXIMATE SCALE IN FEET

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10550 RICHMOND AVE., SUITE 155
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PH: (713) 914-6699
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Title: **Soil Boring and Monitoring Well Locations North and South Areas**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure No.:
As Shown	SJF	5-21-14	25012501	Soil Boring and MonWell North and South Areas.dwg	4
	Chk'd by: BPB	Date: 5-21-14			

TULE LAKE

UP RIVER ROAD

GOLDSTON ROAD

BRINE SERVICE COMPANY
SUPERFUND SITE

NORTH PIT

SOUTH PIT

IH-37

SOUTHERN MINERALS ROAD

VALERO

VALERO

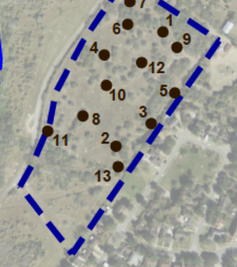
VALERO

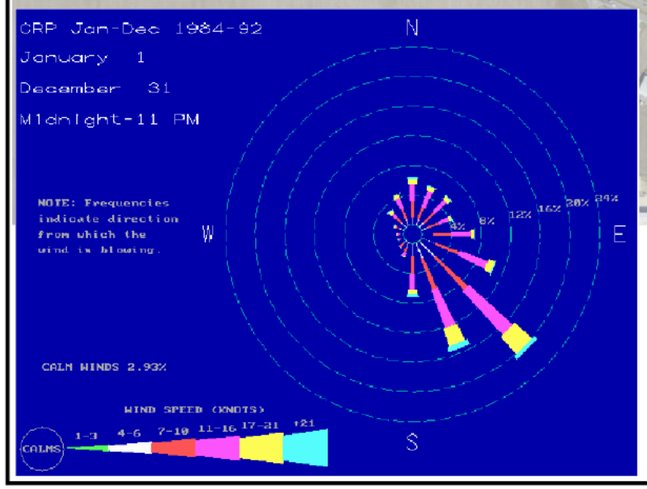
AIR
LIQUIDE

CITGO

CITGO REFINING & CHEMICAL
WEST PLANT

BACKGROUND SAMPLE
LOCATION





LEGEND:

● - BACKGROUND SAMPLE LOCATION

Source:
TNRIS 2008-2009 NAIP Imagery for
Corpus Christi and Annaville, Texas.

0 400 800 1600
APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-8699
FAX: (713) 789-8404

Scale:	Drawn by:	Date:
As Shown	SJF	5-21-14
	Chk'd by: BPB	Date: 5-21-14

Title: **Background Sample Locations**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Project No.:	File Name:	Figure No.:
25012501	Background Sample Locations.dwg	5

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 5 - Background Sample Locations.dwg Layout: Layout1 User: Susan_Forrest Plotted: May 22, 2014 - 12:51pm

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 6 – Surface Water and Sediment Locations.dwg Layout: Layout1 User: Susan_Forrest Plotted: May 22, 2014 – 12:53pm

LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- ▲ - 2012 WATER GAUGE SAMPLE LOCATION
- ● - SURFACE SOIL SAMPLE LOCATION
- ■ - SURFACE WATER / SEDIMENT SAMPLE LOCATION
- ◆ - BACKGROUND SAMPLE LOCATION

Source:

U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Frontier Surveying.

0 175 350 700

APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

Scale: As Shown | Drawn by: SJF | Date: 5-21-14 | Chk'd by: BPB | Date: 5-21-14

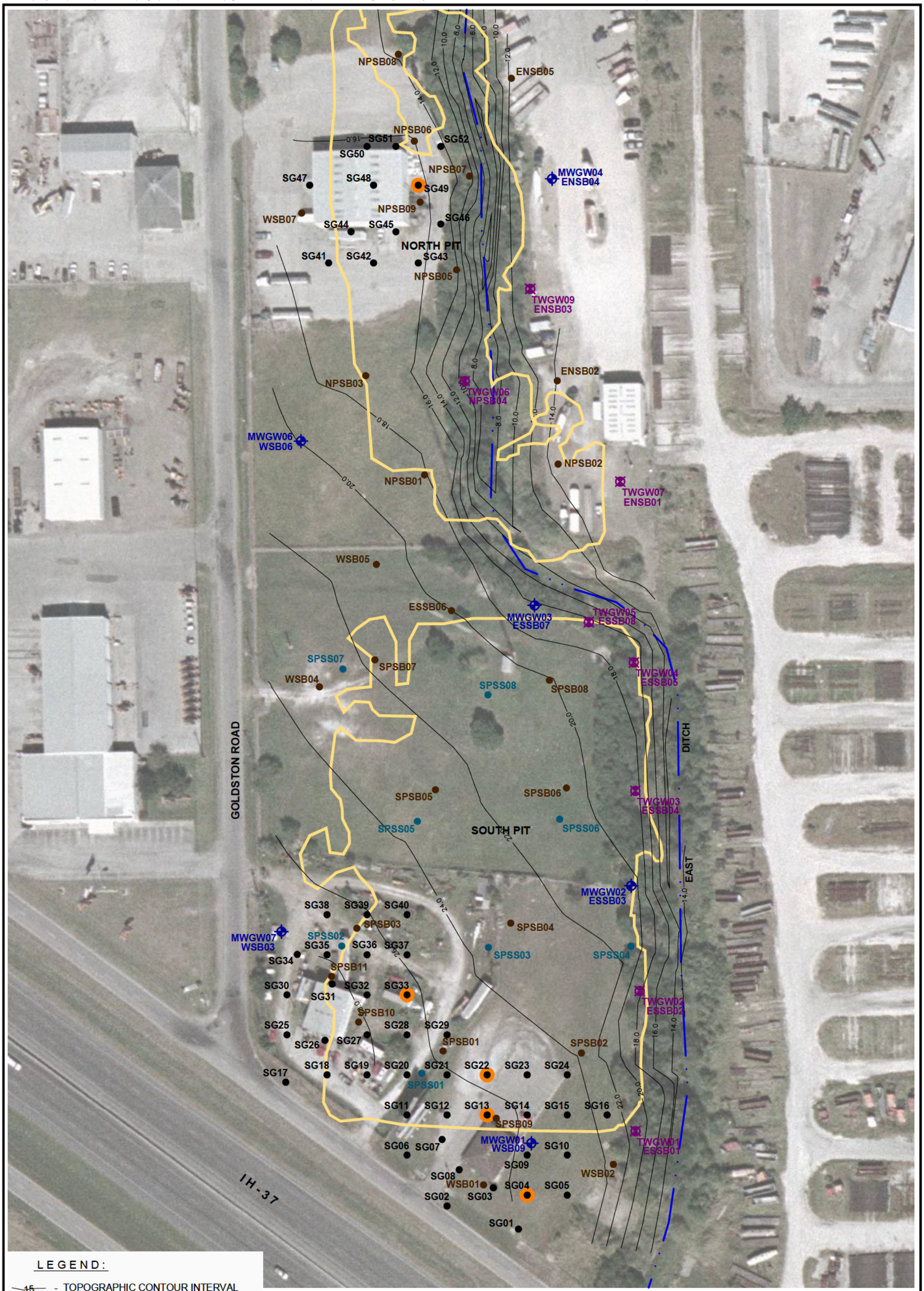
Title: **Surface Water and Sediment Locations**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: Brine Service Cooperating Parties

Project No.: 25012501 | File Name: Surface Water and Sediment Locations.dwg | Figure No.: 6

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 7 – Soil Gas Sample Locations.dwg Layout: Layout User: Susan_Forrest Plotted: Jun 09, 2014 – 4:15pm



LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- TEMPORARY MONITORING WELL
- PERMANENT MONITORING WELL
- SURFACE SOIL SAMPLE LOCATION
- SUBSURFACE SOIL BORING SAMPLE LOCATION
- PASSIVE SOIL GAS SAMPLE LOCATION
- ACTIVE SOIL GAS, MARCH 5, 2012

Source:

U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Frontier Surveying, December 2010.

0 50 100 150

APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

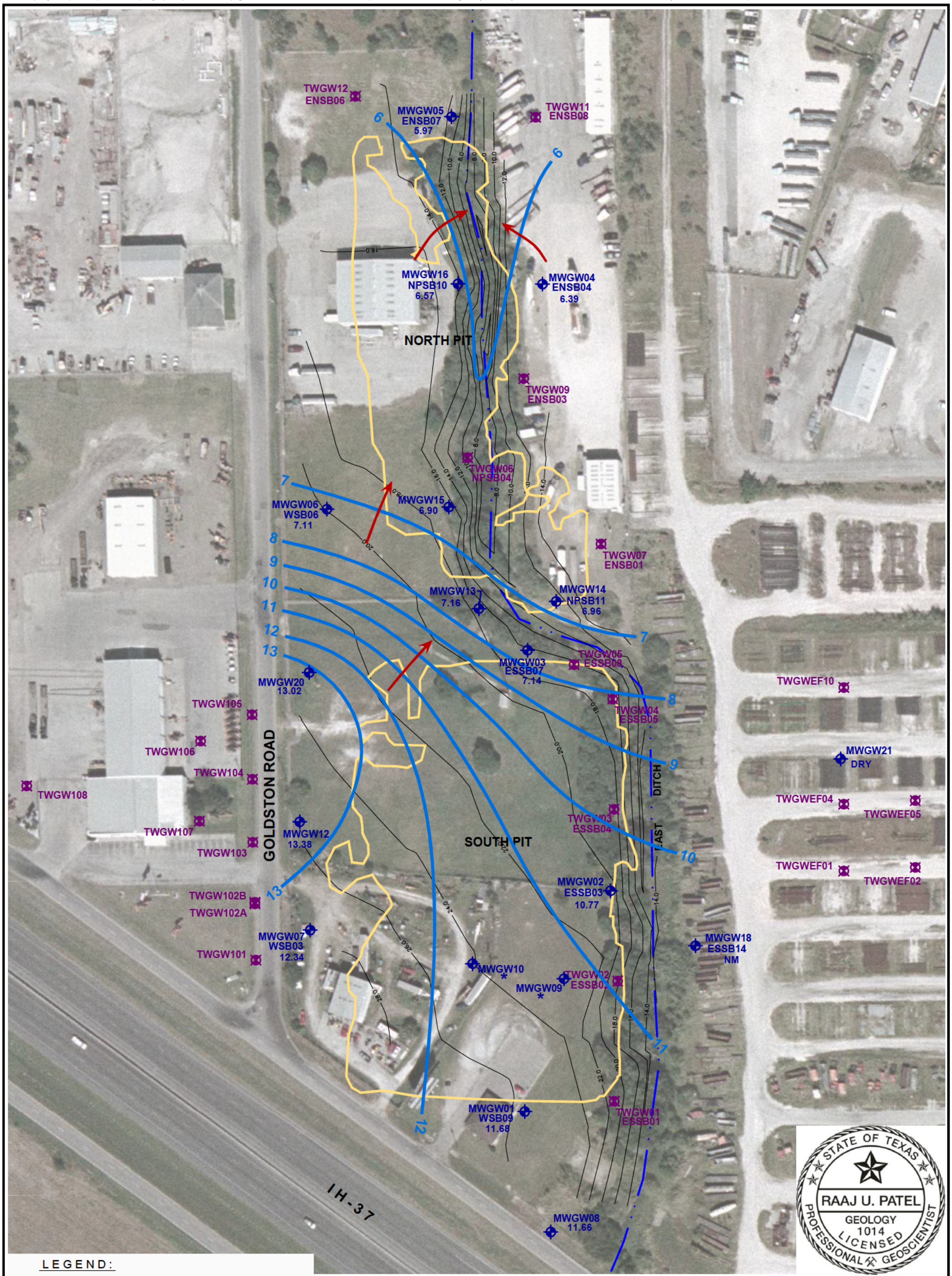
Title: **Soil Gas Sample Locations**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: Brine Service Cooperating Parties

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure No.:
As Shown	SJF	6-9-14	25012501	Soil Gas Sample Locs-Beacon.dwg	7
	Chk'd by: BPB	Date: 6-9-14			

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 8 – Potentiometric Surface Map–UTU – Feb 2014.dwg Layout: Layout1 User: Susan_Forrest Plotted: May 22, 2014 – 1:02pm



LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- TEMPORARY MONITORING WELL
- PERMANENT MONITORING WELL (UTU)
- 11.68 - GROUNDWATER ELEVATION
- NM - NOT MEASURED DUE TO WELL DAMAGE DURING CONSTRUCTION ACTIVITY
- GROUNDWATER CONTOUR (INTERVAL = 1.0 FT)
- GROUNDWATER FLOW DIRECTION
- DRY - WATER NOT MEASURED

NOTES:

"*" NAPL Well - not screened in a transmissive unit

Water elevations measured in feet relative to mean sea level (MSL)

UTU - Upper Transmissive Unit

Source:

U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Fron ier Surveying.

0 60 120 240

APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

Scale:	Drawn by:	Date:
As Shown	SJF	5-21-14
	Chk'd by: BPB	Date: 5-21-14

Title: **Potentiometric Surface Map Upper Transmissive Unit February 24, 2014**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Project No.:	File Name:	Figure No.:
25012501	Potentiometric Surface Map-UTU - Feb 2014.dwg	8

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 9 – Potentiometric Surface Map–STU – Mar 2012.dwg Layout: Layout1 User: Susan_Forrest Plotted: May 22, 2014 – 1:04pm

RAAJ U. PATEL
GEOLOGY
1014
LICENSED
STATE OF TEXAS
PROFESSIONAL GEOSCIENTIST

LEGEND:

- 15 — TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- PERMANENT MONITORING WELL (STU)
- 8.35 GROUNDWATER ELEVATION
- GROUNDWATER CONTOUR (INTERVAL = 0.25 FT)
- GROUNDWATER FLOW DIRECTION

NOTES:

Water elevations measured in feet relative to mean sea level (MSL)

STU - Second Transmissive Unit

Source:

U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Frontier Surveying, December 2010 and additional sample loca ions surveyed in March 2012.

0 60 120 240

APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

Scale:	Drawn by:	Date:
As Shown	SJF/CLK	5-21-14
	Chk'd by: BPB	Date: 5-21-14

Title: **Potentiometric Surface Map Second Transmissive Unit March 22, 2012**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Project No.:	File Name:	Figure No.:
25012501	Potentiometric Surface Map-STU - Mar 2012.dwg	9

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 10 – Total Dissolved Solids in Temp and Perm MonWells.dwg Layout: Layout1 User: Susan_Forrest Plotted: May 22, 2014 – 1:06pm

LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- TEMPORARY MONITORING WELL
- PERMANENT MONITORING WELL

Note:

1. All results reported in milligrams per liter (mg/L).

Source:

U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Frontier Surveying, December 2010.

0 200 400

APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

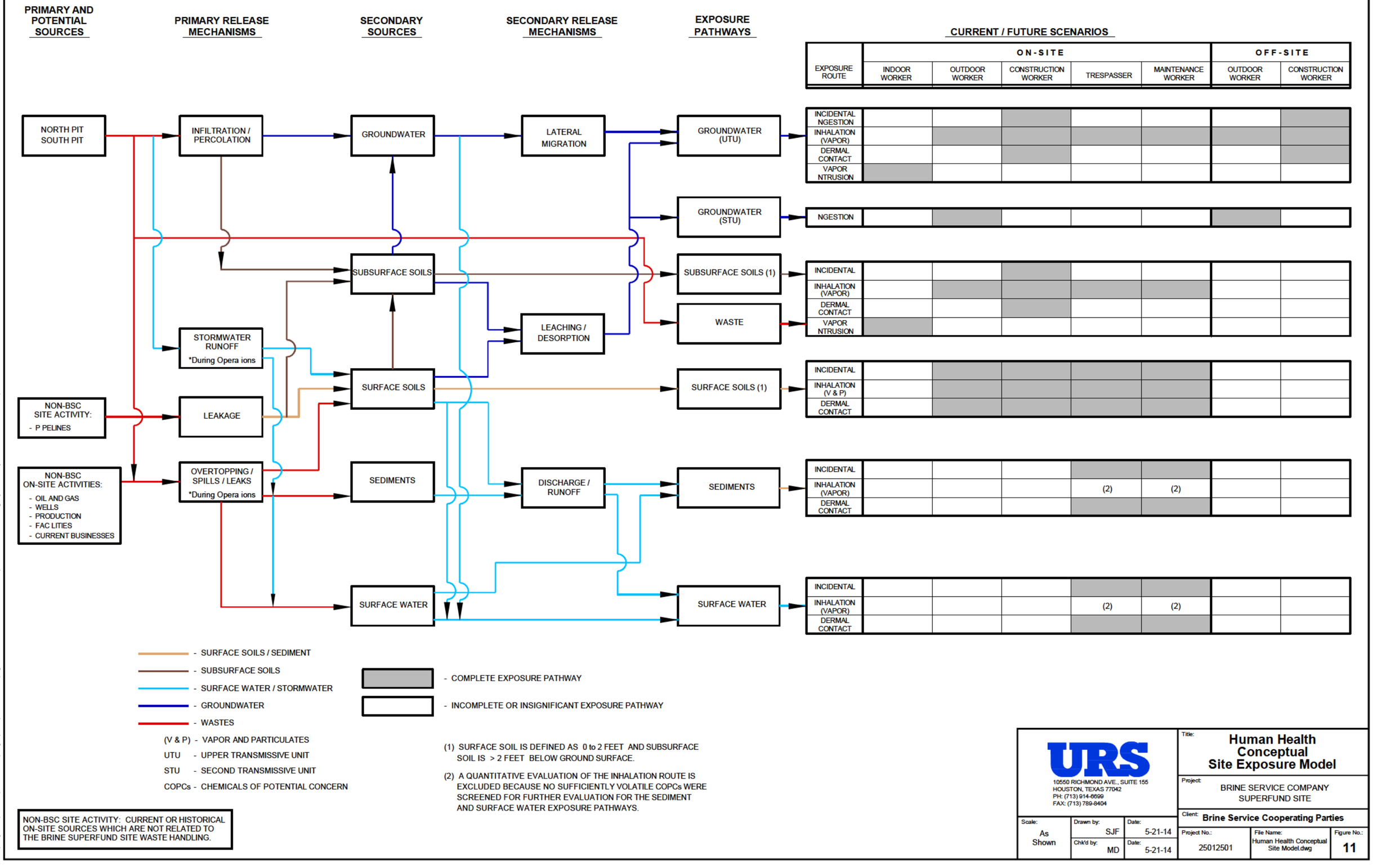
Scale:	Drawn by:	Date:
As Shown	SJF	5-21-14
	Chk'd by: BPB	Date: 5-21-14

Title: **Total Dissolved Solids in Temporary and Permanent Monitoring Wells**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Project No.:	File Name:	Figure No.:
25012501	Total Dissolved Solids in Temp and Perm MonWells.dwg	10



CURRENT / FUTURE SCENARIOS

EXPOSURE ROUTE	ON-SITE: INDOOR WORKER	ON-SITE: OUTDOOR WORKER	ON-SITE: CONSTRUCTION WORKER	ON-SITE: TRESPASSER	ON-SITE: MAINTENANCE WORKER	OFF-SITE: OUTDOOR WORKER	OFF-SITE: CONSTRUCTION WORKER
GROUNDWATER (UTU)							
INCIDENTAL NGESTION			■				■
INHALATION (VAPOR)		■	■	■	■	■	■
DERMAL CONTACT			■				■
VAPOR NTRUSION	■						
GROUNDWATER (STU)							
NGESTION		■				■	
SUBSURFACE SOILS (1)							
INCIDENTAL			■				
INHALATION (VAPOR)		■	■	■	■		
DERMAL CONTACT			■				
VAPOR NTRUSION	■						
WASTE							
INCIDENTAL			■				
INHALATION (VAPOR)		■	■	■	■		
DERMAL CONTACT			■				
VAPOR NTRUSION	■						
SURFACE SOILS (1)							
INCIDENTAL		■	■	■	■		
INHALATION (V & P)		■	■	■	■		
DERMAL CONTACT		■	■	■	■		
SEDIMENTS							
INCIDENTAL				■	■		
INHALATION (VAPOR)				(2)	(2)		
DERMAL CONTACT				■	■		
SURFACE WATER							
INCIDENTAL				■	■		
INHALATION (VAPOR)				(2)	(2)		
DERMAL CONTACT				■	■		

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

Title: **Human Health Conceptual Site Exposure Model**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure No.:
As Shown	SJF	5-21-14	25012501	Human Health Conceptual Site Model.dwg	11
	Chk'd by: MD	Date: 5-21-14			

O:\Projects\ENV10\250125011\Dwgs\CAD\2014 HHRA\Fig 11 – Human Health Conceptual Site Model.dwgLayout1 May 22, 2014 – 1:24pm

West

East

SURFACE AND SUBSURFACE 0 to 10' bgs

SUBSURFACE SOIL > 2' bgs

DEPTH IN FEET

SURFACE SOIL

SOUTH PIT

EAST DITCH

CLAY

SILT

REWORKED SOIL / WASTE MATERIAL

SLUDGE

SILT

SAND

Upper Transmissive Unit

CLAY

Confining Clay

CLAY

SILT

SAND

Second Transmissive Unit

SAND

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6999
FAX: (713) 789-8404

Title: **Generalized Site Stratigraphic Model**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: Brine Service Cooperating Parties

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure:
AS SHOWN	SJF	6-19-14	25012501	Generalized Site Stratigraphic Model.dwg	12
	Chk'd by: RUP	Date: 6-19-14			

File: C:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 12 – Generalized Site Stratigraphic Model.dwg Layout: Layout User: Susan_Forrest Plotted: Jun 19, 2014 – 3:58pm

Appendices

Appendix A RAGS D Tables 1 through 6 and RME Tables 7 through 10

(See CD)

Appendix B RAGS D CT Tables 7 through 10

(See CD)

Appendix C Statistical Calculations

(See CD)

Appendix D Chemical-Specific Exposure Parameters

(See CD)

Appendix E Soil-to-Ambient Air Volatilization Factors and Particulate Emissions Factor

(See CD)

Appendix F Groundwater-to-Ambient Air Volatilization Factors

(See CD)

Appendix G Groundwater Volatilization Factors - Construction Worker in a Trench Model

(See CD)

Appendix H Absorbed Dose (DA_{event}) Calculations - Contact with Groundwater and Surface Water

(See CD)

Appendix I Soil Gas Screening Criteria and Indoor Air Exposure Point Concentrations

(See CD)

Appendix J Leaching from Soil to Groundwater

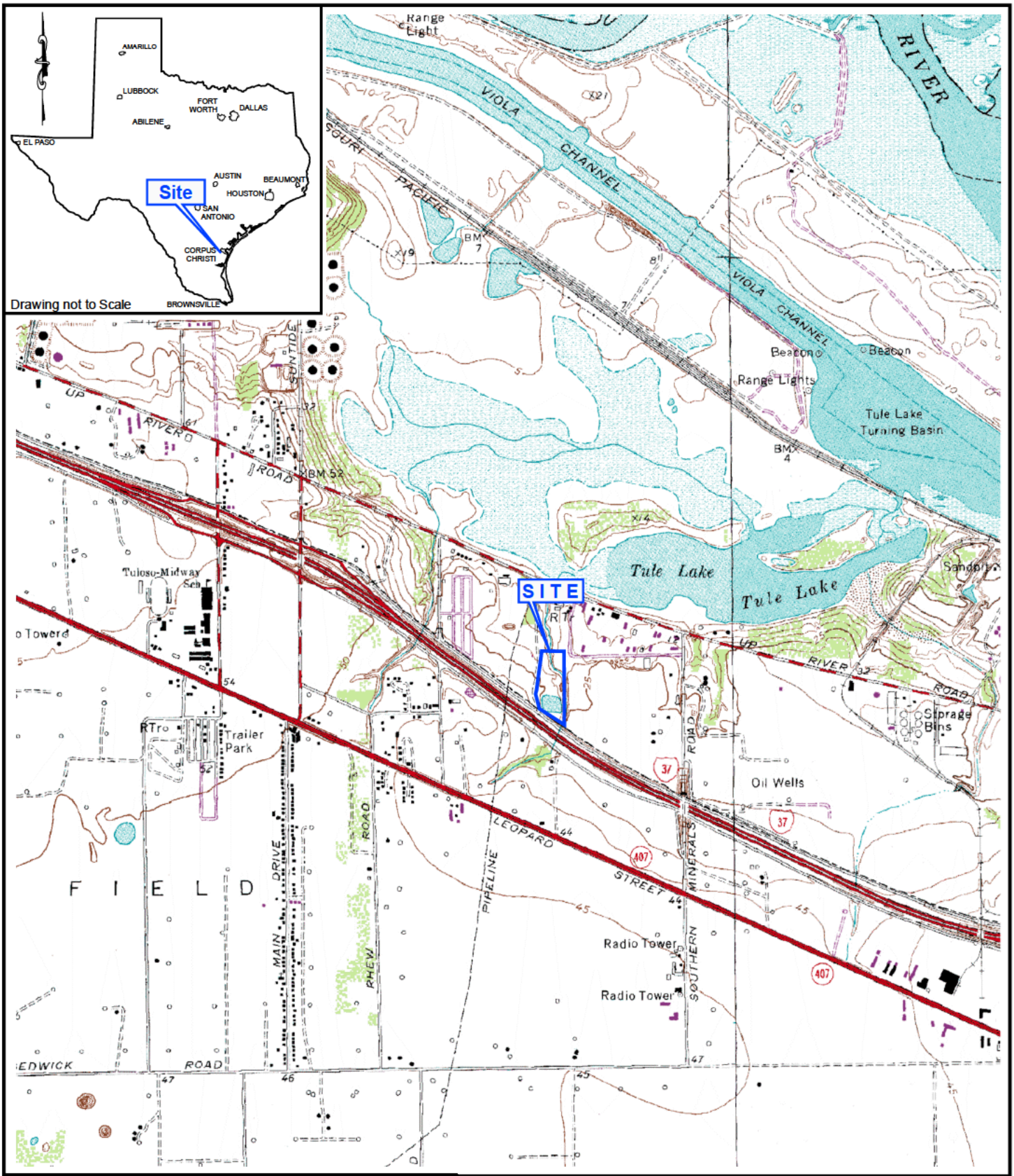
(See CD)

Appendix K Background and Site Data Summary Tables

(See CD)

Appendix L Toxicity Profiles

(See CD)



Source:

U.S.G.S. 7.5-minute Series Topographic Quadrangle Maps from TNRIS for Annaville and Corpus Christi, Texas.
Dated 1969; Photorevised 1975.

0 2000 4000

APPROXIMATE SCALE IN FEET
SCALE= 1:24000

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

Title: **SITE LOCATION MAP**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure:
As Shown	SJF	4-4-14	25012501	Site Location Map.dwg	1
	Chk'd by: BPB	Date: 4-4-14			

File: O:\Projects\ENV10\25012501\Dwgs\CAD\RI Report\Fig 1 – Site Location Map – Topo.dwg Layout: Layout1 User: Susan_Forrest Plotted: Apr 04, 2014 – 10:37am

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 2 – Site Map.dwg Layout: Layout1 User: Susan_Forrest Plotted: Jun 09, 2014 – 4:19pm

NORTHWEST DITCH

UP RIVER ROAD

LOT 1A

LOT 8A

LOT 1B

LOT 2

LOT 8B

NORTH PIT

LOT 3

LOT 4

SOUTH PIT

LOT 5

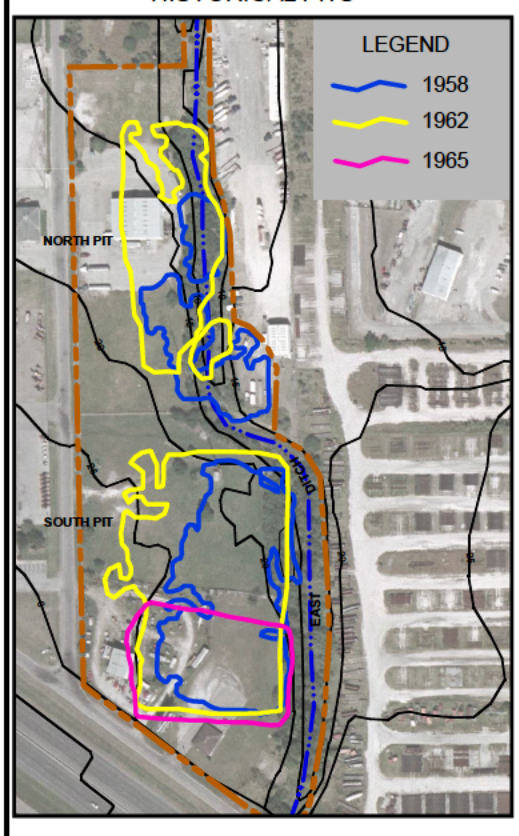
LOT 6

LOT 7

EAST DITCH

IH-37

HISTORICAL PITS



LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- SITE BOUNDARY
- LOT BOUNDARY
- EXTENT OF HISTORICAL PITS
- DOWNSTREAM AOC LIMIT OF INVESTIGATION

Source:

U.S.G.S. High Resolution Orthoimagery for he Corpus Christi, Texas Urban Area, 2007.

Topographic Elevation Contours from he U.S.G.S. 7.5-minute Series Topographic Quadrangle Maps for Annaville and Corpus Christi, Texas, 1975.

0 200 400

APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

Scale:	Drawn by:	Date:
As Shown	SJF	6-9-14
	Chk'd by: BPB	Date: 6-9-14

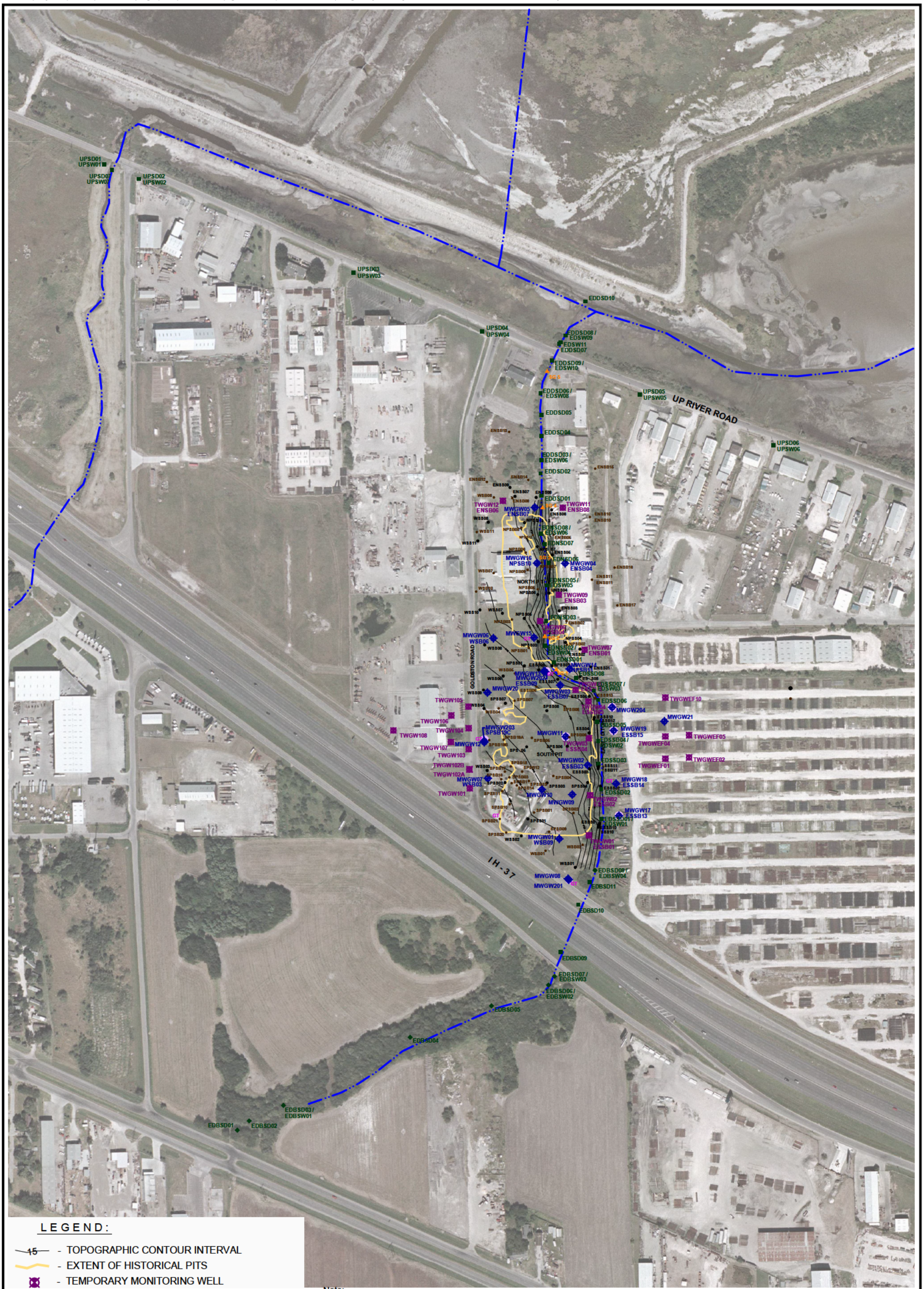
Title: **Site Map**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Project No.:	File Name:	Figure No.:
25012501	Site Map.dwg	2

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 3 – Sample Location Map.dwg Layout: Layout1 User: Susan_Forrest Plotted: May 22, 2014 – 11:21am



LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- TEMPORARY MONITORING WELL
- PERMANENT MONITORING WELL (UTU)
- PERMANENT MONITORING WELL (STU)
- GT - GEOTECHNICAL ANALYSIS
- SURFACE SOIL SAMPLE LOCATION
- SUBSURFACE SOIL BORING SAMPLE LOCATION
- 2012 WATER GAUGE SAMPLE LOCATION
- SURFACE WATER / SEDIMENT SAMPLE LOCATION
- BACKGROUND SAMPLE LOCATION

Note:

UTU - Upper Transmissive Unit
STU - Second Transmissive Unit

Source:

U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Frontier Surveying.

0 175 350 700

APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

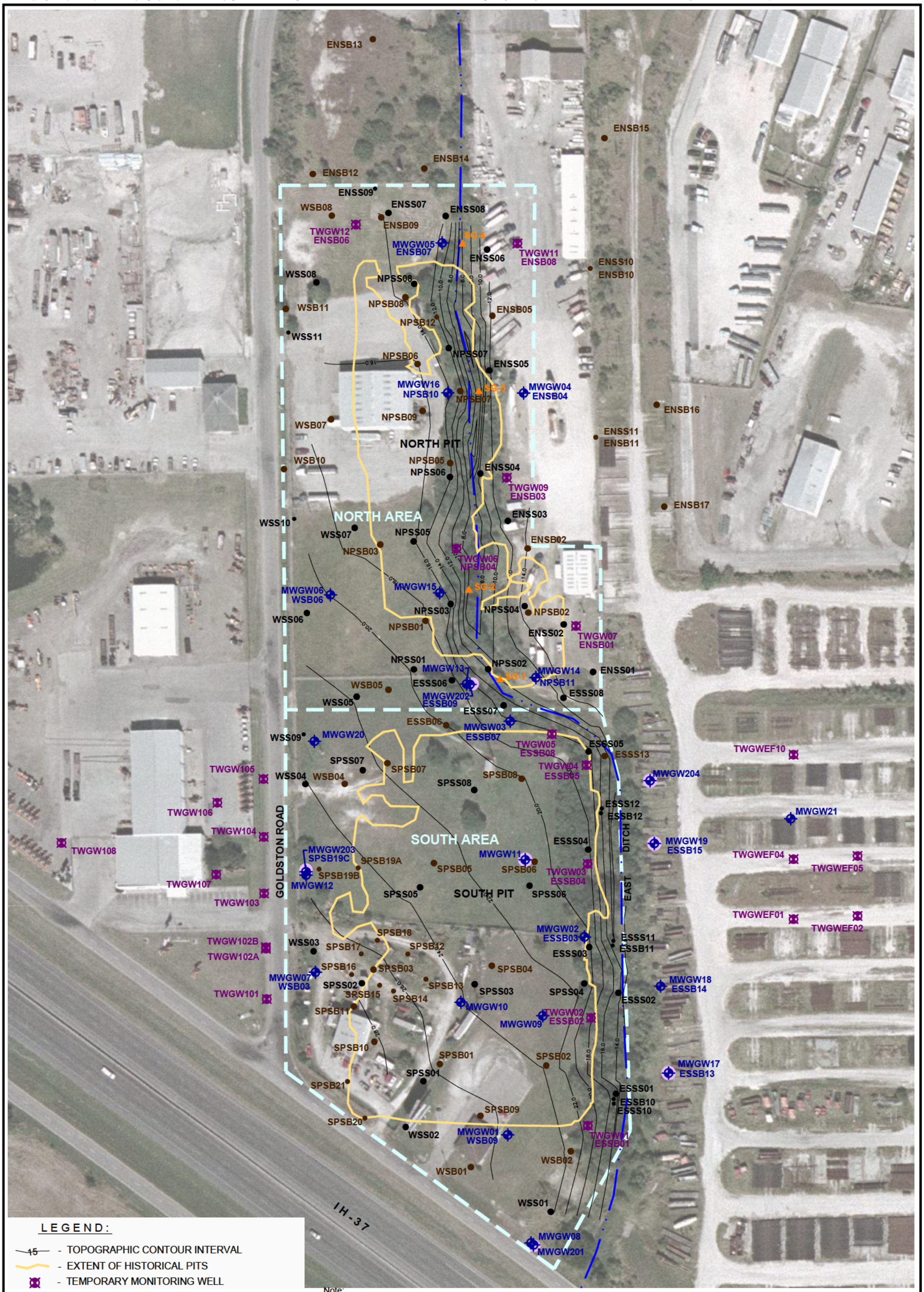
Title: **Sample Location Map**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure No.:
As Shown	SJF	4-8-14	25012501	Soil and GW Sample Location Map.dwg	3
	Chk'd by: BPB	Date: 4-8-14			

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 4 – Soil Boring and MonWell Locs – North and South Areas.dwg Layout: Layout1 User: Susan_Forrest Plotted: May 22, 2014 – 12:47pm



LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- TEMPORARY MONITORING WELL
- PERMANENT MONITORING WELL (UTU)
- PERMANENT MONITORING WELL (STU)
- SURFACE SOIL SAMPLE LOCATION
- SUBSURFACE SOIL BORING SAMPLE LOCATION
- 2012 WATER GAUGE SAMPLE LOCATION
- BOUNDARY FOR SAMPLES ASSIGNED TO NORTH AND SOUTH PIT AREAS

Note:
UTU - Upper Transmissive Unit
STU - Second Transmissive Unit

Source:
U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Frontier Surveying.

0 65 130 260
APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

Title: **Soil Boring and Monitoring Well Locations North and South Areas**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure No.:
As Shown	SJF	5-21-14	25012501	Soil Boring and MonWell North and South Areas.dwg	4
	Chk'd by: BPB	Date: 5-21-14			

TULE LAKE

UP RIVER ROAD

GOLDSTON ROAD

BRINE SERVICE COMPANY
SUPERFUND SITE

NORTH PIT

SOUTH PIT

IH-37

SOUTHERN MINERALS ROAD

VALERO

VALERO

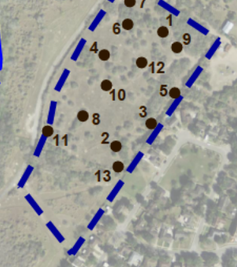
VALERO

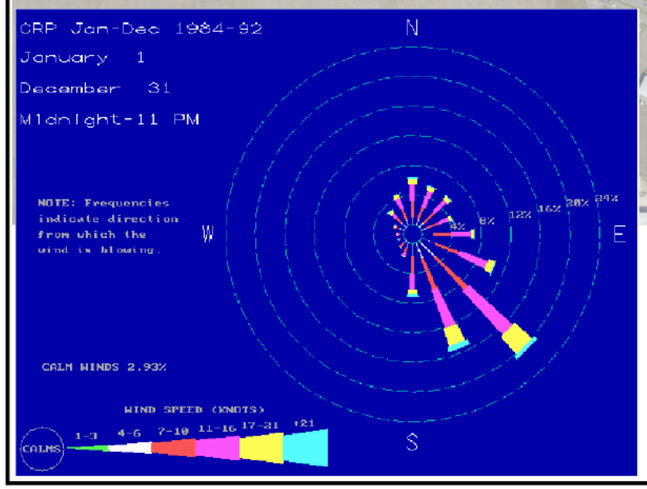
AIR
LIQUIDE

CITGO

CITGO REFINING & CHEMICAL
WEST PLANT

BACKGROUND SAMPLE
LOCATION





LEGEND:

● - BACKGROUND SAMPLE LOCATION

Source:
TNRIS 2008-2009 NAIP Imagery for
Corpus Christi and Annaville, Texas.

0 400 800 1600
APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-8699
FAX: (713) 789-8404

Scale:	Drawn by:	Date:
As Shown	SJF	5-21-14
	Chk'd by: BPB	Date: 5-21-14

Title: **Background Sample Locations**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Project No.:	File Name:	Figure No.:
25012501	Background Sample Locations.dwg	5

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 5 - Background Sample Locations.dwg Layout: Layout1 User: Susan_Forrest Plotted: May 22, 2014 - 12:51pm

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 6 – Surface Water and Sediment Locations.dwg Layout: Layout1 User: Susan_Forrest Plotted: May 22, 2014 – 12:53pm

LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- ▲ - 2012 WATER GAUGE SAMPLE LOCATION
- ● - SURFACE SOIL SAMPLE LOCATION
- ■ - SURFACE WATER / SEDIMENT SAMPLE LOCATION
- ◆ - BACKGROUND SAMPLE LOCATION

Source:

U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Frontier Surveying.

0 175 350 700

APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

Scale: As Shown | Drawn by: SJF | Date: 5-21-14 | Chk'd by: BPB | Date: 5-21-14

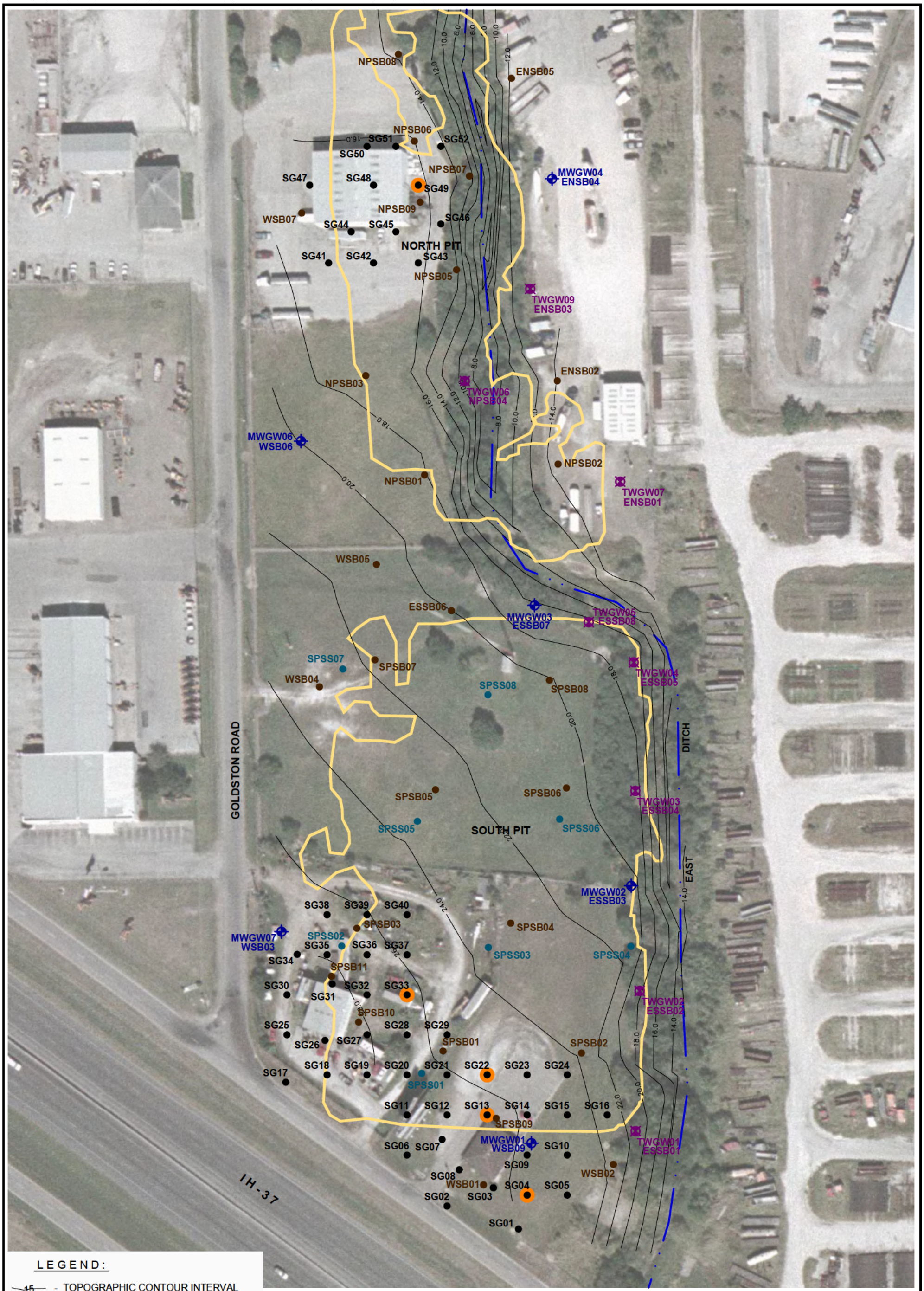
Title: **Surface Water and Sediment Locations**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: Brine Service Cooperating Parties

Project No.: 25012501 | File Name: Surface Water and Sediment Locations.dwg | Figure No.: 6

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 7 – Soil Gas Sample Locations.dwg Layout: Layout User: Susan_Forrest Plotted: Jun 09, 2014 – 4:15pm



LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- TEMPORARY MONITORING WELL
- PERMANENT MONITORING WELL
- SURFACE SOIL SAMPLE LOCATION
- SUBSURFACE SOIL BORING SAMPLE LOCATION
- PASSIVE SOIL GAS SAMPLE LOCATION
- ACTIVE SOIL GAS, MARCH 5, 2012

Source:

U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Frontier Surveying, December 2010.

0 50 100 150

APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

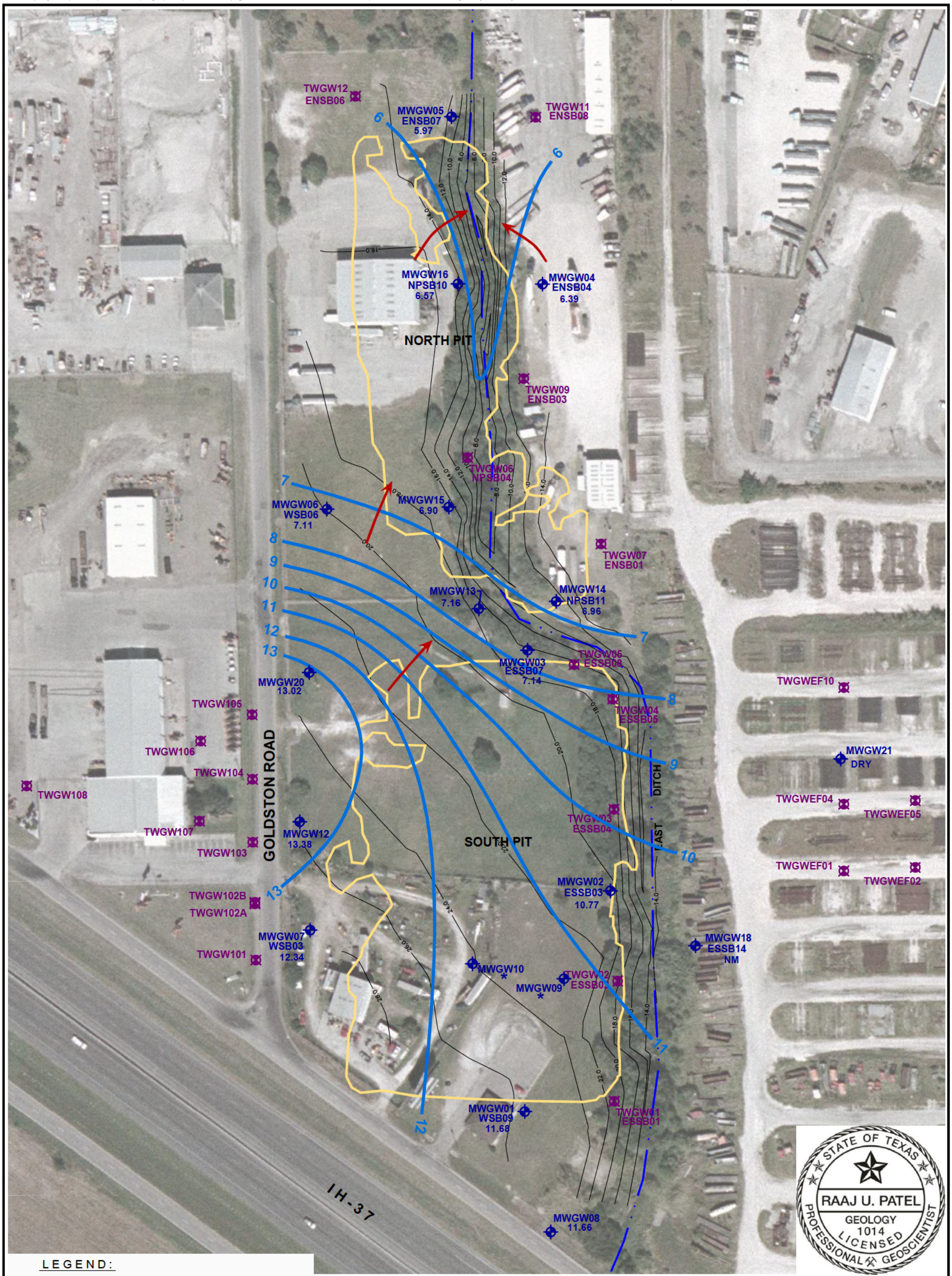
Title: **Soil Gas Sample Locations**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: Brine Service Cooperating Parties

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure No.:
As Shown	SJF	6-9-14	25012501	Soil Gas Sample Locs-Beacon.dwg	7
	Chk'd by: BPB	Date: 6-9-14			

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 8 – Potentiometric Surface Map–UTU – Feb 2014.dwg Layout: Layout1 User: Susan_Forrest Plotted: May 22, 2014 – 1:02pm



LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- TEMPORARY MONITORING WELL
- PERMANENT MONITORING WELL (UTU)
- 11.68 - GROUNDWATER ELEVATION
- NM - NOT MEASURED DUE TO WELL DAMAGE DURING CONSTRUCTION ACTIVITY
- GROUNDWATER CONTOUR (INTERVAL = 1.0 FT)
- GROUNDWATER FLOW DIRECTION
- DRY - WATER NOT MEASURED

NOTES:

"*" NAPL Well - not screened in a transmissive unit

Water elevations measured in feet relative to mean sea level (MSL)

UTU - Upper Transmissive Unit

Source:

U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Fron ier Surveying.

0 60 120 240

APPROXIMATE SCALE IN FEET

URS
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Scale:	Drawn by:	Date:
As Shown	SJF	5-21-14
	Chk'd by: BPB	Date: 5-21-14

Title: **Potentiometric Surface Map Upper Transmissive Unit February 24, 2014**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Project No.:	File Name:	Figure No.:
25012501	Potentiometric Surface Map-UTU - Feb 2014.dwg	8

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 9 – Potentiometric Surface Map–STU – Mar 2012.dwg Layout: Layout1 User: Susan_Forrest Plotted: May 22, 2014 – 1:04pm

RAAJ U. PATEL
GEOLOGY
1014
LICENSED
STATE OF TEXAS
PROFESSIONAL GEOSCIENTIST

LEGEND:

- 15 — TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- PERMANENT MONITORING WELL (STU)
- 8.35 GROUNDWATER ELEVATION
- GROUNDWATER CONTOUR (INTERVAL = 0.25 FT)
- GROUNDWATER FLOW DIRECTION

NOTES:

Water elevations measured in feet relative to mean sea level (MSL)

STU - Second Transmissive Unit

Source:

U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Frontier Surveying, December 2010 and additional sample loca ions surveyed in March 2012.

0 60 120 240

APPROXIMATE SCALE IN FEET

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6699
FAX: (713) 789-8404

Scale:	Drawn by:	Date:
As Shown	SJF/CLK	5-21-14
	Chk'd by: BPB	Date: 5-21-14

Title: **Potentiometric Surface Map Second Transmissive Unit March 22, 2012**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Project No.:	File Name:	Figure No.:
25012501	Potentiometric Surface Map-STU - Mar 2012.dwg	9

File: O:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 10 – Total Dissolved Solids in Temp and Perm MonWells.dwg Layout: Layout1 User: Susan_Forrest Plotted: May 22, 2014 – 1:06pm

LEGEND:

- 15 - TOPOGRAPHIC CONTOUR INTERVAL
- EXTENT OF HISTORICAL PITS
- TEMPORARY MONITORING WELL
- PERMANENT MONITORING WELL

Note:

1. All results reported in milligrams per liter (mg/L).

Source:

U.S.G.S. High Resolution Orthoimagery for the Corpus Christi, Texas Urban Area, 2007.

Topographic elevation contours and sample locations were surveyed by Frontier Surveying, December 2010.

0 200 400

APPROXIMATE SCALE IN FEET

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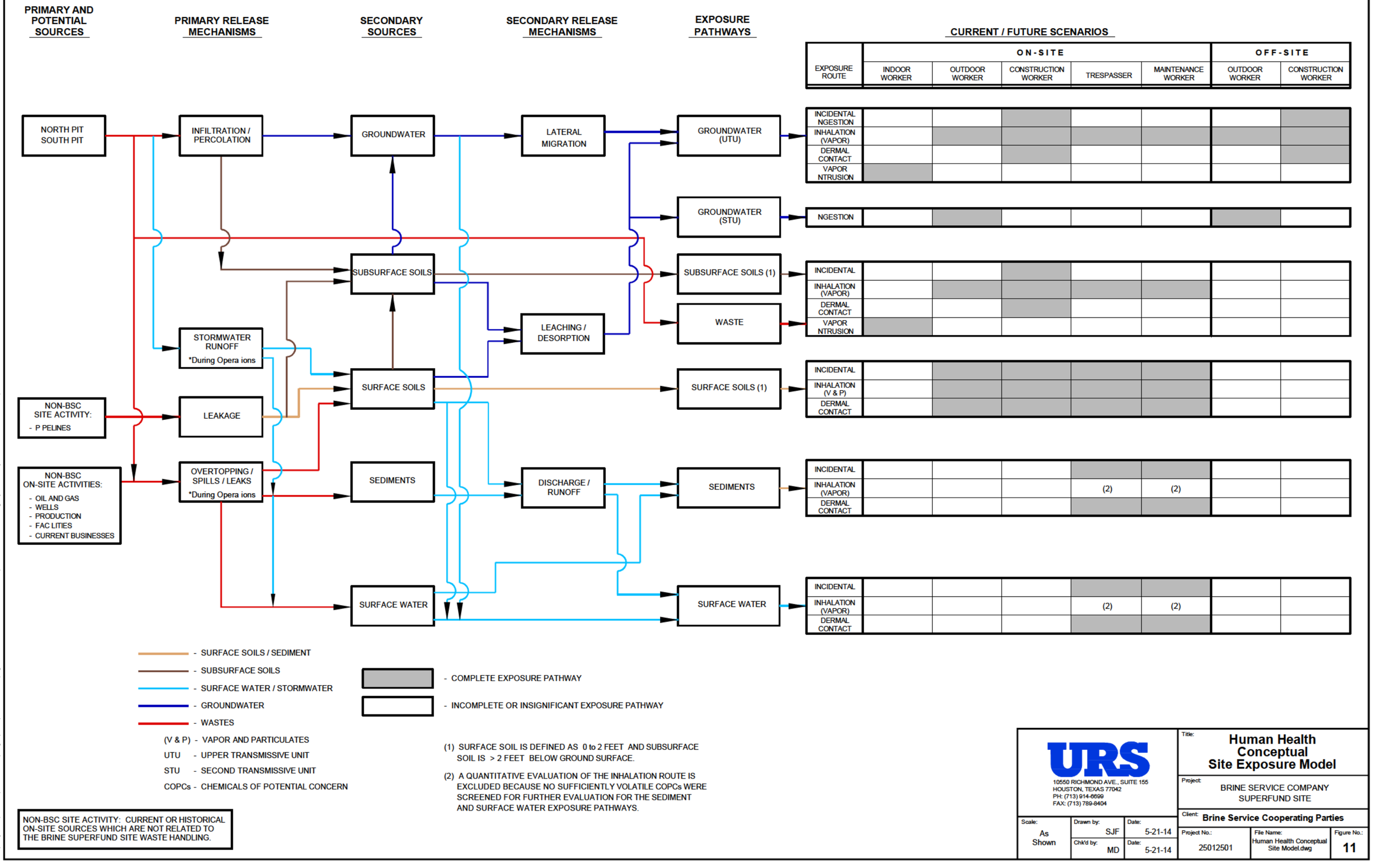
Scale:	Drawn by:	Date:
As Shown	SJF	5-21-14
	Chk'd by: BPB	Date: 5-21-14

Title: **Total Dissolved Solids in Temporary and Permanent Monitoring Wells**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Project No.:	File Name:	Figure No.:
25012501	Total Dissolved Solids in Temp and Perm MonWells.dwg	10



CURRENT / FUTURE SCENARIOS

EXPOSURE ROUTE	ON-SITE: INDOOR WORKER	ON-SITE: OUTDOOR WORKER	ON-SITE: CONSTRUCTION WORKER	ON-SITE: TRESPASSER	ON-SITE: MAINTENANCE WORKER	OFF-SITE: OUTDOOR WORKER	OFF-SITE: CONSTRUCTION WORKER
GROUNDWATER (UTU)							
INCIDENTAL NGESTION			■				■
INHALATION (VAPOR)		■	■	■	■	■	■
DERMAL CONTACT			■				■
VAPOR NTRUSION	■						
GROUNDWATER (STU)							
NGESTION		■				■	
SUBSURFACE SOILS (1)							
INCIDENTAL			■				
INHALATION (VAPOR)		■	■	■	■		
DERMAL CONTACT			■				
VAPOR NTRUSION	■						
WASTE							
INCIDENTAL			■				
INHALATION (VAPOR)		■	■	■	■		
DERMAL CONTACT			■				
VAPOR NTRUSION	■						
SURFACE SOILS (1)							
INCIDENTAL		■	■	■	■		
INHALATION (V & P)		■	■	■	■		
DERMAL CONTACT		■	■	■	■		
SEDIMENTS							
INCIDENTAL				■	■		
INHALATION (VAPOR)				(2)	(2)		
DERMAL CONTACT				■	■		
SURFACE WATER							
INCIDENTAL				■	■		
INHALATION (VAPOR)				(2)	(2)		
DERMAL CONTACT				■	■		

URS
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Title: **Human Health Conceptual Site Exposure Model**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: **Brine Service Cooperating Parties**

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure No.:
As Shown	SJF	5-21-14	25012501	Human Health Conceptual Site Model.dwg	11
	Chk'd by: MD	Date: 5-21-14			

O:\Projects\ENV10\250125011\Dwgs\CAD\2014 HHRA\Fig 11 – Human Health Conceptual Site Model.dwgLayout1 May 22, 2014 – 1:24pm

West

East

SURFACE AND SUBSURFACE 0 to 10' bgs

SUBSURFACE SOIL > 2' bgs

DEPTH IN FEET

SURFACE SOIL

SOUTH PIT

EAST DITCH

CLAY

SILT

REWORKED SOIL / WASTE MATERIAL

SLUDGE

SILT

SAND

Upper Transmissive Unit

CLAY

Confining Clay

CLAY

SILT

SAND

Second Transmissive Unit

SAND

URS
10550 RICHMOND AVE., SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-6999
FAX: (713) 789-8404

Title: **Generalized Site Stratigraphic Model**

Project: BRINE SERVICE COMPANY SUPERFUND SITE

Client: Brine Service Cooperating Parties

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure:
AS SHOWN	SJF	6-19-14	25012501	Generalized Site Stratigraphic Model.dwg	12
	Chk'd by: RUP	Date: 6-19-14			

File: C:\Projects\ENV10\25012501\Dwgs\CAD\2014 HHRA\Fig 12 – Generalized Site Stratigraphic Model.dwg Layout: Layout User: Susan_Forrest Plotted: Jun 19, 2014 – 3:58pm

TABLE 1
SELECTION OF EXPOSURE PATHWAYS
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Number	Scenario Timeframe[1]	Medium	Exposure Medium	Exposure Point	Receptor Population[2,3]	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
1A	Current/Future	Groundwater (On-site) (North and South Pit Areas)	Groundwater	Groundwater in Construction Trench/Excavation (UTU)	Construction Worker	Adult	Dermal	Quant	Exposures (via ingestion and dermal contact) to the upper transmissive unit (UTU) on-site during construction work is considered complete. A construction worker is assumed to conduct work from the ground surface to the top of the UTU. Static water level measurements collected at the Site indicate the depth to the UTU ranges from approximately 6 to 15 feet bgs, with an average depth to groundwater of 9.6 feet bgs. Since the depth to UTU varies considerably at the Site, a site-specific on-site construction worker is assumed to conduct work activities to a depth of 10 feet bgs. Incidental ingestion and dermal contact are considered complete exposure routes for on-site current/future construction workers.
1B							Incidental Ingestion	Quant	
1C				Tap Water Use (STU)	Outdoor Worker	Adult	Dermal	None	The UTU at the Site meets Class 3 designation (non-drinking water resource) and the second transmissive unit (STU) meets Class 2 designation (potentially usable water source). Even though no public water supply wells were identified within a 1-mile radius of the Site and potable water is municipally-supplied to the Site and immediate surrounding areas by the City of Corpus Christi, tap water use (ingestion) of the STU on-site is conservatively assumed. Since an on-site outdoor worker scenario represents the most conservative exposure for routine tap water use, quantitative assessments are not additionally performed for current and future on-site construction workers, on-site maintenance workers, and on-site adolescent trespassers. In addition, it is assumed that tap water at the Site is not routinely used for bathing and a hand washing scenario is considered less conservative that a standard drinking water ingestion scenaro; therefore, dermal contact with COPCs in the STU is not evaluated.
1D							Ingestion	Quant	
1E					Construction Worker	Adult	Dermal	None	
1F							Ingestion	None	
1G					Maintenance Worker	Adult	Dermal	None	
1H							Ingestion	None	
1I					Trespasser	Adolescent[4]	Dermal	None	
1J							Ingestion	None	
1K			Outdoor Air	Outdoor Air (Construction in Trench/Excavation) (UTU)	Construction Worker	Adult	Inhalation	Quant	The UTU at the Site was encountered at depths ranging from about 6 to 15 feet bgs, and construction work is assumed to occur to a depth of 10 feet bgs. Hence, an on-site construction worker could be potentially exposed to chemicals of potential concern (COPCs) in vapors emanating from the UTU that could accumulate within an excavation or trench while conducting work activities.
1L			Outdoor Air	Outdoor Air (ags)	Outdoor Worker	Adult	Inhalation	Quant	Volatile COPCs in groundwater (UTU and STU) could migrate to ambient air. Human receptors working or traversing the Site could be exposed to volatile emissions from groundwater. Since the STU is conservatively evaluated as a drinking water source, the groundwater-to-ambient air pathway is not additionally quantified (given it is a less conservative scenario). Quantitative evaluations are included for inhalation of volatile COPCs in ambient air due to migration of vapors from the UTU (non-drinking water source) for current and future on-site outdoor workers, on-site maintenance workers, and on-site adolescent trespassers.
1M					Maintenance Worker	Adult		Quant	
1N					Trespasser	Adolescent[4]		Quant	
1O			Indoor Air	Indoor Air (Vapor Intrusion)	Indoor Worker	Adult	Inhalation	Quant	Sufficiently volatile COPCs in on-site groundwater can migrate into indoor air (vapor intrusion). The inhalation of volatile COPCs in indoor air due to migration of vapors from on-site groundwater is considered a complete exposure pathway for current and future on-site indoor workers since there are buildings currently present on Site. Since current and future on-site maintenance workers, on-site construction workers, and on-site adolescent trespassers are not l kely to routinely spend time indoors, this exposure pathway is considered incomplete for these receptors. The potential vapor intrusion scenario is evaluated based on active soil gas sampling data collected on-site.
1P		Groundwater (Off-site)	Groundwater	Groundwater in Construction Trench/Excavation (UTU)	Construction Worker	Adult	Dermal	Quant	COPCs were identified in the UTU off-site. Exposures (via ingestion and dermal contact) to the UTU off-site during construction work is considered complete. An off-site construction worker is assumed to conduct work from the ground surface to the top of the UTU. Since the depth to UTU varies considerably within the Site and immediate vicinity, a site-specific off-site construction worker is assumed to conduct work activities to a depth of 10 feet bgs. Incidental ingestion and dermal contact are considered complete exposure routes for current/future off-site construction workers.
1Q							Incidental Ingestion	Quant	
1R				Tap Water Use (STU)	Outdoor Worker	Adult	Dermal	None	COPCs were identified in the UTU and STU off-site. The UTU at the Site meets Class 3 designation (non-drinking water resource) and the STU meets Class 2 designation (potentially usable water source). Even though no public water supply wells were identified within a 1-mile radius of the Site and potable water is municipally-supplied to the Site and immediate surrounding areas by the City of Corpus Christi, tap water use (ingestion) of the STU off-site is conservatively assumed. Since an off-site outdoor worker scenario represents the most conservative exposure for routine tap water use, quantitative assessments are not additionally performed for the current and future off-site construction worker. It is assumed that tap water at the Site is not routinely used for bathing and a hand washing scenario is considered less conservative that a standard drinking water ingestion scenario; therefore, dermal contact with COPCs in the STU is not evaluated.
1S							Ingestion	Quant	
1T					Construction Worker	Adult	Dermal	None	
1U							Ingestion	None	
1V			Outdoor Air	Outdoor Air (Construction in Trench/Excavation)	Construction Worker	Adult	Inhalation	Quant	COPCs were identified in the UTU off-site. The UTU was encountered at depths ranging from about 6 to 15 feet bgs, and construction work is assumed to occur to a depth of 10 feet bgs. Hence, an offsite construction worker could be potentially exposed to COPCs in vapors emanating from the UTU that could accumulate within an excavation or trench while conducting work activities.
1W			Outdoor Air	Outdoor Air (ags)	Outdoor Worker	Adult	Inhalation	Quant	COPCs were identified in UTU and STU off-site. Volatile COPCs in groundwater (UTU and STU) could migrate to ambient air. Since the STU is conservatively evaluated as a drinking water source, the groundwater-to-ambient air pathway is not additionally quantified (given it is a less conservative scenario). A quantitative evaluation is included for inhalation of volatile COPCs in ambient air due to migration of vapors from the UTU (non-drinking water source) for current and future off-site outdoor workers.
1X			Indoor Air	Indoor Air (Vapor Intrusion)	Indoor Worker	Adult	Inhalation	None	Sufficiently volatile COPCs in off-site groundwater could migrate into indoor air (vapor intrusion); since an on-site indoor worker scenario represents the most conservative exposure for vapor intrusion (because the sources are located on-site), a quantitative assessment is not additionally performed for a potential current and future off-site indoor worker scenario.

TABLE 1
SELECTION OF EXPOSURE PATHWAYS
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Number	Scenario Timeframe[1]	Medium	Exposure Medium	Exposure Point	Receptor Population[2,3]	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
2A	Current/Future	Soil (On-site) (North and South Pit Areas)	Surface Soil	Surface Soil (0 to 2 feet)	Outdoor Worker	Adult	Dermal	Quant	Outdoor workers could be exposed to COPCs in surface soils (0-2 feet bgs) during routine Site activities. Incidental ingestion, inhalation of volatiles and particulates, and dermal contact with surface soils are considered complete for current and future on-site outdoor workers.
2B							Inhalation	Quant	
2C							Incidental Ingestion	Quant	
2D					Maintenance Worker	Adult	Dermal	Quant	Maintenance workers could be exposed to COPCs in surface soils (0-2 feet bgs) during routine Site maintenance activities, such as mowing and landscaping. Incidental ingestion, inhalation of volatiles and particulates, and dermal contact with surface soils are considered complete for on-site current and future maintenance workers.
2E							Inhalation	Quant	
2F							Incidental Ingestion	Quant	
2G					Construction Worker	Adult	Dermal	Quant	During intrusive construction activities (e.g., the installation of utilities or foundations), a construction worker could be potentially exposed to COPCs in soils to a depth of up to 10 feet bgs. Incidental ingestion, inhalation of volatiles and particulates, and dermal contact exposures are considered complete for current and future on-site construction workers.
2H							Inhalation	Quant	
2I							Incidental Ingestion	Quant	
2J					Trespasser	Adolescent[4]	Dermal	Quant	Current/future trespassers could be exposed to COPCs in surface soils (0-2 feet bgs) while traversing the Site. Incidental ingestion, inhalation of volatiles and particulates, and dermal contact are considered complete for current and future on-site adolescent trespassers.
2K							Inhalation	Quant	
2L							Incidental Ingestion	Quant	
2M			Subsurface Soil	Subsurface Soil (>2-10 feet bgs)	Outdoor Worker	Adult	Dermal	None	Outdoor workers, maintenance workers, and trespassers are not involved in Site tasks or activities that would result in direct contact exposures to soils deeper than 2 feet bgs. Hence, ingestion and dermal contact with soils deeper than 2 feet are considered incomplete exposure routes for these receptors.
2N							Incidental Ingestion	None	
2O					Maintenance Worker	Adult	Dermal	None	
2P							Incidental Ingestion	None	
2Q					Trespasser	Adolescent[4]	Dermal	None	
2R							Incidental Ingestion	None	
2S					Construction Worker	Adult	Dermal	Quant	During intrusive construction activities (e.g., the installation of utilities or foundations), an on-site construction worker is assumed to be potentially exposed to on-site soils to a depth of up to 10 feet bgs.Incidental ingestion, inhalation of volatiles and particulates, and dermal contact exposures are considered complete for current and future on-site construction workers.
2T							Incidental Ingestion	Quant	
2U			Outdoor Air	Outdoor Air	Outdoor Worker	Adult	Inhalation	Quant	Volatile COPCs in subsurface soils can be emitted into ambient air. Human receptors working or traversing the Site could be exposed to volatile emissions from subsurface soils. Hence, the inhalation of volatile COPCs in ambient air due to migration of vapors from on-site subsurface soils is considered a complete exposure pathway for current and future on-site outdoor workers, on-site maintenance workers, on-site construction workers, and on-site adolescent trespassers.
2V					Maintenance Worker	Adult		Quant	
2W					Construction Worker	Adult		Quant	
2X					Trespasser	Adolescent[4]		Quant	
2Y			Indoor Air	Indoor Air (Vapor Intrusion)	Indoor Worker	Adult	Inhalation	Quant	Sufficiently volatile COPCs in surface and subsurface soils can migrate into indoor air (vapor intrusion). The inhalation of volatile COPCs in indoor air due to migration of vapors from soils is considered a complete exposure pathway for current and future indoor workers since there are buildings currently present on Site. Since current and future maintenance workers, construction workers, and trespassers are not likely to routinely work indoors, this exposure pathway is considered incomplete for these receptors. The potential vapor intrusion scenario is evaluated based on active soil gas sampling data collected on-site.
2Z			Groundwater	Groundwater (UTU)	Commercial/Industrial	N/A	Class 3 Groundwater Protection	Quant	Current and future leaching of COPCs in on-site soils to the UTU is considered a complete pathway for commercial land use.
3A	Current/Future	NAPL/Waste (On-site) (South Pit Area)	NAPL/Waste	NAPL/Waste (> 2 feet bgs)	Outdoor Worker	Adult	Dermal	None	Given the depth at which NAPL/waste were observed in the subsurface at the Site (> 2 feet bgs), current and future on-site outdoor worker, on-site maintenance worker, and on-site adolescent trespasser are not likely to have contact via the ingestion or dermal exposure routes.
3B							Incidental Ingestion	None	
					Trespasser	Adolescent[4]	Dermal	None	
							Incidental Ingestion	None	
3C					Maintenance Worker	Adult	Dermal	None	
3D							Incidental Ingestion	None	
3E					Construction Worker	Adult	Dermal	Quant	During construction activities (e.g., the installation of utilities or foundations), a construction worker could be potentially exposed to waste or NAPL in subsurface soils (to depth of 10 feet bgs). Incidental ingestion, inhalation of volatiles and particulates, and dermal contact exposures are considered complete for current and future construction workers.
3F							Inhalation	Quant	
3G							Incidental Ingestion	Quant	
3H			Outdoor Air	Outdoor Air	Outdoor Worker	Adult	Inhalation	Quant	Volatile COPCs in waste/NAPL could migrate to ambient air. Human receptors working or traversing the Site could be exposed to volatile emissions. Hence, the inhalation of volatile COPCs in ambient air due to migration of vapors from waste/NAPL is considered a complete exposure pathway for current and future on-site outdoor workers, on-site maintenance workers, on-site construction workers, and on-site adolescent trespassers.
3I					Maintenance Worker	Adult		Quant	
3J					Construction Worker	Adult		Quant	
3K					Trespasser	Adolescent[4]		Quant	
3L			Indoor Air	Indoor Air (Vapor Intrusion)	Indoor Worker	Adult	Inhalation	Quant	Sufficiently volatile COPCs in NAPL/waste can migrate into indoor air (vapor intrusion). The inhalation of volatile COPCs in indoor air due to migration of vapors from NAPL/waste is considered a complete exposure pathway for current and future indoor workers since there are buildings currently present on Site, and NAPL/waste was identified with the vicinity of existing buildings. Since current and future on-site maintenance workers, on-site construction workers, and on-site adolescent trespassers are not l kely to routinely work indoors, this exposure pathway is considered incomplete for these receptors. The potential vapor intrusion scenario is evaluated based on active soil gas sampling data collected on-site.
			Groundwater	Groundwater (UTU)	Commercial/Industrial	N/A	Class 3 Groundwater Protection	Quant	Current and future leaching of COPCs in the waste/NAPL to the UTU is considered a complete pathway for commercial land use.

TABLE 1
SELECTION OF EXPOSURE PATHWAYS
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Number	Scenario Timeframe[1]	Medium	Exposure Medium	Exposure Point	Receptor Population[2,3]	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
4A	Current/Future	Surface Water (On-site) (East Ditch)	Surface Water	Surface Water[5] (East Ditch)	Outdoor Worker	Adult	Dermal	None	Outdoor workers are expected to routinely conduct on-site work and activities, and not routinely participate in work that would result in exposures to surface water in the East Ditch; therefore, surface water exposures in the East Ditch are considered incomplete for this receptor.
4B							Inhalation	None	
4C							Incidental Ingestion	None	
4D					Maintenance Worker	Adult	Dermal	Quant	A maintenance worker is likely to be involved in maintaining (e.g., mowing) adjacent areas to the Site, including the East Ditch Area. It is poss ble for this receptor to be potentially exposed to COPCs in surface water in the East Ditch via incidental ingestion and dermal contact. A quantitative evaluation of the inhalation route is excluded because no sufficiently volatile COPCs were screened for further evaluation for the surface water exposure pathway.
4E							Inhalation	None	
4F							Incidental Ingestion	Quant	
4G					Construction Worker	Adult	Dermal	None	Construction workers are expected to be involved in construction work and utility repairs on-site, and are not expected to be routinely involved in work activities in the East Ditch Area; therefore, exposures to surface water in the East Ditch are considered incomplete for this receptor.
4H							Inhalation	None	
4I							Incidental Ingestion	None	
4J					Trespasser	Adolescent[4]	Dermal	Quant	An adolescent could trespass the Site and potentially have contact with surface water in the East Ditch. It is possible for this receptor to be potentially exposed to COPCs in surface water in the East Ditch via incidental ingestion and dermal contact. A quantitative evaluation of the inhalation route is excluded because no sufficiently volatile COPCs were screened for further evaluation for the surface water exposure pathway.
4K							Inhalation	None	
4L							Incidental Ingestion	Quant	
5A	Current/Future	Sediment (On-site) (East Ditch)	Sediment	Sediment (East Ditch)	Outdoor Worker	Adult	Dermal	None	Outdoor workers are expected to routinely conduct on-site work and activities, and not routinely participate in work that would result in exposures to sediments in the East Ditch; therefore, sediment exposures in the East Ditch are considered incomplete for this receptor.
5B							Inhalation	None	
5C							Incidental Ingestion	None	
5D					Maintenance Worker	Adult	Dermal	Quant	A maintenance worker is likely to be involved in maintaining (e.g., mowing) adjacent areas to the Site, including the East Ditch Area. It is poss ble for this receptor to be potentially exposed to COPCs in sediments in the East Ditch via incidental ingestion and dermal contact. A quantitative evaluation of the inhalation route is excluded because no sufficiently volatile COPCs were screened for further evaluation for the sediment exposure pathway.
5E							Inhalation	None	
5F							Incidental Ingestion	Quant	
5G					Construction Worker	Adult	Dermal	None	Construction workers are expected to be involved in construction work and utility repairs on-site, and are not expected to be routinely involved any work activities in the East Ditch Area; therefore, exposures to sediment in the East Ditch are considered incomplete for this receptor.
5H							Inhalation	None	
5I							Incidental Ingestion	None	
5J					Trespasser	Adolescent[4]	Dermal	Quant	An adolescent could trespass the Site and potentially have contact with sediments in the East Ditch. It is possible for this receptor to be potentially exposed to COPCs in sediments in the East Ditch via incidental ingestion and dermal contact. A quantitative evaluation of the inhalation route is excluded because no sufficiently volatile COPCs were screened for further evaluation for the sediment exposure pathway.
5K							Inhalation	None	
5L							Incidental Ingestion	Quant	

Notes:

1 Current and future scenarios are evaluated because the Site is currently active and is expected to remain active in the future.

2 A standard residential receptor is not evaluated because the Site is not used for residential use and is not anticipated to be used for residential purposes in the future.

3 If the land use of the property is changed to residential in the future, risk evaluations may be necessary to assess risks from potential exposures to environmental media of concern assuming residential use.

4 Due to the distance of the Site from residential areas, it is unlikely that children under the age of 15 would trespass in Site or adjacent areas; this age group (less than 15 years old) would require transportation to the Site.

5 Due to the intermittent nature of the water in the East Ditch, it is unl kely that an adolescent trespasser would utilize the East Ditch as a fishery because this drainage ditch is not expected to contain fish that would be a consumable size.

ags Above ground surface
bgs Below ground surface
COPC Chemical of potential concern
HHRA Human Health Risk Assessment
NAPL Non-aqueous phase liquid
None No assessment is indicated because the pathway is considered incomplete; risks contributed by this pathway is not quantitatively assessed.
Quant A quantitative assessment is indicated; this pathway is considered complete and risk is quantitatively evaluated.
STU Second transmissive unit
UTU Upper transmissive unit

TABLE 2.1
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Direct Contact with Surface Soils (0-2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]		Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
South Pit Exposure Area Surface Soil 0-2 ft bgs	7429-90-5	Aluminum	1410	19500	mg/kg	SPSB02-010-120210	55 / 55	2	110	1.95E+04	3.00E+04	T	5.70E+05	n	N/A	N	BSL
	7440-36-0	Antimony	0 223 J	1.06	mg/kg	SPSB06-010-120310	7 / 55	0.17	2 8	1.06E+00	N/A		3.07E+02	n	N/A	N	BSL
	7440-38-2	Arsenic	0.766 J	14.4	mg/kg	ESSB04-010-110510	56 / 56	0.059	0.66	1.44E+01	5.90E+00	T	2.40E+00	c	N/A	Y	ASL
	7440-39-3	Barium	90.9	2220	mg/kg	SPSB06-010-120310	55 / 55	0.073	42	2.22E+03	3.00E+02	T	1.19E+05	n	N/A	N	BSL
	7440-41-7	Beryllium	0.182 J	0 992	mg/kg	WSB04-010-110210	54 / 55	0.044	0.55	9.92E-01	1.50E+00	T	2.47E+02	n	N/A	N	BSL
	7440-43-9	Cadmium	0.109 J	19.6	mg/kg	SPSB08-010-120110	52 / 55	0.039	0.44	1.96E+01	1.42E+00	M	8.00E+02	n	N/A	N	BSL
	7440-47-3	Chromium	3.03	234	mg/kg	ESSB03-010-FD-120910	55 / 55	0.049	5	2.34E+02	3.00E+01	T	7.46E+04	n	N/A	N	BSL
	7440-48-4	Cobalt	0.434 J	8.61	mg/kg	ESSB03-010-120910	55 / 55	0.03	0.33	8.61E+00	7.00E+00	T	2.73E+02	n	N/A	N	BSL
	7440-50-8	Copper	2.91	234	mg/kg	ESSB04-010-110510	54 / 54	0.087	14	2.34E+02	1.50E+01	T	3.89E+04	n	N/A	N	BSL
	7439-92-1	Lead	5.14	359	mg/kg	SPSB08-010-120110	55 / 55	0.044	5 6	3.59E+02	1.73E+01	M	8.00E+02	a	N/A	N	BSL
	7439-96-5	Manganese	55.4	490	mg/kg	SPSS06-000-101310	55 / 55	0.069	11	4.90E+02	3.00E+02	T	2.30E+04	n	N/A	N	BSL
	7440-02-0	Nickel	2.71 J	60.1	mg/kg	SPSB08-010-120110	55 / 55	0.059	0.66	6.01E+01	1.00E+01	T	8.60E+03	n	N/A	N	BSL
	7782-49-2	Selenium	0 268 J	3.77	mg/kg	ESSB06-010-110310	42 / 55	0.16	2 8	3.77E+00	8.90E-01	M	4.87E+03	n	N/A	N	BSL
	7440-22-4	Silver	0.0431 J	1 6	mg/kg	SPSB08-010-120110	24 / 55	0.039	0.44	1.60E+00	N/A		2.27E+03	n	N/A	N	BSL
	7440-28-0	Thallium	0 072 J	0.37 J	mg/kg	WSB04-010-110210	32 / 55	0.061	0.77	3.70E-01	1.11E-01	U	1.00E+01	n	N/A	N	BSL
	7440-62-2	Vanadium	4.74 J	27.7	mg/kg	ESSB03-010-120910	55 / 55	0.069	0.77	2.77E+01	5.00E+01	T	6.10E+02	n	N/A	N	BSL
	7440-66-6	Zinc	12.8	2700	mg/kg	SPSS05-000-101410	55 / 55	0.22	250	2.70E+03	1.02E+02	M	2.45E+05	n	N/A	N	BSL
	7439-97-6	Mercury	0.00183 J	23	mg/kg	ESSB06-010-110310	56 / 56	0.00021	0.024	2.30E+01	4.45E-02	M	3.26E+00	n	N/A	Y	ASL
	72-54-8	4,4 -DDD	0.0052	0.11 J	mg/kg	ESSS03-000-101210	12 / 55	0.0005	0.064	1.10E-01	N/A		7.20E+00	c	N/A	N	BSL
	72-55-9	4,4 -DDE	0.0021 J	0 033 J	mg/kg	ESSS03-000-101210	2 / 55	0.0005	0.064	3.30E-02	N/A		5.10E+00	c	N/A	N	BSL
	50-29-3	4,4 -DDT	0.0029 J	0 088	mg/kg	SPSB09-010-FD-113010	13 / 55	0.0005	0.064	8.80E-02	N/A		6.84E+00	c	N/A	N	BSL
	309-00-2	Aldrin	ND	ND	mg/kg	ND	0 / 55	0.0003	0.038	3.80E-02	N/A		9.70E-02	c	N/A	N	BSL
	319-84-6	alpha-BHC	ND	ND	mg/kg	ND	0 / 55	0.0003	0.038	3.80E-02	N/A		2.70E-01	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	0.0011 J	0.25 J	mg/kg	SPSB10-010-113010	6 / 55	0.0002	0.026	2.50E-01	N/A		5.37E+00	c	N/A	N	BSL
	319-85-7	beta-BHC	0 018 J	0.23	mg/kg	ESSS03-000-101210	5 / 55	0.0003	0.038	2.30E-01	N/A		9.60E-01	c	N/A	N	BSL
	319-86-8	delta-BHC	ND	ND	mg/kg	ND	0 / 55	0.0002	0.026	2.60E-02	N/A		1.15E+00	c	N/A	N	BSL
	60-57-1	Dieldrin	0.0026 J	0 057 J	mg/kg	ESSS03-000-101210	3 / 55	0.0005	0.064	5.70E-02	N/A		1.10E-01	c	N/A	N	BSL
	959-98-8	Endosulfan I	0 017 J	0 027 J	mg/kg	ESSS03-000-101210	3 / 55	0.0003	0.038	2.70E-02	N/A		1.36E+03	n	N/A	N	BSL
	33213-65-9	Endosulfan II	0.02 J	0 024 J	mg/kg	ESSS03-000-101210	2 / 55	0.0006	0.077	2.40E-02	N/A		4.09E+03	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	0 031 J	0 032 J	mg/kg	ESSS03-000-101210/ ESSB03-010-FD-120910	3 / 55	0.0006	0.077	3.20E-02	N/A		4.09E+03	n	N/A	N	BSL
	72-20-8	Endrin	0 022 J	0 038 J	mg/kg	SPSB06-010-120310	2 / 55	0.0006	0.077	3.80E-02	N/A		1.80E+02	n	N/A	N	BSL
	7421-93-4	Endrin aldehyde	0 025 J	0.1 J	mg/kg	ESSS03-000-101210	3 / 55	0.0006	0.077	1.00E-01	N/A		2.04E+02	n	N/A	N	BSL
	53494-70-5	Endrin ketone	0.0042	0 022 J	mg/kg	SPSB09-010-FD-113010	2 / 55	0.0006	0.077	2.20E-02	N/A		2.04E+02	n	N/A	N	BSL
	58-89-9	gamma-BHC	0 013 J	0 013 J	mg/kg	ESSS03-000-101210	1 / 55	0.0002	0.026	1.30E-02	N/A		1.83E+00	c	N/A	N	BSL
	5103-74-2	gamma-Chlordane	0.0012 J	0.31	mg/kg	SPSB10-010-113010	12 / 55	0.0002	0.026	3.10E-01	N/A		5.12E+00	c	N/A	N	BSL
	76-44-8	Heptachlor	0 069	0 069	mg/kg	SPSB10-010-113010	1 / 55	0.0003	0.038	6.90E-02	N/A		2.76E-01	c	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	0 017 J	0.33 J	mg/kg	SPSB04-010-120210	5 / 55	0.0003	0.038	3.30E-01	N/A		1.90E-01	c	N/A	Y	ASL
	72-43-5	Methoxychlor	ND	ND	mg/kg	ND	0 / 55	0.0034	0.43	4.30E-01	N/A		3.10E+03	n	N/A	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/kg	ND	0 / 55	0.0042	0.48	4.80E-01	N/A		1.60E+00	c	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/kg	ND	0 / 55	0.0024	0.031	3.10E-02	N/A		2.10E+01	c	N/A	N	BSL
	11104-28-2	Aroclor 1221	ND	ND	mg/kg	ND	0 / 55	0.0024	0.031	3.10E-02	N/A		5.40E-01	c	N/A	N	BSL
	11141-16-5	Aroclor 1232	ND	ND	mg/kg	ND	0 / 55	0.0024	0.031	3.10E-02	N/A		5.40E-01	c	N/A	N	BSL
	53469-21-9	Aroclor 1242	ND	ND	mg/kg	ND	0 / 55	0.0024	0.031	3.10E-02	N/A		7.40E-01	c	N/A	N	BSL
	12672-29-6	Aroclor 1248	ND	ND	mg/kg	ND	0 / 55	0.0024	0.031	3.10E-02	N/A		7.40E-01	c	N/A	N	BSL
	11097-69-1	Aroclor 1254	0 032	0.36 J	mg/kg	ESSB05-010-110410	3 / 55	0.0024	0.031	3.60E-01	N/A		7.40E-01	c	N/A	N	BSL
	11096-82-5	Aroclor 1260	0.01 J	0.77 J	mg/kg	SPSB09-010-FD-113010	21 / 55	0.0018	0.023	7.70E-01	N/A		7.40E-01	c	N/A	Y	ASL
	TPCB	Total PCBs	0.0178	0.7781	mg/kg	SPSB09-010-FD-113010	24 / 55	0.0081	0.1045	7.78E-01	N/A		7.10E-01	c	N/A	Y	ASL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0007	7.00E-04	N/A		7.31E+00	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0017	1.70E-03	N/A		3.80E+04	n	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 55	0.00037	0 0007	7.00E-04	N/A		2.80E+00	c	N/A	N	BSL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0013	1.30E-03	N/A		1.80E+05	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0019	1.90E-03	N/A		1.86E+00	c	N/A	N	BSL
	75-34-3	1 1-Dichloroethane	ND	ND	mg/kg	ND	0 / 55	0.00037	0 0007	7.00E-04	N/A		1.70E+01	c	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0015	1.50E-03	N/A		1.10E+03	n	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/kg	ND	0 / 55	0.00051	0.00087	8.70E-04	N/A		9.90E+01	c	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	ND	ND	mg/kg	ND	0 / 55	0.00042	0.00078	7.80E-04	N/A		1.13E+02	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0007	7.00E-04	N/A		7.91E-02	c	N/A	N	BSL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 55	0.00042	0.00078	7.80E-04	N/A		5.71E+02	n	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0007	7.00E-04	N/A		1.15E+00	c	N/A	N	BSL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/kg	ND	0 / 55	0.00037	0 0007	7.00E-04	N/A		4.70E+00	c	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	0 003 J	0.0055	mg/kg	SPSB03-010-120110	2 / 55	0.00042	0.00078	5.50E-03	N/A		8.32E+01	n	N/A	N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 55	0.00042	0.00087	8.70E-04	N/A		8.82E+01	n	N/A	N	BSL
	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0007	7.00E-04	N/A		1.20E+01	c	N/A	N	BSL
	78-93-3	2-Butanone	0 014	0 014	mg/kg	SPSB04-010-120210	1 / 55	0.0012	0 0021	1.40E-02	N/A		1.17E+05	n	N/A	N	BSL

TABLE 2.1
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Direct Contact with Surface Soils (0-2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
South Pit Exposure Area Surface Soil 0-2 ft bgs	591-78-6	2-Hexanone	ND	ND	mg/kg	ND	0 / 55	0.00085	0 0017	1.70E-03	N/A	5.33E+02	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/kg	ND	0 / 55	0.00073	0 0014	1.40E-03	N/A	2.76E+04	n	N/A	N	BSL
	67-64-1	Acetone	0 079	0 097	mg/kg	SPSB04-010-120210	2 / 55	0.0017	0 0045	9.70E-02	N/A	2.93E+05	n	N/A	N	BSL
	71-43-2	Benzene	0.0006 J	0.0022 J	mg/kg	SPSB04-010-120210	3 / 55	0.00042	0 0023	2.20E-03	N/A	5.40E+00	c	N/A	N	BSL
	75-27-4	Bromodichloromethane	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0007	7.00E-04	N/A	1.40E+00	c	N/A	N	BSL
	75-25-2	Bromoform	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0007	7.00E-04	N/A	6.03E+01	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/kg	ND	0 / 55	0.00073	0 0014	1.40E-03	N/A	3.20E+01	n	N/A	N	BSL
	75-15-0	Carbon disulfide	ND	ND	mg/kg	ND	0 / 55	0.00085	0 0016	1.60E-03	N/A	3.70E+03	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0012	1.20E-03	N/A	3.00E+00	c	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/kg	ND	0 / 55	0.00037	0 0007	7.00E-04	N/A	5.38E+02	n	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/kg	ND	0 / 55	0.00073	0 0014	1.40E-03	N/A	6.10E+04	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0017	1.70E-03	N/A	1.35E+00	c	N/A	N	BSL
	74-87-3	Chloromethane	ND	ND	mg/kg	ND	0 / 55	0.00066	0 0014	1.40E-03	N/A	1.59E+01	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0015	1.50E-03	N/A	5.01E+02	n	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 55	0.00037	0 0007	7.00E-04	N/A	5.30E+01	n	N/A	N	BSL
	110-82-7	Cyclohexane	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0012	1.20E-03	N/A	2.90E+04	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/kg	ND	0 / 55	0.00037	0 0007	7.00E-04	N/A	3.30E+00	c	N/A	N	BSL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0017	1.70E-03	N/A	4.00E+02	n	N/A	N	BSL
	100-41-4	Ethylbenzene	0.0013 J	0 006	mg/kg	SPSB09-010-FD-113010	8 / 55	0.00042	0.00087	6.00E-03	N/A	2.70E+01	c	N/A	N	BSL
	98-82-8	Isopropylbenzene	0.0012 J	0.0062	mg/kg	SPSB06-010-120310	5 / 55	0.00042	0.00097	6.20E-03	N/A	6.25E+03	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/kg	ND	0 / 55	0.00042	0.00097	9.70E-04	N/A	1.00E+06	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0018	1.80E-03	N/A	1.11E+02	c	N/A	N	BSL
	108-87-2	Methylcyclohexane	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0015	1.50E-03	N/A	3.29E+04	n	N/A	N	BSL
	75-09-2	Methylene chloride	0.0009 J	0.0044 J	mg/kg	ESSB11-010-010412	11 / 55	0.00085	0 0024	4.40E-03	N/A	9.60E+02	c	N/A	N	BSL
	91-20-3	Naphthalene	0.0022 J	0 018	mg/kg	SPSB03-010-120110	6 / 55	0.00042	0.00078	1.80E-02	N/A	1.80E+01	c	N/A	N	BSL
	104-51-8	n-Butylbenzene	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0007	7.00E-04	N/A	3.41E+04	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	0.00062 J	0.0025 J	mg/kg	SPSB03-010-120110	6 / 55	0.00042	0.00087	2.50E-03	N/A	4.10E+03	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0007	7.00E-04	N/A	4.09E+04	n	N/A	N	BSL
	100-42-5	Styrene	0.0019 J	0 013	mg/kg	SPSB04-010-120210	3 / 55	0.00042	0 0007	1.30E-02	N/A	7.80E+03	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0007	7.00E-04	N/A	4.09E+04	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/kg	ND	0 / 55	0.00051	0.00097	9.70E-04	N/A	7.70E+01	c	N/A	N	BSL
	108-88-3	Toluene	0.0024 J	0.0024 J	mg/kg	ESSB07-010-120810	1 / 55	0.00042	0 0051	2.40E-03	N/A	2.92E+04	n	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 55	0.00042	0.00087	8.70E-04	N/A	6.42E+02	n	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 55	0.00037	0 0007	7.00E-04	N/A	6.09E+00	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/kg	ND	0 / 55	0.00042	0 0016	1.60E-03	N/A	6.40E+00	c	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/kg	ND	0 / 55	0.00042	0.00078	7.80E-04	N/A	3.40E+03	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/kg	ND	0 / 55	0.00042	0.00097	9.70E-04	N/A	1.26E+00	c	N/A	N	BSL
	1330-20-7	Xylenes, Total	0.0033 J	0 007 J	mg/kg	ESSB03-010-FD-120910	4 / 55	0.0013	0 0025	7.00E-03	N/A	2.70E+03	n	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	0.0036 J	0.75	mg/kg	ESSB03-010-120910	11 / 55	0.0016	0.18	7.50E-01	N/A	2.10E+02	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	0.0018 J	1.1 J	mg/kg	ESSB03-010-120910	21 / 55	0.0016	0.15	1.10E+00	N/A	5.30E+01	c	N/A	N	BSL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/kg	ND	0 / 55	0.0016	0.18	1.80E-01	N/A	6.20E+04	n	N/A	N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/kg	ND	0 / 55	0.0016	0.21	2.10E-01	N/A	1.60E+02	c	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/kg	ND	0 / 55	0.0016	0.14	1.40E-01	N/A	1.80E+03	n	N/A	N	BSL
	105-67-9	2 4-Dimethylphenol	0.0072	0.19 JL	mg/kg	SPSB06-010-120310	4 / 55	0.0016	0.21	1.90E-01	N/A	1.20E+04	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/kg	ND	0 / 55	0.0033	0.21	2.10E-01	N/A	1.20E+03	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 55	0.0016	0.21	2.10E-01	N/A	2.81E+00	c	N/A	N	BSL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 55	0.0016	0 2	2.00E-01	N/A	2.81E+00	c	N/A	N	BSL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/kg	ND	0 / 55	0.0016	0.26	2.60E-01	N/A	4.96E+04	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/kg	ND	0 / 55	0.0016	0 2	2.00E-01	N/A	5.10E+03	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	0.0034 J	4 8 J	mg/kg	ESSB03-010-120910	27 / 55	0.0016	0.17	4.80E+00	N/A	2.20E+03	n	N/A	N	BSL
	95-48-7	2-Methylphenol	0.0042 J	0.14 J	mg/kg	ESSB03-010-120910	7 / 55	0.0016	0.18	1.40E-01	N/A	3.10E+04	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/kg	ND	0 / 55	0.0016	0.21	2.10E-01	N/A	2.94E+01	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	0.17	0.17	mg/kg	ESSB05-010-110410	1 / 55	0.0016	0.29	1.70E-01	N/A	1.36E+03	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol	0.0021 J	0.27 JL	mg/kg	SPSB06-010-120310	10 / 55	0.0016	0.18	2.70E-01	N/A	3.41E+03	n	N/A	N	BSL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/kg	ND	0 / 55	0.0016	0 2	2.00E-01	N/A	3.80E+00	c	N/A	N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/kg	ND	0 / 55	0.0016	0.17	1.70E-01	N/A	3.55E+01	n	N/A	N	BSL
	534-52-1	4 6-Dinitro-2-methylphenol	ND	ND	mg/kg	ND	0 / 55	0.0016	0.21	2.10E-01	N/A	4.90E+01	n	N/A	N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 55	0.0016	0.21	2.10E-01	N/A	1.10E-01	c	N/A	Y	ASL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/kg	ND	0 / 55	0.0016	0.21	2.10E-01	N/A	3.41E+03	n	N/A	N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/kg	ND	0 / 55	0.0016	0.14	1.40E-01	N/A	8.60E+00	c	N/A	N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 55	0.0016	0.14	1.40E-01	N/A	7.99E-02	c	N/A	Y	ASL
	100-01-6	4-Nitroaniline	ND	ND	mg/kg	ND	0 / 55	0.0016	0.21	2.10E-01	N/A	8.60E+01	c	N/A	N	BSL
	100-02-7	4-Nitrophenol	ND	ND	mg/kg	ND	0 / 55	0.0033	0.24	2.40E-01	N/A	1.36E+03	n	N/A	N	BSL
	83-32-9	Acenaphthene	0.0018 J	0 5	mg/kg	SPSB06-010-120310	10 / 55	0.0016	0.14	5.00E-01	N/A	3.30E+04	n	N/A	N	BSL
	208-96-8	Acenaphthylene	0.0028 J	0.19	mg/kg	SPSB06-010-120310	14 / 55	0.0016	0.14	1.90E-01	N/A	3.72E+04	n	N/A	N	BSL

TABLE 2.1
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Direct Contact with Surface Soils (0-2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Deletion (4)
South Pit Exposure Area Surface Soil 0-2 ft bgs	98-86-2	Acetophenone	0.0036 J	6 8 J	mg/kg	ESSB03-010-120910	25 / 55	0.0016	0.15	6.80E+00	N/A	6.81E+04	n	N/A	N	BSL
	120-12-7	Anthracene	0.0021 J	1 9	mg/kg	SPSB04-010-120210	38 / 55	0.0016	0.14	1.90E+00	N/A	1.70E+05	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	0.0024 J	4 3	mg/kg	SPSB06-010-120310	45 / 55	0.0016	0.18	4.30E+00	N/A	2.10E+00	c	N/A	Y	ASL
	100-52-7	Benzaldehyde	0 004 J	1 3 JL	mg/kg	SPSB06-010-120310	8 / 55	0.0016	0.29	1.30E+00	N/A	1.00E+05	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	0.0022 J	4.4	mg/kg	SPSB06-010-120310	40 / 55	0.0016	0.15	4.40E+00	N/A	2.10E-01	c	N/A	Y	ASL
	205-99-2	Benzo(b)fluoranthene	0.0028 J	5 6	mg/kg	SPSB06-010-120310	42 / 55	0.0016	0.21	5.60E+00	N/A	2.10E+00	c	N/A	Y	ASL
	191-24-2	Benzo(g h i)perylene	0.0024 J	4 6	mg/kg	SPSB06-010-120310	39 / 55	0.0017	0.18	4.60E+00	N/A	1.86E+04	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	0.0024 JL	2 2	mg/kg	SPSB06-010-120310	39 / 55	0.0016	0.21	2.20E+00	N/A	2.10E+01	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/kg	ND	0 / 55	0.0016	0.15	1.50E-01	N/A	6.25E-01	c	N/A	N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/kg	ND	0 / 55	0.0016	0.18	1.80E-01	N/A	2.77E-01	c	N/A	N	BSL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/kg	ND	0 / 55	0.0016	0.17	1.70E-01	N/A	1.08E+01	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.0091	0.29	mg/kg	SPSB10-010-113010	8 / 55	0.0016	0.42	2.90E-01	N/A	5.63E+01	c	N/A	N	BSL
	85-68-7	Butyl benzyl phthalate	0.0043 J	0.05 J	mg/kg	SPSS02-000-101310	5 / 55	0.0026	0.16	5.00E-02	N/A	9.10E+02	c	N/A	N	BSL
	105-60-2	Caprolactam	0.0039 J	0.0067 JL	mg/kg	ESSB15-010-030712	2 / 55	0.002	0.15	6.70E-03	N/A	3.00E+05	n	N/A	N	BSL
	86-74-8	Carbazole	0.0021 J	0.45	mg/kg	SPSB06-010-120310	22 / 55	0.0016	0.14	4.50E-01	N/A	9.54E+01	c	N/A	N	BSL
	218-01-9	Chrysene	0.0065 JL	4 2	mg/kg	SPSB06-010-120310	45 / 55	0.0016	0.18	4.20E+00	N/A	2.10E+02	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	0.0032 J	1 5	mg/kg	SPSB06-010-120310	17 / 55	0.002	0.14	1.50E+00	N/A	2.10E-01	c	N/A	Y	ASL
	132-64-9	Dibenzofuran	0.0026 J	0.19	mg/kg	ESSB03-010-120910	12 / 55	0.0016	0.14	1.90E-01	N/A	1.00E+03	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	ND	ND	mg/kg	ND	0 / 55	0.0016	0.21	2.10E-01	N/A	4.90E+05	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	ND	ND	mg/kg	ND	0 / 55	0.002	0.15	1.50E-01	N/A	5.45E+05	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	0.0056 J	0.0056 J	mg/kg	ESSS12-000-010412	1 / 55	0.002	0.16	5.60E-03	N/A	6.20E+04	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	0.0093	0 081	mg/kg	SPSB08-010-120110	2 / 55	0.002	0.18	8.10E-02	N/A	2.73E+04	n	N/A	N	BSL
	206-44-0	Fluoranthene	0.0031 J	8 3	mg/kg	SPSB06-010-120310	49 / 55	0.0016	0.25	8.30E+00	N/A	2.20E+04	n	N/A	N	BSL
	86-73-7	Fluorene	0 002 J	0.71	mg/kg	SPSB04-010-120210	14 / 55	0.0016	0.14	7.10E-01	N/A	2.20E+04	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/kg	ND	0 / 55	0.0016	0.17	1.70E-01	N/A	6.91E-01	c	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/kg	ND	0 / 55	0.0016	0.28	2.80E-01	N/A	2.28E+00	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/kg	ND	0 / 55	0.0016	0.23	2.30E-01	N/A	1.02E+01	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/kg	ND	0 / 55	0.0016	0.25	2.50E-01	N/A	4.30E+01	c	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	0.0023 J	3 3	mg/kg	SPSB06-010-120310	35 / 55	0.0016	0.22	3.30E+00	N/A	2.10E+00	c	N/A	Y	ASL
	78-59-1	Isophorone	ND	ND	mg/kg	ND	0 / 55	0.0016	0.19	1.90E-01	N/A	1.80E+03	c	N/A	N	BSL
	91-20-3	Naphthalene	0.0021 J	2 2 J	mg/kg	ESSB03-010-120910	17 / 55	0.0016	0.21	2.20E+00	N/A	1.80E+01	c	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/kg	ND	0 / 55	0.0016	0.21	2.10E-01	N/A	5.67E+00	c	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/kg	ND	0 / 55	0.002	0.25	2.50E-01	N/A	1.36E-01	c	N/A	Y	ASL
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/kg	ND	0 / 55	0.002	0.14	1.40E-01	N/A	1.95E+02	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	ND	ND	mg/kg	ND	0 / 55	0.0018	0.18	1.80E-01	N/A	2.70E+00	c	N/A	N	BSL
	85-01-8	Phenanthrene	0.0038 J	5 2	mg/kg	SPSB06-010-120310	45 / 55	0.0025	0.19	5.20E+00	N/A	1.86E+04	n	N/A	N	BSL
	108-95-2	Phenol	0.0099	0.17 JL	mg/kg	SPSB06-010-120310	6 / 55	0.002	0.21	1.70E-01	N/A	1.80E+05	n	N/A	N	BSL
	129-00-0	Pyrene	0.0025 J	6 8	mg/kg	SPSB06-010-120310	47 / 55	0.0016	0.14	6.80E+00	N/A	1.70E+04	n	N/A	N	BSL
	57-12-5	Cyanide	0 649 J	6.95	mg/kg	SPSS06-000-101310	12 / 55	0.57	0.81	6.95E+00	N/A	5.83E+02	n	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value

= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration or detection limit was used for screening.

(2) A surface soil background study was conducted.

M - Maximum concentration; U = 95% Upper Prediction Limit; T= Texas Median Spedific Background

(3) Screening values are the lower of the US EPA industrial RSLs (USEPA, 2013) and TRRP 30-acre commercial/industrial PCLs (TCEQ, 2012a) for direct contact with surface soils; TRRP PCLs for carcinogens were adjusted a 10^{-6} risk.

(4) Rationale for Selection or Deletion:

ASL = Above Screening Level

BSL = Below Screening Level

Definitions:

a= Action level

ARAR = Applicable or relevant and appropriate requirements

CAS No. = Chemical Abstract Registry Number

c = Carcinogen

J = Estimated value

L = Estimated concentration is biased low

mg/kg = milligram/kilogram

n = Noncarcinogen

N/A = Not applicable or available

ND = Not Detected

PCLs = Protective Concentration Levels

RSLs = Regional Screening Levels

TBC = To be considered values

TRRP = Texas Risk Reduction Program

USEPA = United States Environmental Protection Agency

TABLE 2.2
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Direct Contact with Surface and Subsurface Soils (0-10 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface and Subsurface Soil
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
South Pit Exposure Area	7429-90-5	Aluminum	1410	19500	mg/kg	SPSB05-020-120310/ SPSB02-010-120210	108 / 108	2	210	1 95E+04	N/A	5.70E+05	n	N/A	N	BSL
Surface and Subsurface Soils 0-10 ft bgs	7440-36-0	Antimony	0 223 J	1.06	mg/kg	SPSB06-010-120310	9 / 108	0.19	2.8	1 06E+00	N/A	3 07E+02	n	N/A	N	BSL
	7440-38-2	Arsenic	0.766 J	94 5	mg/kg	SPSB03-020-120110	118 / 118	0.056	1.1	9.45E+01	N/A	2.40E+00	c	N/A	Y	ASL
	7440-39-3	Barium	70.2 J	3810	mg/kg	SBSB10-030-113010	108 / 108	0 08	42	3 81E+03	N/A	1.19E+05	n	N/A	N	BSL
	7440-41-7	Beryllium	0.182 J	1.08	mg/kg	WSB04-040-110210	107 / 108	0.047	0 55	1 08E+00	N/A	2.47E+02	n	N/A	N	BSL
	7440-43-9	Cadmium	0.0998 J	19 6	mg/kg	SPSB08-010-120110	105 / 108	0.037	0.44	1 96E+01	N/A	8 00E+02	n	N/A	N	BSL
	7440-47-3	Chromium	3.03	234	mg/kg	ESSB03-010-FD-120910	108 / 108	0.047	5	2 34E+02	N/A	7.46E+04	n	N/A	N	BSL
	7440-48-4	Cobalt	0.434 J	11 6	mg/kg	SPSB19A-040-010912	108 / 108	0.028	0 33	1.16E+01	N/A	2.73E+02	n	N/A	N	BSL
	7440-50-8	Copper	2.72	234	mg/kg	ESSB04-010-110510	108 / 108	0.095	14	2 34E+02	N/A	3 89E+04	n	N/A	N	BSL
	7439-92-1	Lead	4.56	359	mg/kg	SPSB08-010-120110	108 / 108	0.047	5.6	3 59E+02	N/A	8 00E+02	a	N/A	N	BSL
	7439-96-5	Manganese	55.4	722	mg/kg	SPSB19C-030-011112	108 / 108	0.065	12	7 22E+02	N/A	2 30E+04	n	N/A	N	BSL
	7440-02-0	Nickel	2.71 J	60.1	mg/kg	SPSB08-010-120110	108 / 108	0.056	0 66	6 01E+01	N/A	8 60E+03	n	N/A	N	BSL
	7782-49-2	Selenium	0 268 J	3.77	mg/kg	ESSB06-010-110310	94 / 108	0.17	2.8	3.77E+00	N/A	4 87E+03	n	N/A	N	BSL
	7440-22-4	Silver	0.0431 J	1.98 J	mg/kg	ESSB03-020-120910	40 / 108	0.037	0.44	1 98E+00	N/A	2 27E+03	n	N/A	N	BSL
	7440-28-0	Thallium	0 072 J	0 694	mg/kg	WSB01-040-110110	75 / 108	0.065	0.77	6.94E-01	N/A	1 00E+01	n	N/A	N	BSL
	7440-62-2	Vanadium	4.74 J	28.1	mg/kg	SPSB21-040-012412	108 / 108	0.065	0.77	2 81E+01	N/A	6.10E+02	n	N/A	N	BSL
	7440-66-6	Zinc	10.6	2700	mg/kg	SPSS05-000-101410	108 / 108	0 23	250	2.70E+03	N/A	2.45E+05	n	N/A	N	BSL
	7439-97-6	Mercury	0 000351 J	23	mg/kg	ESSB06-010-110310	106 / 110	0 00021	0.024	2 30E+01	N/A	3 26E+00	n	N/A	Y	ASL
	72-54-8	4,4 -DDD	0 001 J	0.33 J	mg/kg	ESSB04-020-110510	26 / 108	0 00053	0.064	3.30E-01	N/A	7 20E+00	c	N/A	N	BSL
	72-55-9	4,4 -DDE	0.0021 J	0.15 J	mg/kg	SPSB02-020-FD-120210	9 / 108	0 00053	0.064	1.50E-01	N/A	5.10E+00	c	N/A	N	BSL
	50-29-3	4,4 -DDT	0.0029 J	0.14 J	mg/kg	SPSB06-020-120310	24 / 108	0 00053	0.064	1.40E-01	N/A	6 84E+00	c	N/A	N	BSL
	309-00-2	Aldrin	0.0048 J	0.0056 J	mg/kg	SPSB19B-090-010912	2 / 108	0 00032	0.038	5.60E-03	N/A	9.70E-02	c	N/A	N	BSL
	319-84-6	alpha-BHC	0.0013 J	0 033	mg/kg	ESSB02-020-110510	2 / 108	0 00032	0.038	3.30E-02	N/A	2.70E-01	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	0.0011 J	0.25 J	mg/kg	SPSB10-010-113010	8 / 108	0 00021	0.026	2.50E-01	N/A	5 37E+00	c	N/A	N	BSL
	319-85-7	beta-BHC	0.0016 J	0.31 J	mg/kg	ESSB04-020-110510	15 / 108	0 00032	0.038	3.10E-01	N/A	9.60E-01	c	N/A	N	BSL
	319-86-8	delta-BHC	0 019	0.49	mg/kg	SPSB03-020-120110	1 / 108	0 00021	0.026	4.90E-01	N/A	1.15E+00	c	N/A	N	BSL
	60-57-1	Dieldrin	0.0026 J	0 094	mg/kg	SPSB03-020-120110	9 / 108	0 00053	0.064	9.40E-02	N/A	1.10E-01	c	N/A	N	BSL
	959-98-8	Endosulfan I	0 014 JH	0.03 J	mg/kg	SPSB19A-090-010912	6 / 108	0 00032	0.038	3.00E-02	N/A	1 36E+03	n	N/A	N	BSL
	33213-65-9	Endosulfan II	0 014 J	0 054 J	mg/kg	SPSB08-070-120110	3 / 108	0 00063	0.077	5.40E-02	N/A	4 09E+03	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	0.0054 J	0 054 J	mg/kg	SPSB08-070-120110	4 / 108	0 00063	0.077	5.40E-02	N/A	4 09E+03	n	N/A	N	BSL
	72-20-8	Endrin	0.0074 JH	0.15 J	mg/kg	ESSB04-020-110510	5 / 108	0 00063	0.077	1.50E-01	N/A	1 80E+02	n	N/A	N	BSL
	7421-93-4	Endrin aldehyde	0.0025 J	0.17 J	mg/kg	SPSB04-030-120210	11 / 108	0 00063	0.077	1.70E-01	N/A	2 04E+02	n	N/A	N	BSL
	53494-70-5	Endrin ketone	0.0042	0.12 J	mg/kg	SPSB04-030-120210	3 / 108	0 00063	0.077	1.20E-01	N/A	2 04E+02	n	N/A	N	BSL
	58-89-9	gamma-BHC	0 013 J	0 013 J	mg/kg	ESSS03-000-101210	1 / 108	0 00021	0.026	1.30E-02	N/A	1 83E+00	c	N/A	N	BSL
	5103-74-2	gamma-Chlordane	0.0012 J	0.31	mg/kg	SPSB10-010-113010	18 / 108	0 00021	0.026	3.10E-01	N/A	5.12E+00	c	N/A	N	BSL
	76-44-8	Heptachlor	0 031	0 069	mg/kg	SPSB10-010-113010	1 / 108	0 00032	0.038	6.90E-02	N/A	2.76E-01	c	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	0.0084 J	0.79 J	mg/kg	SPSB04-030-120210	11 / 108	0 00032	0.038	7.90E-01	N/A	1.90E-01	c	N/A	Y	ASL
	72-43-5	Methoxychlor	0.23 JH	0.6 J	mg/kg	SPSB04-030-120210	3 / 108	0.0036	0.43	6.00E-01	N/A	3.10E+03	n	N/A	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/kg	ND	0 / 108	0.004	0.48	4.80E-01	N/A	1 60E+00	c	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/kg	ND	0 / 108	0.0025	0 39	3.90E-01	N/A	2.10E+01	c	N/A	N	BSL
	11104-28-2	Aroclor 1221	ND	ND	mg/kg	ND	0 / 108	0.0025	0 39	3.90E-01	N/A	5.40E-01	c	N/A	N	BSL
	11141-16-5	Aroclor 1232	ND	ND	mg/kg	ND	0 / 108	0.0025	0 39	3.90E-01	N/A	5.40E-01	c	N/A	N	BSL
	53469-21-9	Aroclor 1242	ND	ND	mg/kg	ND	0 / 108	0.0025	0 39	3.90E-01	N/A	7.40E-01	c	N/A	N	BSL
	12672-29-6	Aroclor 1248	ND	ND	mg/kg	ND	0 / 108	0.0025	0 39	3.90E-01	N/A	7.40E-01	c	N/A	N	BSL
	11097-69-1	Aroclor 1254	0.01 J	1.1	mg/kg	SPSB06-020-120310	9 / 108	0.0025	0 39	1.10E+00	N/A	7.40E-01	c	N/A	Y	ASL
	11096-82-5	Aroclor 1260	0.01 J	0.77 J	mg/kg	SPSB09-010-FD-113010	26 / 108	0.0019	0 29	7.70E-01	N/A	7.40E-01	c	N/A	Y	ASL
	TPCB	Total PCBs	0.0178	1.1835	mg/kg	SPSB06-020-120310	35 / 108	0 00845	1.315	1.18E+00	N/A	7.10E-01	c	N/A	Y	ASL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 108	0 00042	0.047	4.70E-02	N/A	7 31E+00	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/kg	ND	0 / 108	0 00042	0.11	1.10E-01	N/A	3 80E+04	n	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 108	0 00042	0.033	3.30E-02	N/A	2 80E+00	c	N/A	N	BSL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/kg	ND	0 / 108	0 00042	0.086	8.60E-02	N/A	1 80E+05	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/kg	ND	0 / 108	0 00042	0.13	1.30E-01	N/A	1 86E+00	c	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/kg	ND	0 / 108	0 00042	0.033	3.30E-02	N/A	1.70E+01	c	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/kg	ND	0 / 108	0 00042	0.1	1.00E-01	N/A	1.10E+03	n	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/kg	ND	0 / 108	0 00051	0 06	6.00E-02	N/A	9 90E+01	c	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	0.00087 J	6.5	mg/kg	SPSB19A-090-010912	5 / 108	0 00042	0.053	6 50E+00	N/A	1.13E+02	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/kg	ND	0 / 108	0 00042	0.047	4.70E-02	N/A	7.91E-02	c	N/A	N	BSL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 108	0 00042	0.053	5.30E-02	N/A	5.71E+02	n	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/kg	ND	0 / 108	0 00042	0 04	4.00E-02	N/A	1.15E+00	c	N/A	N	BSL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/kg	ND	0 / 108	0 00042	0.033	3.30E-02	N/A	4.70E+00	c	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	0 003 J	2.6	mg/kg	SPSB19A-090-010912	7 / 108	0 00042	0.053	2 60E+00	N/A	8 32E+01	n	N/A	N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 108	0 00042	0 06	6.00E-02	N/A	8 82E+01	n	N/A	N	BSL
	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 108	0 00042	0.047	4.70E-02	N/A	1 20E+01	c	N/A	N	BSL
	78-93-3	2-Butanone	0.0076 J	0 031	mg/kg	ESSB11-050-010412	5 / 108	0.0012	0.15	3.10E-02	N/A	1.17E+05	n	N/A	N	BSL

TABLE 2.2
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Direct Contact with Surface and Subsurface Soils (0-10 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface and Subsurface Soil
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
South Pit Exposure Area Surface and Subsurface Soils 0-10 ft bgs	591-78-6	2-Hexanone	ND	ND	mg/kg	ND	0 / 108	0 00085	0.11	1.10E-01	N/A	5 33E+02	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	0.0074 J	0.0074 J	mg/kg	ESSB11-050-010412	1 / 108	0 00085	0.066	7.40E-03	N/A	2.76E+04	n	N/A	N	BSL
	67-64-1	Acetone	0 013 J	0.16	mg/kg	ESSB11-050-010412	7 / 108	0.0017	0 31	1.60E-01	N/A	2 93E+05	n	N/A	N	BSL
	71-43-2	Benzene	0.0006 J	6	mg/kg	SPSB19A-090-010912	11 / 108	0 00042	0 04	6 00E+00	N/A	5.40E+00	c	N/A	Y	ASL
	75-27-4	Bromodichloromethane	ND	ND	mg/kg	ND	0 / 108	0 00042	0 04	4.00E-02	N/A	1.40E+00	c	N/A	N	BSL
	75-25-2	Bromoform	ND	ND	mg/kg	ND	0 / 108	0 00042	0.047	4.70E-02	N/A	6 03E+01	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/kg	ND	0 / 108	0 00085	0.066	6.60E-02	N/A	3 20E+01	n	N/A	N	BSL
	75-15-0	Carbon disulfide	0.0018 J	0 017	mg/kg	SPSB04-030-120210	6 / 108	0 00085	0.11	1.70E-02	N/A	3.70E+03	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/kg	ND	0 / 108	0 00042	0 08	8.00E-02	N/A	3 00E+00	c	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/kg	ND	0 / 108	0 00042	0.033	3.30E-02	N/A	5 38E+02	n	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/kg	ND	0 / 108	0 00085	0.066	6.60E-02	N/A	6.10E+04	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/kg	ND	0 / 108	0 00042	0.12	1.20E-01	N/A	1 35E+00	c	N/A	N	BSL
	74-87-3	Chloromethane	ND	ND	mg/kg	ND	0 / 108	0 00079	0.063	6.30E-02	N/A	1 59E+01	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 108	0 00042	0.1	1.00E-01	N/A	5 01E+02	n	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 108	0 00042	0.033	3.30E-02	N/A	5 30E+01	n	N/A	N	BSL
	110-82-7	Cyclohexane	0.0036 J	2.5	mg/kg	SPSB19A-090-010912	5 / 108	0 00042	0 08	2 50E+00	N/A	2 90E+04	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/kg	ND	0 / 108	0 00042	0.033	3.30E-02	N/A	3 30E+00	c	N/A	N	BSL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/kg	ND	0 / 108	0 00042	0.12	1.20E-01	N/A	4 00E+02	n	N/A	N	BSL
	100-41-4	Ethylbenzene	0.0013 J	3.3	mg/kg	SPSB08-070-120110	20 / 108	0 00042	0 06	3 30E+00	N/A	2.70E+01	c	N/A	N	BSL
	98-82-8	Isopropylbenzene	0.0012 J	2.3	mg/kg	ESSB08-040-110410	15 / 108	0 00042	0.066	2 30E+00	N/A	6 25E+03	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/kg	ND	0 / 108	0 00042	0.066	6.60E-02	N/A	1 00E+06	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/kg	ND	0 / 108	0 00042	0.13	1.30E-01	N/A	1.11E+02	c	N/A	N	BSL
	108-87-2	Methylcyclohexane	0.0009 J	7.4	mg/kg	SPSB19A-090-010912	9 / 108	0 00042	0.1	7.40E+00	N/A	3 29E+04	n	N/A	N	BSL
	75-09-2	Methylene chloride	0.0009 J	0.0049 J	mg/kg	ESSB11-010-010412	13 / 108	0 00085	0.17	4.90E-03	N/A	9 60E+02	c	N/A	N	BSL
	91-20-3	Naphthalene	0.0005 J	4.2	mg/kg	SPSB10-050-113010	12 / 108	0 00042	0.053	4 20E+00	N/A	1 80E+01	c	N/A	N	BSL
	104-51-8	n-Butylbenzene	0.67	0.77	mg/kg	SPSB19A-090-010912	2 / 108	0 00042	0 04	7.70E-01	N/A	3.41E+04	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	0.00054 J	7.3	mg/kg	ESSB08-040-110410	16 / 108	0 00042	0 06	7 30E+00	N/A	4.10E+03	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	0.0011 J	0.65	mg/kg	SPSB08-070-120110	5 / 108	0 00042	0 04	6.50E-01	N/A	4 09E+04	n	N/A	N	BSL
	100-42-5	Styrene	0.0017 J	0 019	mg/kg	SPSB10-050-113010	7 / 108	0 00042	0 04	1.90E-02	N/A	7 80E+03	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	0.11 J	0.11 J	mg/kg	SPSB08-070-120110	1 / 108	0 00042	0 04	1.10E-01	N/A	4 09E+04	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/kg	ND	0 / 108	0 00051	0.066	6.60E-02	N/A	7.70E+01	c	N/A	N	BSL
	108-88-3	Toluene	0.00088 J	2.4	mg/kg	SPSB19A-090-010912	9 / 108	0 00042	0.047	2.40E+00	N/A	2 92E+04	n	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 108	0 00042	0 06	6.00E-02	N/A	6.42E+02	n	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 108	0 00042	0.033	3.30E-02	N/A	6 09E+00	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/kg	ND	0 / 108	0 00042	0.11	1.10E-01	N/A	6.40E+00	c	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/kg	ND	0 / 108	0 00042	0.053	5.30E-02	N/A	3.40E+03	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/kg	ND	0 / 108	0 00042	0.066	6.60E-02	N/A	1 26E+00	c	N/A	N	BSL
	1330-20-7	Xylenes, Total	0.0032 J	14	mg/kg	SPSB19A-090-010912	11 / 108	0.0013	0.17	1.40E+01	N/A	2.70E+03	n	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	0.0036 J	24	mg/kg	SPSB04-030-120210	21 / 108	0.0017	0 33	2.40E+01	N/A	2.10E+02	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	0 002 J	24	mg/kg	SPSB08-070-120110/ SPSB04-030-120210	38 / 108	0.0017	0 37	2.40E+01	N/A	5 30E+01	c	N/A	N	BSL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/kg	ND	0 / 108	0.0017	0.18	1.80E-01	N/A	6 20E+04	n	N/A	N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/kg	ND	0 / 108	0.0017	0 21	2.10E-01	N/A	1 60E+02	c	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/kg	ND	0 / 108	0.0017	0.14	1.40E-01	N/A	1 80E+03	n	N/A	N	BSL
	105-67-9	2,4-Dimethylphenol	0.0072	2.7	mg/kg	ESSB11-050-010412	9 / 108	0.0017	0 21	2.70E+00	N/A	1 20E+04	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/kg	ND	0 / 108	0.0034	0 21	2.10E-01	N/A	1 20E+03	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 108	0.0017	0 21	2.10E-01	N/A	2 81E+00	c	N/A	N	BSL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 108	0.0017	0.2	2.00E-01	N/A	2 81E+00	c	N/A	N	BSL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/kg	ND	0 / 108	0.0017	0 26	2.60E-01	N/A	4 96E+04	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/kg	ND	0 / 108	0.0017	0.2	2.00E-01	N/A	5.10E+03	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	0.0034 J	45	mg/kg	SPSB04-030-120210	47 / 108	0.0017	1.2	4 50E+01	N/A	2 20E+03	n	N/A	N	BSL
	95-48-7	2-Methylphenol	0.0037 J	2.7	mg/kg	ESSB11-050-010412	15 / 108	0.0017	0.19	2.70E+00	N/A	3.10E+04	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/kg	ND	0 / 108	0.0017	0 21	2.10E-01	N/A	2 94E+01	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	0.17	0.17	mg/kg	ESSB05-010-110410	1 / 108	0.0017	0 29	1.70E-01	N/A	1 36E+03	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol	0.0022 J	3.4	mg/kg	ESSB11-050-010412	17 / 108	0.0017	0.18	3.40E+00	N/A	3.41E+03	n	N/A	N	BSL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/kg	ND	0 / 108	0.0017	0.2	2.00E-01	N/A	3 80E+00	c	N/A	N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/kg	ND	0 / 108	0.0017	0.17	1.70E-01	N/A	3 55E+01	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/kg	ND	0 / 108	0.0017	0 21	2.10E-01	N/A	4 90E+01	n	N/A	N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 108	0.0017	0 21	2.10E-01	N/A	1.10E-01	c	N/A	Y	ASL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/kg	ND	0 / 108	0.0017	0 21	2.10E-01	N/A	3.41E+03	n	N/A	N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/kg	ND	0 / 108	0.0017	0.14	1.40E-01	N/A	8 60E+00	c	N/A	N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 108	0.0017	0.14	1.40E-01	N/A	7.99E-02	c	N/A	Y	ASL
	100-01-6	4-Nitroaniline	ND	ND	mg/kg	ND	0 / 108	0.0017	0 21	2.10E-01	N/A	8 60E+01	c	N/A	N	BSL
	100-02-7	4-Nitrophenol	ND	ND	mg/kg	ND	0 / 108	0.0036	0 24	2.40E-01	N/A	1 36E+03	n	N/A	N	BSL
	83-32-9	Acenaphthene	0.0021 J	1.5	mg/kg	SPSB08-070-120110	23 / 108	0.0017	0.14	1 50E+00	N/A	3 30E+04	n	N/A	N	BSL
	208-96-8	Acenaphthylene	0.0028 J	0.56	mg/kg	SPSB04-030-120210	26 / 108	0.0017	0.14	5.60E-01	N/A	3.72E+04	n	N/A	N	BSL

TABLE 2.2
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Direct Contact with Surface and Subsurface Soils (0-10 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface and Subsurface Soil
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
South Pit Exposure Area Surface and Subsurface Soils 0-10 ft bgs	98-86-2	Acetophenone	0.0024 J	6.8 J	mg/kg	ESSB03-010-120910	37 / 108	0.0017	0.15	6 80E+00	N/A	6 81E+04	n	N/A	N	BSL
	120-12-7	Anthracene	0.0024 J	3.8	mg/kg	SPSB04-030-120210	57 / 108	0.0017	0 36	3 80E+00	N/A	1.70E+05	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	0.0027 JL	4.3	mg/kg	SPSB06-010-120310	64 / 108	0.0017	0.18	4 30E+00	N/A	2.10E+00	c	N/A	Y	ASL
	100-52-7	Benzaldehyde	0.0047 J	1.3 JL	mg/kg	SPSB06-010-120310	15 / 108	0.0017	0 29	1 30E+00	N/A	1 00E+05	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	0.0026 J	7.4 J	mg/kg	SPSB02-020-120210	66 / 116	0.0017	0.15	7.40E+00	N/A	2.10E-01	c	N/A	Y	ASL
	205-99-2	Benzo(b)fluoranthene	0.0031 J	5.6	mg/kg	SPSB06-010-120310	57 / 108	0.0017	0 21	5 60E+00	N/A	2.10E+00	c	N/A	Y	ASL
	191-24-2	Benzo(g,h,i)perylene	0.0022 J	4.6	mg/kg	SPSB06-010-120310	56 / 108	0.0018	0.19	4 60E+00	N/A	1 86E+04	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	0.0024 JL	2.2	mg/kg	SPSB06-010-120310	52 / 108	0.0017	0 21	2 20E+00	N/A	2.10E+01	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/kg	ND	0 / 108	0.0017	0.15	1.50E-01	N/A	6.25E-01	c	N/A	N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/kg	ND	0 / 108	0.0017	0.18	1.80E-01	N/A	2.77E-01	c	N/A	N	BSL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/kg	ND	0 / 108	0.0017	0.17	1.70E-01	N/A	1 08E+01	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.0046	0.29	mg/kg	SPSB10-010-113010	9 / 108	0.0017	0.42	2.90E-01	N/A	5 63E+01	c	N/A	N	BSL
	85-68-7	Butyl benzyl phthalate	0.0035 J	0.05 J	mg/kg	SPSS02-000-101310	5 / 108	0.0026	0.16	5.00E-02	N/A	9.10E+02	c	N/A	N	BSL
	105-60-2	Caprolactam	0.0036 JL	0.0071 JL	mg/kg	ESSB15-090-030712	4 / 108	0.0022	0.15	7.10E-03	N/A	3 00E+05	n	N/A	N	BSL
	86-74-8	Carbazole	0.0022 J	0.45	mg/kg	SPSB06-010-120310	25 / 108	0.0017	0.14	4.50E-01	N/A	9 54E+01	c	N/A	N	BSL
	218-01-9	Chrysene	0.0027 JL	4.2	mg/kg	SPSB06-010-120310	65 / 108	0.0017	0.19	4 20E+00	N/A	2.10E+02	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	0.0024 J	1.5	mg/kg	SPSB06-010-120310	28 / 108	0.0022	0.14	1 50E+00	N/A	2.10E-01	c	N/A	Y	ASL
	132-64-9	Dibenzofuran	0.0026 J	1	mg/kg	SPSB19A-040-010912	20 / 108	0.0017	0.14	1 00E+00	N/A	1 00E+03	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	0 002	0.0032	mg/kg	ND	0 / 108	0.0017	0 21	3.20E-03	N/A	4 90E+05	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	ND	ND	mg/kg	ND	0 / 108	0.0022	0.15	1.50E-01	N/A	5.45E+05	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	0.0024 J	0.46	mg/kg	SPSB02-020-120210	7 / 108	0.0022	0.16	4.60E-01	N/A	6 20E+04	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	0.0023 J	0.12	mg/kg	ESSB04-020-110510	5 / 108	0.0022	0.19	1.20E-01	N/A	2.73E+04	n	N/A	N	BSL
	206-44-0	Fluoranthene	0.0022 J	8.3	mg/kg	SPSB06-010-120310	72 / 108	0.0017	0 25	8 30E+00	N/A	2 20E+04	n	N/A	N	BSL
	86-73-7	Fluorene	0.0024 J	7.9	mg/kg	SPSB04-030-120210	27 / 108	0.0017	0 36	7 90E+00	N/A	2 20E+04	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/kg	ND	0 / 108	0.0017	0.17	1.70E-01	N/A	6.91E-01	c	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/kg	ND	0 / 108	0.0017	0 28	2.80E-01	N/A	2 28E+00	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/kg	ND	0 / 107	0.0017	0 23	2.30E-01	N/A	1 02E+01	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/kg	ND	0 / 108	0.0017	0 25	2.50E-01	N/A	4 30E+01	c	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	0.0023 J	3.3	mg/kg	SPSB06-010-120310	44 / 108	0.0017	0 22	3 30E+00	N/A	2.10E+00	c	N/A	Y	ASL
	78-59-1	Isophorone	ND	ND	mg/kg	ND	0 / 108	0.0017	0.19	1.90E-01	N/A	1 80E+03	c	N/A	N	BSL
	91-20-3	Naphthalene	0.0023 J	9.2	mg/kg	SPSB04-030-120210	31 / 108	0.0017	0.42	9 20E+00	N/A	1 80E+01	c	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/kg	ND	0 / 108	0.0017	0 21	2.10E-01	N/A	5 67E+00	c	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/kg	ND	0 / 108	0.0022	0 26	2.60E-01	N/A	1.36E-01	c	N/A	Y	ASL
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/kg	ND	0 / 108	0.0022	0.14	1.40E-01	N/A	1 95E+02	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	0.0059 J	0.0059 J	mg/kg	WSB04-040-110210	1 / 108	0.0019	0.18	5.90E-03	N/A	2.70E+00	c	N/A	N	BSL
	85-01-8	Phenanthrene	0.0033 J	61	mg/kg	SPSB04-030-120210	66 / 108	0.0027	1.4	6.10E+01	N/A	1 86E+04	n	N/A	N	BSL
	108-95-2	Phenol	0 003 J	2	mg/kg	ESSB11-050-010412	15 / 108	0.0022	0 21	2 00E+00	N/A	1 80E+05	n	N/A	N	BSL
	129-00-0	Pyrene	0.0026 JL	13 J	mg/kg	SPSB02-020-120210	70 / 108	0.0017	0 36	1 30E+01	N/A	1.70E+04	n	N/A	N	BSL
	57-12-5	Cyanide	0 683 J	6.95	mg/kg	SPSS06-000-101310	21 / 108	0 57	0 96	6 95E+00	N/A	5 83E+02	n	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value

= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration or detection limit was used for screening.

(2) Background data were not considered.

(3) Screening values are the lower of the USEPA industrial RSLs (USEPA, 2013) and TRRP 30-acre commercial/industrial PCLs (TCEQ, 2012a) for direct contact with surface soils; TRRP PCLs for carcinogens were adjusted a 10 $^{-6}$ risk.

(4) Rationale for Selection or Deletion:

ASL = Above Screening Level

BSL = Below Screening Level

Definitions:

a= Action level

ARAR = Applicable or relevant and appropriate requirements

CAS No. = Chemical Abstract Registry Number

c = Carcinogen

J = Estimated value

L = Estimated concentration is biased low

mg/kg = milligram/kilogram

n = Noncarcinogen

N/A = Not applicable or available

ND = Not Detected

PCLs = Protective Concentration Levels

RSLs = Regional Screening Levels

TBC = To be considered values

TRRP = Texas Risk Reduction Program

USEPA = United States Environmental Protection Agency

TABLE 2.3
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Migration of Vapors from Subsurface Soils to Ambient Air (> 2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Poten ial ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
South Pit Area Subsurface Soil >2 ft bgs (Outdoor Air Vapors)	7429-90-5	Aluminum	474	19500	mg/kg	SPSB05-020-120310	65 / 65	19	210	1 95E+04	N/A	N/A	---	N/A	N/A	N/A
	7440-36-0	Antimony	0.464 J	0.986	mg/kg	SPSB03-020-120110	2 / 65	0.19	1.3	9 86E-01	N/A	N/A	---	N/A	N/A	N/A
	7440-38-2	Arsenic	0.665	94.5	mg/kg	SPSB03-020-120110	73 / 73	0.056	1.1	9.45E+01	N/A	N/A	---	N/A	N/A	N/A
	7440-39-3	Barium	2.53	3810	mg/kg	SBSB10-030-113010	65 / 65	0.078	10	3 81E+03	N/A	N/A	---	N/A	N/A	N/A
	7440-41-7	Beryllium	0 0526 J	1.08	mg/kg	WSB04-040-110210	63 / 65	0.047	0.28	1 08E+00	N/A	N/A	---	N/A	N/A	N/A
	7440-43-9	Cadmium	0 0574 J	15.1	mg/kg	ESSB03-020-120910	62 / 65	0.037	0.21	1 51E+01	N/A	N/A	---	N/A	N/A	N/A
	7440-47-3	Chromium	0.857	97	mg/kg	SPSB06-020-120310	65 / 65	0.047	0.26	9.70E+01	N/A	N/A	---	N/A	N/A	N/A
	7440-48-4	Cobalt	0.521	15.4	mg/kg	SPSB19C-170-011112	65 / 65	0.028	0.16	1 54E+01	N/A	N/A	---	N/A	N/A	N/A
	7440-50-8	Copper	0.446 J	95.2	mg/kg	ESSB04-020-110510	65 / 65	0.097	0.73	9 52E+01	N/A	N/A	---	N/A	N/A	N/A
	7439-92-1	Lead	1.22	145	mg/kg	ESSB04-020-110510	65 / 65	0.047	0.26	1.45E+02	N/A	N/A	---	N/A	N/A	N/A
	7439-96-5	Manganese	21.6	1110	mg/kg	SPSB19C-170-011112	65 / 65	0.065	12	1.11E+03	N/A	N/A	---	N/A	N/A	N/A
	7440-02-0	Nickel	0.705	13.8	mg/kg	SPSB19A-040-010912	65 / 65	0.056	0.34	1 38E+01	N/A	N/A	---	N/A	N/A	N/A
	7782-49-2	Selenium	0.207 J	2.83	mg/kg	ESSB04-020-110510	61 / 65	0.17	1.3	2 83E+00	N/A	N/A	---	N/A	N/A	N/A
	7440-22-4	Silver	0 0456 J	1.98 J	mg/kg	ESSB03-020-120910	16 / 65	0.037	0.23	1 98E+00	N/A	N/A	---	N/A	N/A	N/A
	7440-28-0	Thallium	0.093 J	0.694	mg/kg	WSB01-040-110110	50 / 65	0.068	0.37	6 94E-01	N/A	N/A	---	N/A	N/A	N/A
	7440-62-2	Vanadium	3.4	33.5	mg/kg	SPSB19C-170-011112	65 / 65	0.065	0.37	3 35E+01	N/A	N/A	---	N/A	N/A	N/A
	7440-66-6	Zinc	1.8	1840	mg/kg	ESSB03-020-120910	64 / 65	0 23	130	1 84E+03	N/A	N/A	---	N/A	N/A	N/A
	7439-97-6	Mercury	0.000351 J	4.2	mg/kg	ESSB04-020-110510	59 / 65	0.00021	0.0026	4 20E+00	N/A	3.32E+00	n	N/A	Y	ASL
	72-54-8	4,4´-DDD	0.001 J	0.33 J	mg/kg	ESSB04-020-110510	16 / 65	0.00053	0.066	3 30E-01	N/A	N/A	---	N/A	N/A	N/A
	72-55-9	4,4´-DDE	0 0031 J	0.15 J	mg/kg	SPSB02-020-FD-120210	8 / 65	0.00053	0.066	1 50E-01	N/A	N/A	---	N/A	N/A	N/A
	50-29-3	4,4´-DDT	0 0045	0.55	mg/kg	ESSB14-120-030612	13 / 65	0.00053	0.066	5 50E-01	N/A	1.05E+02	c	N/A	N	BSL
	309-00-2	Aldrin	0 0012 J	0 0056 J	mg/kg	SPSB19B-090-010912	3 / 65	0.00032	0.039	5.60E-03	N/A	7.17E-01	c	N/A	N	BSL
	319-84-6	alpha-BHC	0 0013 J	0.07 J	mg/kg	WSB04-140-110210	4 / 65	0.00032	0.039	7 00E-02	N/A	1.20E+00	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	0 0015 J	0.1 J	mg/kg	SPSB03-020-120110	4 / 65	0.00021	0.026	1 00E-01	N/A	3.55E+02	c	N/A	N	BSL
	319-85-7	beta-BHC	0.002 J	0.31 J	mg/kg	ESSB04-020-110510	12 / 65	0.00032	0.039	3.10E-01	N/A	6.20E+00	c	N/A	N	BSL
	319-86-8	delta-BHC	0.019 JH	0.49	mg/kg	SPSB03-020-120110	2 / 65	0.00021	0.026	4 90E-01	N/A	8.77E+00	c	N/A	N	BSL
	60-57-1	Dieldrin	0 0027 J	0.094	mg/kg	SPSB03-020-120110	8 / 65	0.00053	0.066	9.40E-02	N/A	2.74E+00	c	N/A	N	BSL
	959-98-8	Endosulfan I	0.014 JH	0.1 JH	mg/kg	SPSB21-160-012412	5 / 65	0.00032	0.039	1 00E-01	N/A	N/A	---	N/A	N/A	N/A
	33213-65-9	Endosulfan II	0 0021 J	0.054 J	mg/kg	SPSB08-070-120110	4 / 65	0.00063	0.079	5.40E-02	N/A	N/A	---	N/A	N/A	N/A
	1031-07-8	Endosulfan sulfate	0 0055 J	0.054 J	mg/kg	SPSB08-070-120110	2 / 65	0.00063	0.079	5.40E-02	N/A	N/A	---	N/A	N/A	N/A
	72-20-8	Endrin	0.011 JH	0.15 J	mg/kg	ESSB04-020-110510	5 / 65	0.00063	0.079	1 50E-01	N/A	N/A	---	N/A	N/A	N/A
	7421-93-4	Endrin aldehyde	0 0025 J	0.17 J	mg/kg	SPSB04-030-120210	10 / 65	0.00063	0.079	1.70E-01	N/A	N/A	---	N/A	N/A	N/A
	53494-70-5	Endrin ketone	0.12 J	0.12 J	mg/kg	SPSB04-030-120210	1 / 65	0.00063	0.079	1 20E-01	N/A	N/A	---	N/A	N/A	N/A
	58-89-9	gamma-BHC	ND	ND	mg/kg	ND	0 / 65	0.00021	0.026	2.60E-02	N/A	N/A	---	N/A	N/A	N/A
	5103-74-2	gamma-Chlordane	0 0023	0.17 J	mg/kg	ESSB04-020-110510	7 / 65	0.00021	0.026	1.70E-01	N/A	8.36E+01	c	N/A	N	BSL
	76-44-8	Heptachlor	ND	ND	mg/kg	ND	0 / 65	0.00032	0.039	3 90E-02	N/A	7.88E-01	c	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	0 0084 J	0.79 J	mg/kg	SPSB04-030-120210	7 / 65	0.00032	0.039	7 90E-01	N/A	2.05E+00	c	N/A	N	BSL
	72-43-5	Methoxychlor	0.23 JH	0.6 J	mg/kg	SPSB04-030-120210	3 / 65	0.0036	0.45	6 00E-01	N/A	N/A	---	N/A	N/A	N/A
	8001-35-2	Toxaphene	ND	ND	mg/kg	ND	0 / 65	0.004	0.5	5 00E-01	N/A	8.25E+01	c	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/kg	ND	0 / 65	0.0025	0.39	3 90E-01	N/A	N/A	---	N/A	N/A	N/A
	11104-28-2	Aroclor 1221	ND	ND	mg/kg	ND	0 / 65	0.0025	0.39	3 90E-01	N/A	N/A	---	N/A	N/A	N/A
	11141-16-5	Aroclor 1232	ND	ND	mg/kg	ND	0 / 65	0.0025	0.39	3 90E-01	N/A	N/A	---	N/A	N/A	N/A
	53469-21-9	Aroclor 1242	ND	ND	mg/kg	ND	0 / 65	0.0025	0.39	3 90E-01	N/A	N/A	---	N/A	N/A	N/A
	12672-29-6	Aroclor 1248	ND	ND	mg/kg	ND	0 / 65	0.0025	0.39	3 90E-01	N/A	N/A	---	N/A	N/A	N/A
	11097-69-1	Aroclor 1254	0.01 J	9	mg/kg	ESSB14-120-030612	7 / 65	0.0025	0.39	9 00E+00	N/A	N/A	---	N/A	N/A	N/A
	11096-82-5	Aroclor 1260	0.014 J	0.56	mg/kg	SPSB09-020-113010	5 / 65	0.0019	0.29	5.60E-01	N/A	N/A	---	N/A	N/A	N/A
	TPCB	Total PCBs	0 0186	9.86	mg/kg	ESSB14-120-030612	12 / 65	0.00845	1.315	9 86E+00	N/A	4.69E+00	c	N/A	Y	ASL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.068	6 80E-02	N/A	7.83E+00	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.16	1.60E-01	N/A	5.64E+04	n	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.059	5 90E-02	N/A	N/A	---	N/A	N/A	N/A
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.13	1 30E-01	N/A	3.32E+05	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.19	1 90E-01	N/A	1.93E+00	c	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.059	5 90E-02	N/A	2.65E+04	n	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/kg	ND	0 / 65	0.00043	0.15	1 50E-01	N/A	3.76E+03	n	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/kg	ND	0 / 65	0.00052	0.087	8.70E-02	N/A	1.09E+02	n	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	0.00087 J	17	mg/kg	SPSB21-160-012412	11 / 65	0.00043	0.077	1.70E+01	N/A	1.13E+02	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.068	6 80E-02	N/A	8.37E-02	c	N/A	N	BSL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 65	0.00043	0.077	7.70E-02	N/A	5.74E+02	n	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.059	5 90E-02	N/A	1.19E+00	c	N/A	N	BSL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.059	5 90E-02	N/A	4.42E+01	n	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	0 0016 J	6	mg/kg	SPSB21-160-012412	9 / 65	0.00043	0.077	6 00E+00	N/A	8.33E+01	n	N/A	N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 65	0.00043	0.087	8.70E-02	N/A	8.84E+01	n	N/A	N	BSL
	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 65	0.00043	0.068	6 80E-02	N/A	1.76E+03	n	N/A	N	BSL

TABLE 2.3
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Migration of Vapors from Subsurface Soils to Ambient Air (> 2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Poten ial ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
South Pit Area Subsurface Soil >2 ft bgs (Outdoor Air Vapors)	78-93-3	2-Butanone	0 0076 J	0.036	mg/kg	SPSB19C-190-011112	9 / 65	0.0012	0.21	3.60E-02	N/A	1.45E+05	n	N/A	N	BSL
	591-78-6	2-Hexanone	2.3	2.3	mg/kg	ESSB08-150-110410	1 / 65	0.00086	0.16	2 30E+00	N/A	5.95E+02	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	0 0074 J	0.56 J	mg/kg	SPSB21-160-012412	2 / 65	0.00086	0.12	5.60E-01	N/A	4.17E+04	n	N/A	N	BSL
	67-64-1	Acetone	0.015 J	0.21	mg/kg	SPSB19C-190-011112	9 / 65	0.0017	0.44	2.10E-01	N/A	4.30E+05	n	N/A	N	BSL
	71-43-2	Benzene	0 0021 J	6	mg/kg	SPSB19A-090-010912	16 / 65	0.00043	0.059	6 00E+00	N/A	1.41E+01	c	N/A	N	BSL
	75-27-4	Bromodichloromethane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.059	5 90E-02	N/A	N/A	---	N/A	N/A	N/A
	75-25-2	Bromoform	ND	ND	mg/kg	ND	0 / 65	0.00043	0.068	6 80E-02	N/A	7.24E+01	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/kg	ND	0 / 65	0.00086	0.12	1 20E-01	N/A	5.53E+01	n	N/A	N	BSL
	75-15-0	Carbon disulfide	0 0018 J	0.017	mg/kg	SPSB04-030-120210	9 / 65	0.00086	0.15	1.70E-02	N/A	7.74E+03	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/kg	ND	0 / 65	0.00043	0.12	1 20E-01	N/A	5.16E+00	c	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/kg	ND	0 / 65	0.00043	0.059	5 90E-02	N/A	5.53E+02	n	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/kg	ND	0 / 65	0.00086	0.12	1 20E-01	N/A	1.11E+05	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/kg	ND	0 / 65	0.00043	0.17	1.70E-01	N/A	1.35E+00	c	N/A	N	BSL
	74-87-3	Chloromethane	ND	ND	mg/kg	ND	0 / 65	0.00082	0.12	1 20E-01	N/A	1.72E+01	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 65	0.00043	0.15	1 50E-01	N/A	6.63E+02	n	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 65	0.00043	0.059	5 90E-02	N/A	2.21E+02	n	N/A	N	BSL
	110-82-7	Cyclohexane	0 0036 J	12	mg/kg	ESSB08-150-110410	8 / 65	0.00043	0.12	1 20E+01	N/A	6.63E+04	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.059	5 90E-02	N/A	N/A	---	N/A	N/A	N/A
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.17	1.70E-01	N/A	1.11E+03	n	N/A	N	BSL
	100-41-4	Ethylbenzene	0 0015 J	12	mg/kg	SPSB21-160-012412	21 / 65	0.00043	0.087	1 20E+01	N/A	2.10E+04	n	N/A	N	BSL
	98-82-8	Isopropylbenzene	0.001 J	6.1	mg/kg	SPSB21-160-012412	17 / 65	0.00043	0.097	6.10E+00	N/A	6.66E+03	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/kg	ND	0 / 65	0.00043	0.097	9.70E-02	N/A	N/A	---	N/A	N/A	N/A
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/kg	ND	0 / 65	0.00043	0.18	1 80E-01	N/A	1.19E+02	c	N/A	N	BSL
	108-87-2	Methylcyclohexane	0 0009 J	47	mg/kg	ESSB08-150-110410	14 / 65	0.00043	0.59	4.70E+01	N/A	3.32E+04	n	N/A	N	BSL
	75-09-2	Methylene chloride	0 0017 J	0 0037 J	mg/kg	SPSB19C-170-011112	3 / 65	0.00086	0.24	3.70E-03	N/A	1.11E+03	c	N/A	N	BSL
	91-20-3	Naph halene	0 0025 J	18	mg/kg	SPSB21-160-012412	15 / 65	0.00043	0.077	1 80E+01	N/A	1.93E+02	n	N/A	N	BSL
	104-51-8	n-Butylbenzene	0.024	0.77	mg/kg	SPSB19A-090-010912	4 / 65	0.00043	0.059	7.70E-01	N/A	N/A	---	N/A	N/A	N/A
	103-65-1	n-Propylbenzene	0.00054 J	7.3	mg/kg	ESSB08-040-110410	16 / 65	0.00043	0.087	7 30E+00	N/A	4.55E+03	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	0 0011 J	7.6	mg/kg	SPSB21-160-012412	9 / 65	0.00043	0.059	7.60E+00	N/A	N/A	---	N/A	N/A	N/A
	100-42-5	Styrene	0 0017 J	0.099 J	mg/kg	ESSB08-150-110410	5 / 65	0.00043	0.059	9 90E-02	N/A	8.11E+03	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	0.11 J	0.89	mg/kg	SPSB21-160-012412	3 / 65	0.00043	0.059	8 90E-01	N/A	N/A	---	N/A	N/A	N/A
	127-18-4	Tetrachloroethene	ND	ND	mg/kg	ND	0 / 65	0.00052	0.097	9.70E-02	N/A	8.14E+01	c	N/A	N	BSL
	108-88-3	Toluene	0.00088 J	2.4	mg/kg	SPSB19A-090-010912	15 / 65	0.00043	0.068	2.40E+00	N/A	4.53E+04	n	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 65	0.00043	0.087	8.70E-02	N/A	6.63E+02	n	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 65	0.00043	0.059	5 90E-02	N/A	7.74E+00	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/kg	ND	0 / 65	0.00043	0.15	1 50E-01	N/A	2.21E+01	n	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/kg	ND	0 / 65	0.00043	0.077	7.70E-02	N/A	N/A	---	N/A	N/A	N/A
	75-01-4	Vinyl chloride	ND	ND	mg/kg	ND	0 / 65	0.00043	0.097	9.70E-02	N/A	3.68E+00	c	N/A	N	BSL
	1330-20-7	Xylenes, Total	0 0032 J	14	mg/kg	SPSB19A-090-010912	16 / 65	0.0013	0.25	1.40E+01	N/A	6.74E+03	n	N/A	N	BSL
	92-52-4	1,1´-Biphenyl	0 0026 J	31	mg/kg	WSB09-110-120710	16 / 65	0.0017	1.9	3.10E+01	N/A	N/A	---	N/A	N/A	N/A
	90-12-0	1-Methylnaphthalene	0 0031 J	53	mg/kg	WSB09-110-120710	24 / 65	0.0017	1.5	5 30E+01	N/A	N/A	---	N/A	N/A	N/A
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/kg	ND	0 / 65	0.0017	0.18	1 80E-01	N/A	N/A	---	N/A	N/A	N/A
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/kg	ND	0 / 65	0.0017	0.21	2.10E-01	N/A	1.70E+02	c	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/kg	ND	0 / 65	0.0017	0.14	1.40E-01	N/A	N/A	---	N/A	N/A	N/A
	105-67-9	2,4-Dime hylphenol	0.09	2.7	mg/kg	ESSB11-050-010412	11 / 65	0.0017	0.22	2.70E+00	N/A	N/A	---	N/A	N/A	N/A
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/kg	ND	0 / 65	0.0035	0.21	2.10E-01	N/A	N/A	---	N/A	N/A	N/A
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 65	0.0017	0.21	2.10E-01	N/A	N/A	---	N/A	N/A	N/A
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 65	0.0017	0.2	2 00E-01	N/A	N/A	---	N/A	N/A	N/A
	91-58-7	2-Chloronaphthalene	ND	ND	mg/kg	ND	0 / 65	0.0017	0.26	2.60E-01	N/A	N/A	---	N/A	N/A	N/A
	95-57-8	2-Chlorophenol	ND	ND	mg/kg	ND	0 / 65	0.0017	0.2	2 00E-01	N/A	N/A	---	N/A	N/A	N/A
	91-57-6	2-Methylnaphthalene	0.004 J	96	mg/kg	WSB09-110-120710	27 / 65	0.0017	1.8	9.60E+01	N/A	N/A	---	N/A	N/A	N/A
	95-48-7	2-Methylphenol	0 0037 J	3.9	mg/kg	SPSB19C-190-011112	14 / 65	0.0017	0.19	3 90E+00	N/A	N/A	---	N/A	N/A	N/A
	88-74-4	2-Nitroaniline	ND	ND	mg/kg	ND	0 / 65	0.0017	0.21	2.10E-01	N/A	3.43E+01	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/kg	ND	0 / 65	0.0017	0.29	2 90E-01	N/A	N/A	---	N/A	N/A	N/A
	106-44-5	3&4-Methylphenol	0 0028 J	3.7	mg/kg	SPSB19C-190-011112	13 / 65	0.0017	0.18	3.70E+00	N/A	N/A	---	N/A	N/A	N/A
	91-94-1	3,3´-Dichlorobenzidine	ND	ND	mg/kg	ND	0 / 65	0.0017	0.2	2 00E-01	N/A	N/A	---	N/A	N/A	N/A
	99-09-2	3-Nitroaniline	ND	ND	mg/kg	ND	0 / 65	0.0017	0.17	1.70E-01	N/A	4.30E+01	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/kg	ND	0 / 65	0.0017	0.21	2.10E-01	N/A	N/A	---	N/A	N/A	N/A
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 65	0.0017	0.21	2.10E-01	N/A	8.42E-01	c	N/A	N	BSL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/kg	ND	0 / 65	0.0017	0.21	2.10E-01	N/A	N/A	---	N/A	N/A	N/A
	106-47-8	4-Chloroaniline	ND	ND	mg/kg	ND	0 / 65	0.0017	0.14	1.40E-01	N/A	N/A	---	N/A	N/A	N/A
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 65	0.0017	0.14	1.40E-01	N/A	2.15E-01	c	N/A	N	BSL
	100-01-6	4-Nitroaniline	ND	ND	mg/kg	ND	0 / 65	0.0017	0.21	2.10E-01	N/A	8.69E+02	n	N/A	N	BSL

TABLE 2.3
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Migration of Vapors from Subsurface Soils to Ambient Air (> 2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Poten ial ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
South Pit Area Subsurface Soil >2 ft bgs (Outdoor Air Vapors)	100-02-7	4-Nitrophenol	ND	ND	mg/kg	ND	0 / 65	0.0036	0.24	2.40E-01	N/A	N/A	---	N/A	N/A	N/A
	83-32-9	Acenaphthene	0 0074 J	1.6	mg/kg	SPSB21-160-012412	21 / 65	0.0017	0.14	1.60E+00	N/A	N/A	---	N/A	N/A	N/A
	208-96-8	Acenaphthylene	0.013	1.3	mg/kg	SPSB21-160-012412	15 / 65	0.0017	0.17	1 30E+00	N/A	N/A	---	N/A	N/A	N/A
	98-86-2	Acetophenone	0.011	4.7	mg/kg	WSB09-110-120710	13 / 65	0.0017	0.16	4.70E+00	N/A	N/A	---	N/A	N/A	N/A
	120-12-7	Anthracene	0 0029 J	3.8	mg/kg	SPSB04-030-120210	24 / 65	0.0017	0.36	3 80E+00	N/A	N/A	---	N/A	N/A	N/A
	56-55-3	Benz(a)anthracene	0 0027 JL	3.3 J	mg/kg	SPSB02-020-120210	24 / 65	0.0017	0.18	3 30E+00	N/A	3.24E+02	c	N/A	N	BSL
	100-52-7	Benzaldehyde	0 0034 JL	0.83 JL	mg/kg	SPSB06-020-120310	8 / 65	0.0017	0.29	8 30E-01	N/A	N/A	---	N/A	N/A	N/A
	50-32-8	Benzo(a)pyrene	0.003 J	7.4 J	mg/kg	SPSB02-020-120210	32 / 73	0.0017	0.15	7.40E+00	N/A	7.32E+01	c	N/A	N	BSL
	205-99-2	Benzo(b)fluoranthene	0 0031 J	1.4 J	mg/kg	SPSB02-020-120210	20 / 65	0.0017	0.22	1.40E+00	N/A	5.31E+02	c	N/A	N	BSL
	191-24-2	Benzo(g,h,i)perylene	0 0033 J	1.7	mg/kg	ESSB04-020-110510	22 / 65	0.0018	0.19	1.70E+00	N/A	N/A	---	N/A	N/A	N/A
	207-08-9	Benzo(k)fluoranthene	0 0028 J	1.5 J	mg/kg	SPSB02-020-120210	18 / 65	0.0017	0.22	1 50E+00	N/A	1.32E+04	c	N/A	N	BSL
	111-91-1	Bis(2-chloroe hoxy)methane	ND	ND	mg/kg	ND	0 / 65	0.0017	0.15	1 50E-01	N/A	9.76E-01	c	N/A	N	BSL
	111-44-4	Bis(2-chloroe hyl)ether	ND	ND	mg/kg	ND	0 / 65	0.0017	0.18	1 80E-01	N/A	3.10E-01	c	N/A	N	BSL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/kg	ND	0 / 65	0.0017	0.17	1.70E-01	N/A	1.79E+01	c	N/A	N	BSL
	117-81-7	Bis(2-e hylhexyl)phthalate	0 0099	0.2	mg/kg	SPSB20-140-012712	3 / 65	0.0017	0.42	2 00E-01	N/A	N/A	---	N/A	N/A	N/A
	85-68-7	Butyl benzyl phthalate	ND	ND	mg/kg	ND	0 / 65	0.0026	0.16	1.60E-01	N/A	N/A	---	N/A	N/A	N/A
	105-60-2	Caprolactam	0 0036 JL	0 0071 JL	mg/kg	ESSB15-090-030712	2 / 65	0.0022	0.15	7.10E-03	N/A	N/A	---	N/A	N/A	N/A
	86-74-8	Carbazole	0 0032 JL	0.073 J	mg/kg	SPSB02-020-FD-120210	4 / 65	0.0017	0.14	7 30E-02	N/A	N/A	---	N/A	N/A	N/A
	218-01-9	Chrysene	0 0033 JL	5.3	mg/kg	WSB09-110-120710	25 / 65	0.0017	0.19	5 30E+00	N/A	5.11E+04	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	0 0024 J	1.5	mg/kg	WSB09-110-120710	15 / 65	0.0022	0.14	1 50E+00	N/A	1.70E+02	c	N/A	N	BSL
	132-64-9	Dibenzofuran	0.003 J	4	mg/kg	SPSB21-160-012412	15 / 65	0.0017	0.17	4 00E+00	N/A	N/A	---	N/A	N/A	N/A
	84-66-2	Die hyl phthalate	ND	ND	mg/kg	ND	0 / 65	0.0017	0.21	2.10E-01	N/A	N/A	---	N/A	N/A	N/A
	131-11-3	Dimethyl ph halate	ND	ND	mg/kg	ND	0 / 65	0.0022	0.15	1 50E-01	N/A	N/A	---	N/A	N/A	N/A
	84-74-2	Di-n-butyl phthalate	0 0028 J	0.46	mg/kg	SPSB02-020-120210	6 / 65	0.0024	0.16	4.60E-01	N/A	N/A	---	N/A	N/A	N/A
	117-84-0	Di-n-octyl phthalate	0 0047 J	0.12	mg/kg	ESSB04-020-110510	3 / 65	0.0022	0.19	1 20E-01	N/A	N/A	---	N/A	N/A	N/A
	206-44-0	Fluoranthene	0 0022 J	1.5 J	mg/kg	SPSB02-020-120210	28 / 65	0.0017	0.14	1 50E+00	N/A	N/A	---	N/A	N/A	N/A
	86-73-7	Fluorene	0 0027 J	8.8	mg/kg	WSB09-110-120710	20 / 65	0.0017	0.36	8 80E+00	N/A	N/A	---	N/A	N/A	N/A
	118-74-1	Hexachlorobenzene	ND	ND	mg/kg	ND	0 / 65	0.0017	0.17	1.70E-01	N/A	1.65E+00	c	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/kg	ND	0 / 65	0.0017	0.28	2 80E-01	N/A	2.51E+00	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/kg	ND	0 / 64	0.0017	0.23	2 30E-01	N/A	1.02E+01	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/kg	ND	0 / 65	0.0017	0.25	2 50E-01	N/A	3.56E+03	n	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	0 0023 J	0.47	mg/kg	SPSB06-020-120310	13 / 65	0.0017	0.22	4.70E-01	N/A	2.17E+03	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/kg	ND	0 / 65	0.0017	0.19	1 90E-01	N/A	N/A	---	N/A	N/A	N/A
	91-20-3	Naph halene	0 0046 J	25	mg/kg	WSB09-110-120710	21 / 65	0.0017	2.2	2 50E+01	N/A	1.93E+02	n	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/kg	ND	0 / 65	0.0017	0.21	2.10E-01	N/A	5.68E+00	c	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/kg	ND	0 / 65	0.0022	0.26	2.60E-01	N/A	N/A	---	N/A	N/A	N/A
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/kg	ND	0 / 65	0.0022	0.14	1.40E-01	N/A	N/A	---	N/A	N/A	N/A
	87-86-5	Pentachlorophenol	0 0038 J	0 0059 J	mg/kg	WSB04-040-110210	2 / 65	0.0019	0.18	5 90E-03	N/A	N/A	---	N/A	N/A	N/A
	85-01-8	Phenan hrene	0.005 J	62	mg/kg	WSB09-110-120710	28 / 65	0.0029	2	6 20E+01	N/A	N/A	---	N/A	N/A	N/A
	108-95-2	Phenol	0 0047 J	3.5	mg/kg	SPSB19C-190-011112	13 / 65	0.0022	0.21	3 50E+00	N/A	N/A	---	N/A	N/A	N/A
	129-00-0	Pyrene	0 0024 J	13 J	mg/kg	SPSB02-020-120210	29 / 65	0.0017	0.36	1 30E+01	N/A	N/A	---	N/A	N/A	N/A
	57-12-5	Cyanide	0.647 J	5.24	mg/kg	ESSB06-020-FD-110310	10 / 65	0 58	730	5 24E+00	N/A	N/A	---	N/A	N/A	N/A

Notes

= Maximum detection limit exceeds screening value

= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.

(2) A background study was not conducted for soils deeper than 2 feet bgs.

(3) Screening values are TRRP 30-acre commercial/industrial subsurface soil-to-air PCLs (TCEQ, 2012a), adjusted for carcinogens to a 10^{-6} risk.

(4) Rationale for Selection or Deletion:

ASL = Above Screening Level
BSL = Below Screening Level

Definitions:

ARAR = Applicable or relevant and appropriate requirements
CAS No. = Chemical Abstract Registry Number
c = Carcinogen
J = Estimated value
H = Estimated concentration is biased high
L = Estimated concentration is biased low
mg/kg = milligram/kilogram
n = Noncarcinogen
N/A = Not applicable or available
PCLs = Protective Concentration Levels
TBC = To be considered values
TRRP = Texas Risk Reduction Program

TABLE 2.4
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Leaching from Soils to Class 3 Groundwater (All soils)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	All Soils
Exposure Medium:	Groundwater (Leaching from Soils)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
South Pit Exposure Area	7429-90-5	Aluminum	474	19500	mg/kg	SPSB05-020-120310/ SPSB02-010-120210	120 / 120	2	210	1.95E+04	N/A	1 00E+06	n	N/A	N	BSL
All Soil Leaching from soils to groundwater	7440-36-0	Antimony	0 223 J	1.06	mg/kg	SPSB06-010-120310	9 / 120	0.19	2.8	1.06E+00	N/A	2.71E+02	m	N/A	N	BSL
	7440-38-2	Arsenic	0 665	94.5	mg/kg	SPSB03-020-120110	130 / 130	0 056	1.1	9.45E+01	N/A	2 51E+02	m	N/A	N	BSL
	7440-39-3	Barium	2.53	3810	mg/kg	SBSB10-030-113010	120 / 120	0 078	42	3.81E+03	N/A	2 22E+04	m	N/A	N	BSL
	7440-41-7	Beryllium	0.0526 J	1.08	mg/kg	WSB04-040-110210	117 / 120	0 047	0.55	1.08E+00	N/A	9 24E+01	m	N/A	N	BSL
	7440-43-9	Cadmium	0.0574 J	19.6	mg/kg	SPSB08-010-120110	114 / 120	0 037	0.44	1.96E+01	N/A	7 55E+01	m	N/A	N	BSL
	7440-47-3	Chromium	0 857	234	mg/kg	ESSB03-010-FD-120910	120 / 120	0 047	5	2.34E+02	N/A	1 20E+05	m	N/A	N	BSL
	7440-48-4	Cobalt	0.434 J	15.4	mg/kg	SPSB19C-170-011112	120 / 120	0 028	0.33	1.54E+01	N/A	9 88E+02	n	N/A	N	BSL
	7440-50-8	Copper	0.446 J	234	mg/kg	ESSB04-010-110510	120 / 120	0 095	14	2.34E+02	N/A	5 21E+04	a	N/A	N	BSL
	7439-92-1	Lead	1.22	359	mg/kg	SPSB08-010-120110	120 / 120	0 047	5.6	3.59E+02	N/A	1 51E+02	a	N/A	Y	ASL
	7439-96-5	Manganese	21.6	1110	mg/kg	SPSB19C-170-011112	120 / 120	0 065	12	1.11E+03	N/A	5.13E+05	n	N/A	N	BSL
	7440-02-0	Nickel	0.705	60.1	mg/kg	SPSB08-010-120110	120 / 120	0 056	0.66	6.01E+01	N/A	2 35E+04	n	N/A	N	BSL
	7782-49-2	Selenium	0 207 J	3.77	mg/kg	ESSB06-010-110310	103 / 120	0.17	2.8	3.77E+00	N/A	1.15E+02	m	N/A	N	BSL
	7440-22-4	Silver	0.0431 J	1.98 J	mg/kg	ESSB03-020-120910	40 / 120	0 037	0.44	1.98E+00	N/A	7.15E+01	n	N/A	N	BSL
	7440-28-0	Thallium	0 072 J	0 694	mg/kg	WSB01-040-110110	82 / 120	0 068	0.77	6.94E-01	N/A	8.75E+01	m	N/A	N	BSL
	7440-62-2	Vanadium	3.4	33.5	mg/kg	SPSB19C-170-011112	120 / 120	0 065	0.77	3.35E+01	N/A	1 31E+05	n	N/A	N	BSL
	7440-66-6	Zinc	1.8	2700	mg/kg	SPSS05-000-101410	119 / 120	0.23	250	2.70E+03	N/A	3 52E+05	n	N/A	N	BSL
	7439-97-6	Mercury	0.000351 J	23	mg/kg	ESSB06-010-110310	116 / 122	0.00021	0 024	2.30E+01	N/A	3.91E-01	m	N/A	Y	ASL
	72-54-8	4,4 -DDD	0 001 J	0.33 J	mg/kg	ESSB04-020-110510	28 / 120	0.00053	0 066	3.30E-01	N/A	1.45E+02	c	N/A	N	BSL
	72-55-9	4,4 -DDE	0.0021 J	0.15 J	mg/kg	SPSB02-020-FD-120210	10 / 120	0.00053	0 066	1.50E-01	N/A	1 32E+02	c	N/A	N	BSL
	50-29-3	4,4 -DDT	0.0029 J	0.55	mg/kg	ESSB14-120-030612	26 / 120	0.00053	0 066	5.50E-01	N/A	1 65E+02	c	N/A	N	BSL
	309-00-2	Aldrin	0.0012 J	0.0056 J	mg/kg	SPSB19B-090-010912	3 / 120	0.00032	0 039	5.60E-03	N/A	1.15E+00	c	N/A	N	BSL
	319-84-6	alpha-BHC	0.0013 J	0.07 J	mg/kg	WSB04-140-110210	4 / 120	0.00032	0 039	7.00E-02	N/A	8.86E-02	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	0.0011 J	0.25 J	mg/kg	SPSB10-010-113010	10 / 120	0.00021	0 026	2.50E-01	N/A	8 27E+03	c	N/A	N	BSL
	319-85-7	beta-BHC	0 002 J	0.31 J	mg/kg	ESSB04-020-110510	17 / 120	0.00032	0 039	3.10E-01	N/A	3.24E-01	c	N/A	N	BSL
	319-86-8	delta-BHC	0 019 JH	0.49	mg/kg	SPSB03-020-120110	2 / 120	0.00021	0 026	4.90E-01	N/A	1 94E+00	c	N/A	N	BSL
	60-57-1	Dieldrin	0.0026 J	0 094	mg/kg	SPSB03-020-120110	11 / 120	0.00053	0 066	9.40E-02	N/A	5.47E-01	c	N/A	N	BSL
	959-98-8	Endosulfan I	0 014 JH	0.1 JH	mg/kg	SPSB21-160-012412	8 / 120	0.00032	0 039	1.00E-01	N/A	4 60E+03	n	N/A	N	BSL
	33213-65-9	Endosulfan II	0.0021 J	0 054 J	mg/kg	SPSB08-070-120110	6 / 120	0.00063	0 079	5.40E-02	N/A	1 38E+04	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	0.0055 J	0 054 J	mg/kg	SPSB08-070-120110	5 / 120	0.00063	0 079	5.40E-02	N/A	6 96E+05	n	N/A	N	BSL
	72-20-8	Endrin	0 011 JH	0.15 J	mg/kg	ESSB04-020-110510	7 / 120	0.00063	0 079	1.50E-01	N/A	3.75E+01	m	N/A	N	BSL
	7421-93-4	Endrin aldehyde	0.0025 J	0.17 J	mg/kg	SPSB04-030-120210	13 / 120	0.00063	0 079	1.70E-01	N/A	9 36E+04	n	N/A	N	BSL
	53494-70-5	Endrin ketone	0.0042	0.12 J	mg/kg	SPSB04-030-120210	3 / 120	0.00063	0 079	1.20E-01	N/A	7 61E+03	n	N/A	N	BSL
	58-89-9	gamma-BHC	0 013 J	0 013 J	mg/kg	ESSS03-000-101210	1 / 120	0.00021	0 026	1.30E-02	N/A	4.58E-01	m	N/A	N	BSL
	5103-74-2	gamma-Chlordane	0.0012 J	0.31	mg/kg	SPSB10-010-113010	19 / 120	0.00021	0 026	3.10E-01	N/A	4 60E+02	c	N/A	N	BSL
	76-44-8	Heptachlor	0 069	0 069	mg/kg	SPSB10-010-113010	1 / 120	0.00032	0 039	6.90E-02	N/A	9.44E+00	m	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	0.0084 J	0.79 J	mg/kg	SPSB04-030-120210	12 / 120	0.00032	0 039	7.90E-01	N/A	2 91E+00	m	N/A	N	BSL
	72-43-5	Methoxychlor	0.23 JH	0.6 J	mg/kg	SPSB04-030-120210	3 / 120	0.0036	0.45	6.00E-01	N/A	6 21E+03	m	N/A	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/kg	ND	0 / 120	0 004	0.5	5.00E-01	N/A	5.75E+02	m	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/kg	ND	0 / 120	0.0025	0.39	3.90E-01	N/A	N/A	---	N/A	N/A	N/A
	11104-28-2	Aroclor 1221	ND	ND	mg/kg	ND	0 / 120	0.0025	0.39	3.90E-01	N/A	N/A	---	N/A	N/A	N/A
	11141-16-5	Aroclor 1232	ND	ND	mg/kg	ND	0 / 120	0.0025	0.39	3.90E-01	N/A	N/A	---	N/A	N/A	N/A
	53469-21-9	Aroclor 1242	ND	ND	mg/kg	ND	0 / 120	0.0025	0.39	3.90E-01	N/A	N/A	---	N/A	N/A	N/A
	12672-29-6	Aroclor 1248	ND	ND	mg/kg	ND	0 / 120	0.0025	0.39	3.90E-01	N/A	N/A	---	N/A	N/A	N/A
	11097-69-1	Aroclor 1254	0.01 J	9	mg/kg	ESSB14-120-030612	10 / 120	0.0025	0.39	9.00E+00	N/A	N/A	---	N/A	N/A	N/A
	11096-82-5	Aroclor 1260	0.01 J	0.77 J	mg/kg	SPSB09-010-FD-113010	26 / 120	0.0019	0.29	7.70E-01	N/A	N/A	---	N/A	N/A	N/A
	TPCB	Total PCBs	0.0178	9.86	mg/kg	ESSB14-120-030612	36 / 120	0.00845	1 315	9.86E+00	N/A	5 30E+02	m	N/A	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 120	0.00042	0 068	6.80E-02	N/A	1 59E+01	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/kg	ND	0 / 120	0.00042	0.16	1.60E-01	N/A	8.10E+01	m	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 120	0.00042	0 059	5.90E-02	N/A	2.59E-01	c	N/A	N	BSL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/kg	ND	0 / 120	0.00042	0.13	1.30E-01	N/A	1 00E+06	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/kg	ND	0 / 120	0.00042	0.19	1.90E-01	N/A	1 00E+00	m	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/kg	ND	0 / 120	0.00042	0 059	5.90E-02	N/A	2.76E+03	n	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/kg	ND	0 / 120	0.00042	0.15	1.50E-01	N/A	2 50E+00	m	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/kg	ND	0 / 120	0.00051	0 087	8.70E-02	N/A	2.40E+02	m	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	0 00087 J	17	mg/kg	SPSB21-160-012412	11 / 120	0.00042	0 077	1.70E+01	N/A	7 25E+03	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/kg	ND	0 / 120	0.00042	0 068	6.80E-02	N/A	1.03E-02	m	N/A	Y	ASL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 120	0.00042	0 077	7.70E-02	N/A	8 94E+02	m	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/kg	ND	0 / 120	0.00042	0 059	5.90E-02	N/A	6.86E-01	m	N/A	N	BSL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/kg	ND	0 / 120	0.00042	0 059	5.90E-02	N/A	1.14E+00	m	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	0.0016 J	6	mg/kg	SPSB21-160-012412	11 / 120	0.00042	0 077	6.00E+00	N/A	7 94E+03	n	N/A	N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 120	0.00042	0 087	8.70E-02	N/A	1 01E+03	n	N/A	N	BSL
	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 120	0.00042	0 068	6.80E-02	N/A	1 05E+02	m	N/A	N	BSL

TABLE 2.4
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Leaching from Soils to Class 3 Groundwater (All soils)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	All Soils
Exposure Medium:	Groundwater (Leaching from Soils)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
South Pit Exposure Area All Soil Leaching from soils to groundwater	78-93-3	2-Butanone	0.0076 J	0 036	mg/kg	SPSB19C-190-011112	10 / 120	0.0012	0.21	3.60E-02	N/A	4 37E+03	n	N/A	N	BSL
	591-78-6	2-Hexanone	2.3	2.3	mg/kg	ESSB08-150-110410	1 / 120	0.00085	0.16	2.30E+00	N/A	4 82E+01	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	0.0074 J	0.56 J	mg/kg	SPSB21-160-012412	2 / 120	0.00085	0.12	5.60E-01	N/A	7 39E+02	n	N/A	N	BSL
	67-64-1	Acetone	0 015 J	0.21	mg/kg	SPSB19C-190-011112	11 / 120	0.0017	0.44	2.10E-01	N/A	6 38E+03	n	N/A	N	BSL
	71-43-2	Benzene	0.0006 J	6	mg/kg	SPSB19A-090-010912	19 / 120	0.00042	0 059	6.00E+00	N/A	1 28E+00	m	N/A	Y	ASL
	75-27-4	Bromodichloromethane	ND	ND	mg/kg	ND	0 / 120	0.00042	0 059	5.90E-02	N/A	7.33E-01	c	N/A	N	BSL
	75-25-2	Bromoform	ND	ND	mg/kg	ND	0 / 120	0.00042	0 068	6.80E-02	N/A	7 07E+00	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/kg	ND	0 / 120	0.00085	0.12	1.20E-01	N/A	1 95E+01	n	N/A	N	BSL
	75-15-0	Carbon disulfide	0.0018 J	0 017	mg/kg	SPSB04-030-120210	9 / 120	0.00085	0.15	1.70E-02	N/A	2 03E+03	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/kg	ND	0 / 120	0.00042	0.12	1.20E-01	N/A	3 09E+00	m	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/kg	ND	0 / 120	0.00042	0 059	5.90E-02	N/A	5.46E+01	m	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/kg	ND	0 / 120	0.00085	0.12	1.20E-01	N/A	4 61E+03	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/kg	ND	0 / 120	0.00042	0.17	1.70E-01	N/A	1 52E+02	n	N/A	N	BSL
	74-87-3	Chloromethane	ND	ND	mg/kg	ND	0 / 120	0.00079	0.12	1.20E-01	N/A	4 54E+00	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 120	0.00042	0.15	1.50E-01	N/A	1 24E+01	m	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 120	0.00042	0 059	5.90E-02	N/A	7.44E-02	c	N/A	N	BSL
	110-82-7	Cyclohexane	0.0036 J	12	mg/kg	ESSB08-150-110410	8 / 120	0.00042	0.12	1.20E+01	N/A	8.78E+05	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/kg	ND	0 / 120	0.00042	0 059	5.90E-02	N/A	5.50E-01	c	N/A	N	BSL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/kg	ND	0 / 120	0.00042	0.17	1.70E-01	N/A	3 58E+04	n	N/A	N	BSL
	100-41-4	Ethylbenzene	0.0013 J	12	mg/kg	SPSB21-160-012412	29 / 120	0.00042	0 087	1.20E+01	N/A	3 82E+02	m	N/A	N	BSL
	98-82-8	Isopropylbenzene	0 001 J	6.1	mg/kg	SPSB21-160-012412	22 / 120	0.00042	0 097	6.10E+00	N/A	5.19E+04	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/kg	ND	0 / 120	0.00042	0 097	9.70E-02	N/A	7 29E+03	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/kg	ND	0 / 120	0.00042	0.18	1.80E-01	N/A	9 28E+01	n	N/A	N	BSL
	108-87-2	Methylcyclohexane	0.0009 J	47	mg/kg	ESSB08-150-110410	14 / 120	0.00042	0.59	4.70E+01	N/A	1 00E+06	n	N/A	N	BSL
	75-09-2	Methylene chloride	0.0009 J	0.0049 J	mg/kg	ESSB11-010-010412	14 / 120	0.00085	0.24	4.90E-03	N/A	6.54E-01	m	N/A	N	BSL
	91-20-3	Naphthalene	0.0022 J	18	mg/kg	SPSB21-160-012412	21 / 120	0.00042	0 077	1.80E+01	N/A	4 67E+03	n	N/A	N	BSL
	104-51-8	n-Butylbenzene	0 024	0.77	mg/kg	SPSB19A-090-010912	4 / 120	0.00042	0 059	7.70E-01	N/A	2 26E+04	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	0 00054 J	7.3	mg/kg	ESSB08-040-110410	22 / 120	0.00042	0 087	7.30E+00	N/A	6 69E+03	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	0.0011 J	7.6	mg/kg	SPSB21-160-012412	9 / 120	0.00042	0 059	7.60E+00	N/A	1 27E+04	n	N/A	N	BSL
	100-42-5	Styrene	0.0017 J	0 099 J	mg/kg	ESSB08-150-110410	8 / 120	0.00042	0 059	9.90E-02	N/A	1 63E+02	m	N/A	N	BSL
	98-06-6	tert-Butylbenzene	0.11 J	0.89	mg/kg	SPSB21-160-012412	3 / 120	0.00042	0 059	8.90E-01	N/A	1.49E+04	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/kg	ND	0 / 120	0.00051	0 097	9.70E-02	N/A	2 51E+00	m	N/A	N	BSL
	108-88-3	Toluene	0 00088 J	2.4	mg/kg	SPSB19A-090-010912	16 / 120	0.00042	0 068	2.40E+00	N/A	4.11E+02	m	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 120	0.00042	0 087	8.70E-02	N/A	2.45E+01	m	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 120	0.00042	0 059	5.90E-02	N/A	4.02E-01	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/kg	ND	0 / 120	0.00042	0.15	1.50E-01	N/A	1 68E+00	m	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/kg	ND	0 / 120	0.00042	0 077	7.70E-02	N/A	1 91E+04	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/kg	ND	0 / 120	0.00042	0 097	9.70E-02	N/A	1.11E+00	m	N/A	N	BSL
	1330-20-7	Xylenes, Total	0.0032 J	14	mg/kg	SPSB19A-090-010912	20 / 120	0.0013	0.25	1.40E+01	N/A	6.13E+03	m	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	0.0026 J	31	mg/kg	WSB09-110-120710	27 / 120	0.0017	1.9	3.10E+01	N/A	3.78E+04	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	0 002 J	53	mg/kg	WSB09-110-120710	45 / 120	0.0017	1.5	5.30E+01	N/A	3 30E+01	c	N/A	Y	ASL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/kg	ND	0 / 120	0.0017	0.18	1.80E-01	N/A	5 05E+03	n	N/A	N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/kg	ND	0 / 120	0.0017	0.21	2.10E-01	N/A	2 61E+01	n	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/kg	ND	0 / 120	0.0017	0.14	1.40E-01	N/A	5 25E+01	n	N/A	N	BSL
	105-67-9	2,4-Dimethylphenol	0.0072	2.7	mg/kg	ESSB11-050-010412	15 / 120	0.0017	0.22	2.70E+00	N/A	4 83E+02	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/kg	ND	0 / 120	0.0034	0.21	2.10E-01	N/A	1.40E+01	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 120	0.0017	0.21	2.10E-01	N/A	5.96E-02	c	N/A	Y	ASL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 120	0.0017	0.2	2.00E-01	N/A	5.39E-02	c	N/A	Y	ASL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/kg	ND	0 / 120	0.0017	0.26	2.60E-01	N/A	1 00E+05	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/kg	ND	0 / 120	0.0017	0.2	2.00E-01	N/A	2.44E+02	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	0.0034 J	96	mg/kg	WSB09-110-120710	54 / 120	0.0017	1.8	9.60E+01	N/A	2 55E+03	n	N/A	N	BSL
	95-48-7	2-Methylphenol	0.0037 J	3.9	mg/kg	SPSB19C-190-011112	21 / 120	0.0017	0.19	3.90E+00	N/A	1 06E+03	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/kg	ND	0 / 120	0.0017	0.21	2.10E-01	N/A	3 28E+00	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	0.17	0.17	mg/kg	ESSB05-010-110410	1 / 120	0.0017	0.29	1.70E-01	N/A	2 01E+01	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol	0.0022 J	3.7	mg/kg	SPSB19C-190-011112	23 / 120	0.0017	0.18	3.70E+00	N/A	9.43E+01	n	N/A	N	BSL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/kg	ND	0 / 120	0.0017	0.2	2.00E-01	N/A	7.02E-01	c	N/A	N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/kg	ND	0 / 120	0.0017	0.17	1.70E-01	N/A	3 82E+00	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/kg	ND	0 / 120	0.0017	0.21	2.10E-01	N/A	7.00E-01	n	N/A	N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 120	0.0017	0.21	2.10E-01	N/A	3 96E+00	c	N/A	N	BSL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/kg	ND	0 / 120	0.0017	0.21	2.10E-01	N/A	6.76E+02	n	N/A	N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/kg	ND	0 / 120	0.0017	0.14	1.40E-01	N/A	2.33E-01	c	N/A	N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 120	0.0017	0.14	1.40E-01	N/A	3.58E-01	c	N/A	N	BSL
	100-01-6	4-Nitroaniline	ND	ND	mg/kg	ND	0 / 120	0.0017	0.21	2.10E-01	N/A	1 21E+00	c	N/A	N	BSL

TABLE 2.4
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Leaching from Soils to Class 3 Groundwater (All soils)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	All Soils
Exposure Medium:	Groundwater (Leaching from Soils)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
South Pit Exposure Area All Soil Leaching from soils to groundwater	100-02-7	4-Nitrophenol	ND	ND	mg/kg	ND	0 / 120	0.0036	0.24	2.40E-01	N/A	1.49E+01	n	N/A	N	BSL
	83-32-9	Acenaphthene	0.0021 J	1.6	mg/kg	SPSB21-160-012412	31 / 120	0.0017	0.14	1.60E+00	N/A	3 53E+04	n	N/A	N	BSL
	208-96-8	Acenaphthylene	0.0028 J	1.3	mg/kg	SPSB21-160-012412	29 / 120	0.0017	0.17	1.30E+00	N/A	6.10E+04	n	N/A	N	BSL
	98-86-2	Acetophenone	0.0036 J	6.8 J	mg/kg	ESSB03-010-120910	38 / 120	0.0017	0.16	6.80E+00	N/A	1 23E+03	n	N/A	N	BSL
	120-12-7	Anthracene	0.0024 J	3.8	mg/kg	SPSB04-030-120210	62 / 120	0.0017	0.36	3.80E+00	N/A	1 00E+06	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	0.0027 JL	4.3	mg/kg	SPSB06-010-120310	69 / 120	0.0017	0.18	4.30E+00	N/A	1 99E+02	c	N/A	N	BSL
	100-52-7	Benzaldehyde	0.0034 JL	1.3 JL	mg/kg	SPSB06-010-120310	16 / 120	0.0017	0.29	1.30E+00	N/A	1 57E+03	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	0.0026 J	7.4 J	mg/kg	SPSB02-020-120210	72 / 128	0.0017	0.15	7.40E+00	N/A	3 82E+02	m	N/A	N	BSL
	205-99-2	Benzo(b)fluoranthene	0.0031 J	5.6	mg/kg	SPSB06-010-120310	62 / 120	0.0017	0.22	5.60E+00	N/A	6.73E+02	c	N/A	N	BSL
	191-24-2	Benzo(g,h,i)perylene	0.0029 J	4.6	mg/kg	SPSB06-010-120310	61 / 120	0.0018	0.19	4.60E+00	N/A	1 00E+06	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	0.0024 JL	2.2	mg/kg	SPSB06-010-120310	57 / 120	0.0017	0.22	2.20E+00	N/A	6 89E+03	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/kg	ND	0 / 120	0.0017	0.15	1.50E-01	N/A	1.32E-01	c	N/A	Y	ASL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/kg	ND	0 / 120	0.0017	0.18	1.80E-01	N/A	2.36E-02	c	N/A	Y	ASL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/kg	ND	0 / 120	0.0017	0.17	1.70E-01	N/A	2.13E+00	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.0091	0.29	mg/kg	SPSB10-010-113010	11 / 120	0.0017	0.42	2.90E-01	N/A	8.18E+03	m	N/A	N	BSL
	85-68-7	Butyl benzyl phthalate	0.0047 J	0.05 J	mg/kg	SPSS02-000-101310	5 / 120	0.0026	0.16	5.00E-02	N/A	2 97E+03	c	N/A	N	BSL
	105-60-2	Caprolactam	0.0036 JL	0.0071 JL	mg/kg	ESSB15-090-030712	4 / 120	0.0022	0.15	7.10E-03	N/A	7 01E+03	n	N/A	N	BSL
	86-74-8	Carbazole	0.0022 J	0.45	mg/kg	SPSB06-010-120310	26 / 120	0.0017	0.14	4.50E-01	N/A	5.12E+01	c	N/A	N	BSL
	218-01-9	Chrysene	0.0033 JL	5.3	mg/kg	WSB09-110-120710	70 / 120	0.0017	0.19	5.30E+00	N/A	1.73E+04	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	0.0024 J	1.5	mg/kg	SPSB06-010-120310/ WSB09 110-120710	32 / 120	0.0022	0.14	1.50E+00	N/A	1 07E+02	c	N/A	N	BSL
	132-64-9	Dibenzofuran	0.0026 J	4	mg/kg	SPSB21-160-012412	27 / 120	0.0017	0.17	4.00E+00	N/A	4 98E+03	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	ND	ND	mg/kg	ND	0 / 120	0.0017	0.21	2.10E-01	N/A	2 33E+04	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	ND	ND	mg/kg	ND	0 / 120	0.0022	0.15	1.50E-01	N/A	9 29E+03	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	0.0028 J	0.46	mg/kg	SPSB02-020-120210	7 / 120	0.0023	0.16	4.60E-01	N/A	4 95E+05	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	0.0047 J	0.12	mg/kg	ESSB04-020-110510	5 / 120	0.0022	0.19	1.20E-01	N/A	1 00E+06	n	N/A	N	BSL
	206-44-0	Fluoranthene	0.0022 J	8.3	mg/kg	SPSB06-010-120310	77 / 120	0.0017	0.25	8.30E+00	N/A	2 86E+05	n	N/A	N	BSL
	86-73-7	Fluorene	0.0024 J	8.8	mg/kg	WSB09-110-120710	34 / 120	0.0017	0.36	8.80E+00	N/A	4.46E+04	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/kg	ND	0 / 120	0.0017	0.17	1.70E-01	N/A	5 65E+01	m	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/kg	ND	0 / 120	0.0017	0.28	2.80E-01	N/A	3 68E+01	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/kg	ND	0 / 119	0.0017	0.23	2.30E-01	N/A	9 64E+02	m	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/kg	ND	0 / 120	0.0017	0.25	2.50E-01	N/A	1 92E+02	n	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	0.0023 J	3.3	mg/kg	SPSB06-010-120310	48 / 120	0.0017	0.22	3.30E+00	N/A	1 94E+03	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/kg	ND	0 / 120	0.0017	0.19	1.90E-01	N/A	3 36E+01	c	N/A	N	BSL
	91-20-3	Naphthalene	0.0023 J	25	mg/kg	WSB09-110-120710	38 / 120	0.0017	2.2	2.50E+01	N/A	4 67E+03	n	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/kg	ND	0 / 120	0.0017	0.21	2.10E-01	N/A	5 25E+01	n	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/kg	ND	0 / 120	0.0022	0.26	2.60E-01	N/A	3.95E-03	c	N/A	Y	ASL
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/kg	ND	0 / 120	0.0022	0.14	1.40E-01	N/A	3.16E+01	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	0.0038 J	0.0059 J	mg/kg	WSB04-040-110210	2 / 120	0.0019	0.18	5.90E-03	N/A	9.16E-01	m	N/A	N	BSL
	85-01-8	Phenanthrene	0.0038 J	62	mg/kg	WSB09-110-120710	73 / 120	0.0027	2	6.20E+01	N/A	6 21E+04	n	N/A	N	BSL
	108-95-2	Phenol	0.0047 J	3.5	mg/kg	SPSB19C-190-011112	19 / 120	0.0022	0.21	3.50E+00	N/A	2 86E+03	n	N/A	N	BSL
	129-00-0	Pyrene	0.0024 J	13 J	mg/kg	SPSB02-020-120210	76 / 120	0.0017	0.36	1.30E+01	N/A	1 67E+05	n	N/A	N	BSL
	57-12-5	Cyanide	0 647 J	6.95	mg/kg	SPSS06-000-101310	20 / 120	0.57	730	6.95E+00	N/A	2 00E+03	m	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value

= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.

(2) Background data were not considered.

(3)Screening values are the TRRP 30-acre commercial/industrial PCLs (TCEQ, 2012a) for leaching from soil-to-groundwater and subsequent volatilization to groundwater, adjusted for carcinogens to a 10-6 risk.

(4) Rationale for Selection or Deletion:

ASL = Above Screening Level

BSL = Below Screening Level

Definitions:

a= Action level

ARAR = Applicable or relevant and appropriate requirements

CAS No. = Chemical Abstract Registry Number

c = Carcinogen

J = Estimated value

L = Estimated concentration is biased low

mg/kg = milligram/kilogram

m = MCL-based

n = Noncarcinogen

N/A = Not applicable or available

ND= Not Detected

PCLs = Protective Concentration Levels

TBC = To be considered values

TRRP = Texas Risk Reduction Program

TABLE 2.5
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
North Pit Exposure Area
Direct Contact with Surface Soils (0-2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]		Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
North Pit Exposure Area Surface Soil 0-2 ft bgs	7429-90-5	Aluminum	635	17800	mg/kg	WSS05-000-100710	51 / 51	2	23	1.78E+04	3.00E+04	T	5.70E+05	n	N/A	N	BSL
	7440-36-0	Antimony	0.257 J	1	mg/kg	ENSS06-000-101110	13 / 51	0.19	2.8	1.00E+00	N/A		3.07E+02	n	N/A	N	BSL
	7440-38-2	Arsenic	1.33	32.3	mg/kg	NPSB07-010-110910	56 / 56	0.055	0.68	3.23E+01	5.90E+00	T	2.40E+00	c	N/A	Y	ASL
	7440-39-3	Barium	100	11800	mg/kg	ENSS06-000-101110	51 / 51	0.081	78	1.18E+04	3.00E+02	T	1.19E+05	n	N/A	N	BSL
	7440-41-7	Beryllium	0.0705 J	0.829 J	mg/kg	NPSS02-000-101310	49 / 51	0.046	0.57	8 29E-01	1.50E+00	T	2.47E+02	n	N/A	N	BSL
	7440-43-9	Cadmium	0.147 J	67.2	mg/kg	NPSB07-010-110910	51 / 51	0.036	0.45	6.72E+01	1.42E+00	M	8.00E+02	n	N/A	N	BSL
	7440-47-3	Chromium	3.12	61.8	mg/kg	NPSS01-000-101210	51 / 51	0.046	0.57	6.18E+01	3.00E+01	T	7.46E+04	n	N/A	N	BSL
	7440-48-4	Cobalt	0.518 J	11.3	mg/kg	NPSB09-010-111010	51 / 51	0.027	0.34	1.13E+01	7.00E+00	T	2.73E+02	n	N/A	N	BSL
	7440-50-8	Copper	3.84	475	mg/kg	NPSB07-010-110910	51 / 51	0.097	16	4.75E+02	1.50E+01	T	3.89E+04	n	N/A	N	BSL
	7439-92-1	Lead	7.02	1800	mg/kg	NPSS07-000-101310	51 / 51	0.046	5.7	1.80E+03	1.73E+01	M	8.00E+02	a	N/A	Y	ASL
	7439-96-5	Manganese	45.8	584	mg/kg	NPSB03-010-111110	51 / 51	0.064	11	5.84E+02	3.00E+02	T	2.30E+04	n	N/A	N	BSL
	7440-02-0	Nickel	2.38	15.4	mg/kg	WSS07-000-100710	51 / 51	0.055	0.68	1.54E+01	1.00E+01	T	8.60E+03	n	N/A	N	BSL
	7782-49-2	Selenium	0.309 J	12.8	mg/kg	ENSB07-010-120810	45 / 51	0.17	2.8	1.28E+01	8.90E-01	M	4.87E+03	n	N/A	N	BSL
	7440-22-4	Silver	0.0468 J	10.2	mg/kg	NPSB07-010-110910	30 / 51	0.036	0.45	1.02E+01	N/A		2.27E+03	n	N/A	N	BSL
	7440-28-0	Thallium	0.0765 J	0.254 J	mg/kg	NPSS03-000-101210	26 / 51	0.064	0.79	2 54E-01	1.11E-01	U	1.00E+01	n	N/A	N	BSL
	7440-62-2	Vanadium	4.17	25.4	mg/kg	WSS05-000-100710/ NPSB03 010-111110	51 / 51	0.064	0.79	2.54E+01	5.00E+01	T	6.10E+02	n	N/A	N	BSL
	7440-66-6	Zinc	16	13700	mg/kg	NPSB07-010-110910	51 / 51	0 24	29	1.37E+04	1.02E+02	M	2.45E+05	n	N/A	N	BSL
	7439-97-6	Mercury	0.00472	58.1	mg/kg	ESSB09-010-011012	57 / 57	0.0002	0 032	5.81E+01	4.45E-02	M	3.26E+00	n	N/A	Y	ASL
	72-54-8	4,4 -DDD	0.045 J	0.045 J	mg/kg	NPSS05-000-101310	1 / 51	0.00052	0 006	4 50E-02	N/A		7.20E+00	c	N/A	N	BSL
	72-55-9	4,4 -DDE	ND	ND	mg/kg	ND	0 / 51	0.00052	0 006	6 00E-03	N/A		5.10E+00	c	N/A	N	BSL
	50-29-3	4,4 -DDT	0.0019 J	0.01 J	mg/kg	NPSS05-000-101310	3 / 51	0.00052	0 006	1 00E-02	N/A		6.84E+00	c	N/A	N	BSL
	309-00-2	Aldrin	0.024 J	0.024 J	mg/kg	NPSS05-000-101310	1 / 51	0.00031	0.0036	2.40E-02	N/A		9.70E-02	c	N/A	N	BSL
	319-84-6	alpha-BHC	ND	ND	mg/kg	ND	0 / 51	0.00031	0.0036	3 60E-03	N/A		2.70E-01	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	ND	ND	mg/kg	ND	0 / 51	0.00021	0.0024	2.40E-03	N/A		5.37E+00	c	N/A	N	BSL
	319-85-7	beta-BHC	0.0024 J	0.012 J	mg/kg	NPSB05-010-111110	2 / 51	0.00031	0.0036	1 20E-02	N/A		9.60E-01	c	N/A	N	BSL
	319-86-8	delta-BHC	ND	ND	mg/kg	ND	0 / 51	0.00021	0.0024	2.40E-03	N/A		1.15E+00	c	N/A	N	BSL
	60-57-1	Dieldrin	ND	ND	mg/kg	ND	0 / 51	0.00052	0 006	6 00E-03	N/A		1.10E-01	c	N/A	N	BSL
	959-98-8	Endosulfan I	ND	ND	mg/kg	ND	0 / 51	0.00031	0.0036	3 60E-03	N/A		1.36E+03	n	N/A	N	BSL
	33213-65-9	Endosulfan II	ND	ND	mg/kg	ND	0 / 51	0.00063	0.0072	7 20E-03	N/A		4.09E+03	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	ND	ND	mg/kg	ND	0 / 51	0.00063	0.0072	7 20E-03	N/A		4.09E+03	n	N/A	N	BSL
	72-20-8	Endrin	0.0044 J	0.061 J	mg/kg	NPSS05-000-101310	2 / 51	0.00063	0.0072	6.10E-02	N/A		1.80E+02	n	N/A	N	BSL
	7421-93-4	Endrin aldehyde	0.0036 J	0.02	mg/kg	ENSS07-000-101110	3 / 51	0.00063	0.0072	2 00E-02	N/A		2.04E+02	n	N/A	N	BSL
	53494-70-5	Endrin ketone	0.036	0.036	mg/kg	NPSS05-000-101310	1 / 51	0.00063	0.0072	3 60E-02	N/A		2.04E+02	n	N/A	N	BSL
	58-89-9	gamma-BHC	ND	ND	mg/kg	ND	0 / 51	0.00021	0.0024	2.40E-03	N/A		1.83E+00	c	N/A	N	BSL
	5103-74-2	gamma-Chlordane	ND	ND	mg/kg	ND	0 / 51	0.00021	0.0024	2.40E-03	N/A		5.12E+00	c	N/A	N	BSL
	76-44-8	Heptachlor	ND	ND	mg/kg	ND	0 / 51	0.00031	0.0036	3 60E-03	N/A		2.76E-01	c	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	ND	ND	mg/kg	ND	0 / 51	0.00031	0.0036	3 60E-03	N/A		1.90E-01	c	N/A	N	BSL
	72-43-5	Methoxychlor	ND	ND	mg/kg	ND	0 / 51	0.0036	0 041	4.10E-02	N/A		3.10E+03	n	N/A	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/kg	ND	0 / 51	0.004	0 052	5 20E-02	N/A		1.60E+00	c	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/kg	ND	0 / 51	0.0024	0 003	3 00E-03	N/A		2.10E+01	c	N/A	N	BSL
	11104-28-2	Aroclor 1221	ND	ND	mg/kg	ND	0 / 51	0.0024	0 003	3 00E-03	N/A		5.40E-01	c	N/A	N	BSL
	11141-16-5	Aroclor 1232	ND	ND	mg/kg	ND	0 / 51	0.0024	0 003	3 00E-03	N/A		5.40E-01	c	N/A	N	BSL
	53469-21-9	Aroclor 1242	ND	ND	mg/kg	ND	0 / 51	0.0024	0 003	3 00E-03	N/A		7.40E-01	c	N/A	N	BSL
	12672-29-6	Aroclor 1248	ND	ND	mg/kg	ND	0 / 51	0.0024	0 003	3 00E-03	N/A		7.40E-01	c	N/A	N	BSL
	11097-69-1	Aroclor 1254	ND	ND	mg/kg	ND	0 / 51	0.0024	0 003	3 00E-03	N/A		7.40E-01	c	N/A	N	BSL
	11096-82-5	Aroclor 1260	0.0093 J	0.025	mg/kg	WSS07-000-100710	8 / 51	0.0018	0.0022	2 50E-02	N/A		7.40E-01	c	N/A	N	BSL
	TPCB	Total PCBs	0.0165	0.0325	mg/kg	WSS07-000-100710	8 / 51	0.0081	0.0101	3 25E-02	N/A		7.10E-01	c	N/A	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 51	0.00042	0 001	1 00E-03	N/A		7.31E+00	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0024	2.40E-03	N/A		3.80E+04	n	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A		2.80E+00	c	N/A	N	BSL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0019	1 90E-03	N/A		1.80E+05	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0028	2 80E-03	N/A		1.86E+00	c	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A		1.70E+01	c	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0021	2.10E-03	N/A		1.10E+03	n	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/kg	ND	0 / 51	0.0005	0.0013	1 30E-03	N/A		9.90E+01	c	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0011	1.10E-03	N/A		1.13E+02	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/kg	ND	0 / 51	0.00042	0 001	1 00E-03	N/A		7.91E-02	c	N/A	N	BSL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0011	1.10E-03	N/A		5.71E+02	n	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A		1.15E+00	c	N/A	N	BSL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A		4.70E+00	c	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0011	1.10E-03	N/A		8.32E+01	n	N/A	N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0013	1 30E-03	N/A		8.82E+01	n	N/A	N	BSL

TABLE 2.5
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
North Pit Exposure Area
Direct Contact with Surface Soils (0-2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
North Pit Exposure Area Surface Soil 0-2 ft bgs	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0 001	1 00E-03	N/A	1.20E+01	c	N/A	N	BSL
	78-93-3	2-Butanone	ND	ND	mg/kg	ND	0 / 51	0.0012	0.0031	3.10E-03	N/A	1.17E+05	n	N/A	N	BSL
	591-78-6	2-Hexanone	ND	ND	mg/kg	ND	0 / 51	0.00084	0.0024	2.40E-03	N/A	5.33E+02	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/kg	ND	0 / 51	0.00084	0.0018	1 80E-03	N/A	2.76E+04	n	N/A	N	BSL
	67-64-1	Acetone	ND	ND	mg/kg	ND	0 / 51	0.0017	0.0065	6 50E-03	N/A	2.93E+05	n	N/A	N	BSL
	71-43-2	Benzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A	5.40E+00	c	N/A	N	BSL
	75-27-4	Bromodichloromethane	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A	1.40E+00	c	N/A	N	BSL
	75-25-2	Bromoform	ND	ND	mg/kg	ND	0 / 51	0.00042	0 001	1 00E-03	N/A	6.03E+01	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/kg	ND	0 / 51	0.00084	0.0018	1 80E-03	N/A	3.20E+01	n	N/A	N	BSL
	75-15-0	Carbon disulfide	0.0022 J	0.0022 J	mg/kg	NPSS08FD-000-101310	1 / 51	0.00084	0.0023	2 20E-03	N/A	3.70E+03	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0017	1.70E-03	N/A	3.00E+00	c	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A	5.38E+02	n	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/kg	ND	0 / 51	0.00084	0.0018	1 80E-03	N/A	6.10E+04	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0026	2 60E-03	N/A	1.35E+00	c	N/A	N	BSL
	74-87-3	Chloromethane	ND	ND	mg/kg	ND	0 / 51	0.00083	0.0018	1 80E-03	N/A	1.59E+01	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0021	2.10E-03	N/A	5.01E+02	n	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A	5.30E+01	n	N/A	N	BSL
	110-82-7	Cyclohexane	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0017	1.70E-03	N/A	2.90E+04	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A	3.30E+00	c	N/A	N	BSL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0026	2 60E-03	N/A	4.00E+02	n	N/A	N	BSL
	100-41-4	Ethylbenzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0013	1 30E-03	N/A	2.70E+01	c	N/A	N	BSL
	98-82-8	Isopropylbenzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0014	1.40E-03	N/A	6.25E+03	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0014	1.40E-03	N/A	1.00E+06	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0027	2.70E-03	N/A	1.11E+02	c	N/A	N	BSL
	108-87-2	Methylcyclohexane	0.0022 J	0.0022 J	mg/kg	ESSB09-010-011012	1 / 51	0.00042	0.0021	2 20E-03	N/A	3.29E+04	n	N/A	N	BSL
	75-09-2	Methylene chloride	0.001 J	0.0055 J	mg/kg	NPSB10-010-011212	6 / 51	0.00084	0.0036	5 50E-03	N/A	9.60E+02	c	N/A	N	BSL
	91-20-3	Naphthalene	0.00062 J	0.006 J	mg/kg	ESSB09-010-011012	2 / 51	0.00042	0.0011	6 00E-03	N/A	1.80E+01	c	N/A	N	BSL
	104-51-8	n-Butylbenzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A	3.41E+04	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0013	1 30E-03	N/A	4.10E+03	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A	4.09E+04	n	N/A	N	BSL
	100-42-5	Styrene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A	7.80E+03	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A	4.09E+04	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/kg	ND	0 / 51	0.0005	0.0014	1.40E-03	N/A	7.70E+01	c	N/A	N	BSL
	108-88-3	Toluene	0.0014 J	0.0014 J	mg/kg	ENSB07-010-120810	1 / 51	0.00042	0 001	1.40E-03	N/A	2.92E+04	n	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0013	1 30E-03	N/A	6.42E+02	n	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.00089	8 90E-04	N/A	6.09E+00	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0023	2 30E-03	N/A	6.40E+00	c	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0011	1.10E-03	N/A	3.40E+03	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/kg	ND	0 / 51	0.00042	0.0014	1.40E-03	N/A	1.26E+00	c	N/A	N	BSL
	1330-20-7	Xylenes, Total	0.0024 J	0.0024 J	mg/kg	ENSB07-010-120810	1 / 51	0.0013	0.0037	2.40E-03	N/A	2.70E+03	n	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	0.004 J	0.004 J	mg/kg	ENSS04-000-101110	1 / 51	0.0018	0.16	4 00E-03	N/A	2.10E+02	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	0.0027 J	0.013	mg/kg	ENSB07-010-120810	9 / 51	0.0018	0.13	1 30E-02	N/A	5.30E+01	c	N/A	N	BSL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/kg	ND	0 / 51	0.0018	0.16	1 60E-01	N/A	6.20E+04	n	N/A	N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/kg	ND	0 / 51	0.0018	0.18	1 80E-01	N/A	1.60E+02	c	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/kg	ND	0 / 51	0.0018	0.12	1 20E-01	N/A	1.80E+03	n	N/A	N	BSL
	105-67-9	2,4-Dimethylphenol	ND	ND	mg/kg	ND	0 / 51	0.0018	0.18	1 80E-01	N/A	1.20E+04	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/kg	ND	0 / 51	0.0033	0.18	1 80E-01	N/A	1.20E+03	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 51	0.0018	0.18	1 80E-01	N/A	2.81E+00	c	N/A	N	BSL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 51	0.0018	0.18	1 80E-01	N/A	2.81E+00	c	N/A	N	BSL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/kg	ND	0 / 51	0.0018	0.23	2 30E-01	N/A	4.96E+04	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/kg	ND	0 / 51	0.0018	0.18	1 80E-01	N/A	5.10E+03	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	0.0033 J	0.019	mg/kg	ENSB07-010-120810	15 / 51	0.0018	0.15	1 90E-02	N/A	2.20E+03	n	N/A	N	BSL
	95-48-7	2-Methylphenol	0.005 JL	0.005 JL	mg/kg	ENSB07-010-120810	1 / 51	0.0018	0.16	5 00E-03	N/A	3.10E+04	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/kg	ND	0 / 51	0.0018	0.18	1 80E-01	N/A	2.94E+01	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/kg	ND	0 / 51	0.0018	0.26	2 60E-01	N/A	1.36E+03	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol	0.015 JL	0.015 JL	mg/kg	ENSB07-010-120810	1 / 51	0.0018	0.16	1 50E-02	N/A	3.41E+03	n	N/A	N	BSL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/kg	ND	0 / 50	0.0018	0.17	1.70E-01	N/A	3.80E+00	c	N/A	N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/kg	ND	0 / 51	0.0018	0.14	1.40E-01	N/A	3.55E+01	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/kg	ND	0 / 51	0.0018	0.18	1 80E-01	N/A	4.90E+01	n	N/A	N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 51	0.0018	0.18	1 80E-01	N/A	1.10E-01	c	N/A	Y	ASL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/kg	ND	0 / 51	0.0018	0.18	1 80E-01	N/A	3.41E+03	n	N/A	N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/kg	ND	0 / 51	0.0018	0.12	1 20E-01	N/A	8.60E+00	c	N/A	N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 51	0.0018	0.12	1 20E-01	N/A	7.99E-02	c	N/A	Y	ASL

TABLE 2.5
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
North Pit Exposure Area
Direct Contact with Surface Soils (0-2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
North Pit Exposure Area Surface Soil 0-2 ft bgs	100-01-6	4-Nitroaniline	ND	ND	mg/kg	ND	0 / 51	0.0018	0.18	1 80E-01	N/A	8.60E+01	c	N/A	N	BSL
	100-02-7	4-Nitrophenol	ND	ND	mg/kg	ND	0 / 51	0.0036	0.21	2.10E-01	N/A	1.36E+03	n	N/A	N	BSL
	83-32-9	Acenaphthene	0.0022 J	0.045	mg/kg	WSB07-010-110210	16 / 51	0.0018	0.12	4 50E-02	N/A	3.30E+04	n	N/A	N	BSL
	208-96-8	Acenaphthylene	0.004 J	0.062 J	mg/kg	NPSS01-000-101210	8 / 51	0.0018	0.12	6 20E-02	N/A	3.72E+04	n	N/A	N	BSL
	98-86-2	Acetophenone	0.0028 J	0.023 JL	mg/kg	NPSS02-000-101310	10 / 51	0.0018	0.13	2 30E-02	N/A	6.81E+04	n	N/A	N	BSL
	120-12-7	Anthracene	0.002 J	0.089 JL	mg/kg	NPSS05-000-101310	32 / 51	0.0018	0.12	8 90E-02	N/A	1.70E+05	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	0.0036 J	0.24	mg/kg	WSB07-010-110210	41 / 51	0.0018	0.16	2.40E-01	N/A	2.10E+00	c	N/A	N	BSL
	100-52-7	Benzaldehyde	0.0042 JL	0.011 JL	mg/kg	NPSS02-000-101310	2 / 51	0.0018	0.26	1.10E-02	N/A	1.00E+05	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	0.0039 J	0.38 JL	mg/kg	NPSS05-000-101310	42 / 51	0.0018	0.13	3 80E-01	N/A	2.10E-01	c	N/A	Y	ASL
	205-99-2	Benzo(b)fluoranthene	0.0057 J	0.33	mg/kg	NPSS03-000-101210	43 / 51	0.0018	0.18	3 30E-01	N/A	2.10E+00	c	N/A	N	BSL
	191-24-2	Benzo(g,h,i)perylene	0.004 J	0.16	mg/kg	NPSS03-000-101210	36 / 51	0.0019	0.16	1 60E-01	N/A	1.86E+04	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	0.0059 J	0.38 JL	mg/kg	NPSS02-000-101310	42 / 51	0.0018	0.18	3 80E-01	N/A	2.10E+01	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/kg	ND	0 / 51	0.0018	0.13	1 30E-01	N/A	6.25E-01	c	N/A	N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/kg	ND	0 / 51	0.0018	0.16	1 60E-01	N/A	2.77E-01	c	N/A	N	BSL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/kg	ND	0 / 51	0.0018	0.15	1 50E-01	N/A	1.08E+01	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.0043	84	mg/kg	NPSS01-000-101210	14 / 51	0.0018	3.5	8.40E+01	N/A	5.63E+01	c	N/A	Y	ASL
	85-68-7	Butyl benzyl phthalate	0.0045 J	0.076 J	mg/kg	NPSS07-000-101310	15 / 51	0.0025	0.14	7 60E-02	N/A	9.10E+02	c	N/A	N	BSL
	105-60-2	Caprolactam	0.0045 J	0.22	mg/kg	ENSS06-000-101110	6 / 51	0.0022	0.13	2 20E-01	N/A	3.00E+05	n	N/A	N	BSL
	86-74-8	Carbazole	0.0028 JL	0.065 J	mg/kg	NPSS01-000-101210	26 / 51	0.0018	0.12	6 50E-02	N/A	9.54E+01	c	N/A	N	BSL
	218-01-9	Chrysene	0.0038 J	0.55	mg/kg	NPSS05-000-101310	46 / 51	0.0018	0.16	5 50E-01	N/A	2.10E+02	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	0.0029 J	0.064	mg/kg	WSB07-010-110210	16 / 51	0.0022	0.12	6.40E-02	N/A	2.10E-01	c	N/A	N	BSL
	132-64-9	Dibenzofuran	0.0038 J	0.017	mg/kg	WSB07-010-110210	8 / 51	0.0018	0.12	1.70E-02	N/A	1.00E+03	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	ND	ND	mg/kg	ND	0 / 51	0.0018	0.18	1 80E-01	N/A	4.90E+05	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	0.0057 J	0.0085	mg/kg	ENSS03FD-000-101110	2 / 51	0.0022	0.13	8 50E-03	N/A	5.45E+05	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	0.0029 J	0.041 J	mg/kg	ENSS06-000-101110	10 / 51	0.0022	0.14	4.10E-02	N/A	6.20E+04	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	0.0073 J	0.062 J	mg/kg	ENSS03FD-000-101110	5 / 51	0.0022	0.16	6 20E-02	N/A	2.73E+04	n	N/A	N	BSL
	206-44-0	Fluoranthene	0.0039 J	0.74	mg/kg	NPSS02-000-101310/ NPSS05-000-101310	47 / 51	0.0018	0.12	7.40E-01	N/A	2.20E+04	n	N/A	N	BSL
	86-73-7	Fluorene	0.0026 J	0.023	mg/kg	WSB07-010-110210	15 / 51	0.0018	0.12	2 30E-02	N/A	2.20E+04	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/kg	ND	0 / 51	0.0018	0.14	1.40E-01	N/A	6.91E-01	c	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/kg	ND	0 / 51	0.0018	0.24	2.40E-01	N/A	2.28E+00	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/kg	ND	0 / 51	0.0018	0.2	2 00E-01	N/A	1.02E+01	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/kg	ND	0 / 51	0.0018	0.22	2 20E-01	N/A	4.30E+01	c	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	0.0075 J	0.17	mg/kg	NPSS03-000-101210	32 / 51	0.0018	0.19	1.70E-01	N/A	2.10E+00	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/kg	ND	0 / 51	0.0018	0.17	1.70E-01	N/A	1.80E+03	c	N/A	N	BSL
	91-20-3	Naphthalene	0.0023 J	0.019 JL	mg/kg	NPSS02-000-101310	9 / 51	0.0018	0.18	1 90E-02	N/A	1.80E+01	c	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/kg	ND	0 / 51	0.0018	0.18	1 80E-01	N/A	5.67E+00	c	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/kg	ND	0 / 51	0.0022	0.22	2 20E-01	N/A	1.36E-01	c	N/A	Y	ASL
	86-30-6	N-Nitrosodiphenylamine	0.0067 J	0.0067 J	mg/kg	ENSB09-010-110910	1 / 51	0.0022	0.12	6.70E-03	N/A	1.95E+02	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	ND	ND	mg/kg	ND	0 / 51	0.002	0.16	1 60E-01	N/A	2.70E+00	c	N/A	N	BSL
	85-01-8	Phenanthrene	0.0042 J	0.31 JL	mg/kg	NPSS05-000-101310	41 / 51	0.0028	0.17	3.10E-01	N/A	1.86E+04	n	N/A	N	BSL
	108-95-2	Phenol	0.037 JL	0.037 JL	mg/kg	ENSB07-010-120810	1 / 51	0.0022	0.18	3.70E-02	N/A	1.80E+05	n	N/A	N	BSL
	129-00-0	Pyrene	0.0052 J	0.7	mg/kg	NPSS05-000-101310	47 / 51	0.0018	0.12	7 00E-01	N/A	1.70E+04	n	N/A	N	BSL
	57-12-5	Cyanide	0.715 J	34.3	mg/kg	ENSS08-000-101110	10 / 51	0 56	1.3	3.43E+01	N/A	5.83E+02	n	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value
= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.

(2) A surface soil background study was conducted.
M - Maximum concentration; U = 95% Upper Prediction Limit

(3) Screening values are the lower of the USEPA industrial RSLs (USEPA, 2013) and TRRP 30-acre commercial/industrial PCLs (TCEQ, 2012a) for direct contact with surface soils; TRRP PCLs for carcinogens were adjusted a 10^{-6} risk.

(4) Rationale for Selection or Deletion:
ASL = Above Screening Level
BSL = Below Screening Level

Definitions:

a= Action level
ARAR = Applicable or relevant and appropriate requirements
CAS No. = Chemical Abstract Registry Number
c = Carcinogen
J = Estimated value
L = Estimated concentration is biased low
mg/kg = milligram/kilogram
n = Noncarcinogen
N/A = Not applicable or available
ND = Not Detected
PCLs = Protective Concentration Levels
RSLs = Regional Screening Levels
TBC = To be considered values
TRRP = Texas Risk Reduction Program
USEPA = United States Environmental Protection Agency

TABLE 2.6
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
North Pit Exposure Area
Direct Contact with Surface and Subsurface Soils (0-10 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
North Pit Exposure Area Surface Soil 0-10 ft bgs	7429-90-5	Aluminum	635	17800	mg/kg	WSS05-000-100710	94 / 94	2	27	1.78E+04	N/A	5.70E+05	n	N/A	N	BSL
	7440-36-0	Antimony	0.257 J	1.62	mg/kg	NPSB09-020-111010	14 / 94	0.19	2 8	1.62E+00	N/A	3 07E+02	n	N/A	N	BSL
	7440-38-2	Arsenic	0.891	32.3	mg/kg	NPSB07-010-110910	99 / 99	0 055	0.68	3.23E+01	N/A	2.40E+00	c	N/A	Y	ASL
	7440-39-3	Barium	100	11800	mg/kg	ENSS06-000-101110	94 / 94	0 079	78	1.18E+04	N/A	1.19E+05	n	N/A	N	BSL
	7440-41-7	Beryllium	0 0705 J	1.38	mg/kg	NPSB12-040-012512	92 / 94	0 046	0.57	1.38E+00	N/A	2.47E+02	n	N/A	N	BSL
	7440-43-9	Cadmium	0 0777 J	67.2	mg/kg	NPSB07-010-110910	94 / 94	0 036	0.45	6.72E+01	N/A	8 00E+02	n	N/A	N	BSL
	7440-47-3	Chromium	2.13	61.8	mg/kg	NPSS01-000-101210	94 / 94	0 046	0.57	6.18E+01	N/A	7.46E+04	n	N/A	N	BSL
	7440-48-4	Cobalt	0.518 J	11.3	mg/kg	NPSB09-010-111010	94 / 94	0 027	0.34	1.13E+01	N/A	2.73E+02	n	N/A	N	BSL
	7440-50-8	Copper	2.33	475	mg/kg	NPSB07-010-110910	94 / 94	0 097	16	4.75E+02	N/A	3 89E+04	n	N/A	N	BSL
	7439-92-1	Lead	4.92	1800	mg/kg	NPSS07-000-101310	94 / 94	0 046	5.7	1.80E+03	N/A	8 00E+02	a	N/A	Y	ASL
	7439-96-5	Manganese	45 8	599	mg/kg	ENSB07-030-120810	94 / 94	0 064	12	5.99E+02	N/A	2 30E+04	n	N/A	N	BSL
	7440-02-0	Nickel	2.38	15.4	mg/kg	WSS07-000-100710	94 / 94	0 055	0.68	1.54E+01	N/A	8 60E+03	n	N/A	N	BSL
	7782-49-2	Selenium	0.309 J	157	mg/kg	NPSB09-020-111010	85 / 94	0.17	2 8	1.57E+02	N/A	4 87E+03	n	N/A	N	BSL
	7440-22-4	Silver	0 0465 J	10.2	mg/kg	NPSB07-010-110910	43 / 94	0 036	0.45	1.02E+01	N/A	2 27E+03	n	N/A	N	BSL
	7440-28-0	Thallium	0 0765 J	0 311 J	mg/kg	WSB06-020-120610	56 / 94	0 064	0.79	3.11E-01	N/A	1 00E+01	n	N/A	N	BSL
	7440-62-2	Vanadium	4.17	32.6	mg/kg	WSB06-020-120610	94 / 94	0 064	0.79	3.26E+01	N/A	6.10E+02	n	N/A	N	BSL
	7440-66-6	Zinc	7.87	13700	mg/kg	NPSB07-010-110910	94 / 94	0.24	29	1.37E+04	N/A	2.45E+05	n	N/A	N	BSL
	7439-97-6	Mercury	0.00125 J	58.1	mg/kg	ESSB09-010-011012	99 / 100	0.0002	0.032	5.81E+01	N/A	3 26E+00	n	N/A	Y	ASL
	72-54-8	4,4 -DDD	0 0083	0 045 J	mg/kg	NPSS05-000-101310	3 / 94	0.00052	0.006	4.50E-02	N/A	7 20E+00	c	N/A	N	BSL
	72-55-9	4,4 -DDE	0 0043 J	0.12	mg/kg	NPSB02-040-111110	2 / 94	0.00052	0.006	1.20E-01	N/A	5.10E+00	c	N/A	N	BSL
	50-29-3	4,4 -DDT	0 0013 J	0 011 J	mg/kg	NPSB08-090-111010	5 / 94	0.00052	0.006	1.10E-02	N/A	6 84E+00	c	N/A	N	BSL
	309-00-2	Aldrin	0.024 J	0 024 J	mg/kg	NPSS05-000-101310	1 / 94	0.00031	0 0036	2.40E-02	N/A	9.70E-02	c	N/A	N	BSL
	319-84-6	alpha-BHC	0.001 J	0.0017 J	mg/kg	ENSB07-090-120810	2 / 94	0.00031	0 0036	1.70E-03	N/A	2.70E-01	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	0.025 J	0 025 J	mg/kg	NPSB02-040-111110	1 / 94	0.00021	0 0024	2.50E-02	N/A	5 37E+00	c	N/A	N	BSL
	319-85-7	beta-BHC	0 0024 J	0 012 J	mg/kg	NPSB05-010-111110	2 / 94	0.00031	0 0036	1.20E-02	N/A	9.60E-01	c	N/A	N	BSL
	319-86-8	delta-BHC	0.001 J	0 011 J	mg/kg	NPSB08-090-111010	2 / 94	0.00021	0 0024	1.10E-02	N/A	1.15E+00	c	N/A	N	BSL
	60-57-1	Dieldrin	0.024	0 024	mg/kg	NPSB02-040-111110	1 / 94	0.00052	0.006	2.40E-02	N/A	1.10E-01	c	N/A	N	BSL
	959-98-8	Endosulfan I	ND	ND	mg/kg	ND	0 / 94	0.00031	0 0036	3.60E-03	N/A	1 36E+03	n	N/A	N	BSL
	33213-65-9	Endosulfan II	ND	ND	mg/kg	ND	0 / 94	0.00063	0 0072	7.20E-03	N/A	4 09E+03	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	ND	ND	mg/kg	ND	0 / 94	0.00063	0 0072	7.20E-03	N/A	4 09E+03	n	N/A	N	BSL
	72-20-8	Endrin	0 0044 J	0 061 J	mg/kg	NPSS05-000-101310	2 / 94	0.00063	0 0072	6.10E-02	N/A	1 80E+02	n	N/A	N	BSL
	7421-93-4	Endrin aldehyde	0 0036 J	0.02	mg/kg	ENSS07-000-101110	3 / 94	0.00063	0 0072	2.00E-02	N/A	2 04E+02	n	N/A	N	BSL
	53494-70-5	Endrin ketone	0.036	0 036	mg/kg	NPSS05-000-101310	1 / 94	0.00063	0 0072	3.60E-02	N/A	2 04E+02	n	N/A	N	BSL
	58-89-9	gamma-BHC	ND	ND	mg/kg	ND	0 / 94	0.00021	0 0024	2.40E-03	N/A	1 83E+00	c	N/A	N	BSL
	5103-74-2	gamma-Chlordane	0.001 J	0 044 J	mg/kg	NPSB02-040-111110	1 / 94	0.00021	0 0024	4.40E-02	N/A	5.12E+00	c	N/A	N	BSL
	76-44-8	Heptachlor	ND	ND	mg/kg	ND	0 / 94	0.00031	0 0036	3.60E-03	N/A	2.76E-01	c	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	0.021	0 021	mg/kg	NPSB02-040-111110	1 / 94	0.00031	0 0036	2.10E-02	N/A	1.90E-01	c	N/A	N	BSL
	72-43-5	Methoxychlor	ND	ND	mg/kg	ND	0 / 94	0.0036	0.041	4.10E-02	N/A	3.10E+03	n	N/A	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/kg	ND	0 / 94	0 004	0.052	5.20E-02	N/A	1 60E+00	c	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/kg	ND	0 / 94	0.0024	0 0034	3.40E-03	N/A	2.10E+01	c	N/A	N	BSL
	11104-28-2	Aroclor 1221	ND	ND	mg/kg	ND	0 / 94	0.0024	0 0034	3.40E-03	N/A	5.40E-01	c	N/A	N	BSL
	11141-16-5	Aroclor 1232	ND	ND	mg/kg	ND	0 / 94	0.0024	0 0034	3.40E-03	N/A	5.40E-01	c	N/A	N	BSL
	53469-21-9	Aroclor 1242	ND	ND	mg/kg	ND	0 / 94	0.0024	0 0034	3.40E-03	N/A	7.40E-01	c	N/A	N	BSL
	12672-29-6	Aroclor 1248	ND	ND	mg/kg	ND	0 / 94	0.0024	0 0034	3.40E-03	N/A	7.40E-01	c	N/A	N	BSL
	11097-69-1	Aroclor 1254	0.012 J	0 012 J	mg/kg	ENSB02-020-110810	1 / 94	0.0024	0 0034	1.20E-02	N/A	7.40E-01	c	N/A	N	BSL
	11096-82-5	Aroclor 1260	0 0093 J	0 025	mg/kg	WSS07-000-100710	8 / 94	0.0018	0 0025	2.50E-02	N/A	7.40E-01	c	N/A	N	BSL
	TPCB	Total PCBs	0 0165	0.0325	mg/kg	WSS07-000-100710	9 / 94	0.0081	0.01145	3.25E-02	N/A	7.10E-01	c	N/A	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 94	0.00042	0.078	7.80E-02	N/A	7 31E+00	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/kg	ND	0 / 94	0.00042	0.19	1.90E-01	N/A	3 80E+04	n	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 94	0.00042	0.056	5.60E-02	N/A	2 80E+00	c	N/A	N	BSL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/kg	ND	0 / 94	0.00042	0.14	1.40E-01	N/A	1 80E+05	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/kg	ND	0 / 94	0.00042	0.22	2.20E-01	N/A	1 86E+00	c	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/kg	ND	0 / 94	0.00042	0.056	5.60E-02	N/A	1.70E+01	c	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/kg	ND	0 / 94	0.00042	0.17	1.70E-01	N/A	1.10E+03	n	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/kg	ND	0 / 94	0.0005	0.1	1.00E-01	N/A	9 90E+01	c	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	0 0086	1.2	mg/kg	NPSB08-090-111010	2 / 94	0.00042	0.089	1.20E+00	N/A	1.13E+02	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/kg	ND	0 / 94	0.00042	0.078	7.80E-02	N/A	7.91E-02	c	N/A	N	BSL
	95-50-1	1 2-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 94	0.00042	0.089	8.90E-02	N/A	5.71E+02	n	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/kg	ND	0 / 94	0.00042	0.067	6.70E-02	N/A	1.15E+00	c	N/A	N	BSL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/kg	ND	0 / 94	0.00042	0.056	5.60E-02	N/A	4.70E+00	c	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	0 0036 J	6.6	mg/kg	NPSB08-090-111010	2 / 94	0.00042	0.089	6.60E+00	N/A	8 32E+01	n	N/A	N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 94	0.00042	0.1	1.00E-01	N/A	8 82E+01	n	N/A	N	BSL
	106-46-7	1,4-Dichlorobenzene	0 0013 JH	0.0013 JH	mg/kg	WSB08-090-110210	1 / 94	0.00042	0.078	1.30E-03	N/A	1 20E+01	c	N/A	N	BSL
	78-93-3	2-Butanone	0 0037 J	0 015	mg/kg	NPSB02-040-111110	5 / 94	0.0012	0.24	1.50E-02	N/A	1.17E+05	n	N/A	N	BSL
	591-78-6	2-Hexanone	ND	ND	mg/kg	ND	0 / 94	0.00083	0.19	1.90E-01	N/A	5 33E+02	n	N/A	N	BSL

TABLE 2.6
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
North Pit Exposure Area
Direct Contact with Surface and Subsurface Soils (0-10 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
North Pit Exposure Area Surface Soil 0-10 ft bgs	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/kg	ND	0 / 94	0.00083	0.11	1.10E-01	N/A	2.76E+04	n	N/A	N	BSL
	67-64-1	Acetone	0 0019 J	0.33 JH	mg/kg	WSB08-090-110210	3 / 94	0.0017	0.51	3.30E-01	N/A	2 93E+05	n	N/A	N	BSL
	71-43-2	Benzene	1 2	1.2	mg/kg	NPSB08-090-111010	1 / 94	0.00042	0.067	1.20E+00	N/A	5.40E+00	c	N/A	N	BSL
	75-27-4	Bromodichloromethane	ND	ND	mg/kg	ND	0 / 94	0.00042	0.067	6.70E-02	N/A	1.40E+00	c	N/A	N	BSL
	75-25-2	Bromoform	ND	ND	mg/kg	ND	0 / 94	0.00042	0.078	7.80E-02	N/A	6 03E+01	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/kg	ND	0 / 94	0.00083	0.11	1.10E-01	N/A	3 20E+01	n	N/A	N	BSL
	75-15-0	Carbon disulfide	0 0022 J	0.0037 JH	mg/kg	NPSB08-090-111010	4 / 94	0.00083	0.18	3.70E-03	N/A	3.70E+03	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	0 0062 JH	0.0062 JH	mg/kg	ENSB09-090-110910	1 / 94	0.00042	0.13	6.20E-03	N/A	3 00E+00	c	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/kg	ND	0 / 94	0.00042	0.056	5.60E-02	N/A	5 38E+02	n	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/kg	ND	0 / 94	0.00083	0.11	1.10E-01	N/A	6.10E+04	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/kg	ND	0 / 94	0.00042	0 2	2.00E-01	N/A	1 35E+00	c	N/A	N	BSL
	74-87-3	Chloromethane	ND	ND	mg/kg	ND	0 / 94	0.00077	0.1	1.00E-01	N/A	1 59E+01	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 94	0.00042	0.17	1.70E-01	N/A	5 01E+02	n	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	0.00069 JH	0.00069 JH	mg/kg	ENSB06-090-110910	1 / 94	0.00042	0.056	6.90E-04	N/A	5 30E+01	n	N/A	N	BSL
	110-82-7	Cyclohexane	0.026	22	mg/kg	NPSB08-090-111010	5 / 94	0.00042	0.24	2.20E+01	N/A	2 90E+04	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/kg	ND	0 / 94	0.00042	0.056	5.60E-02	N/A	3 30E+00	c	N/A	N	BSL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/kg	ND	0 / 94	0.00042	0 2	2.00E-01	N/A	4 00E+02	n	N/A	N	BSL
	100-41-4	Ethylbenzene	0.001 J	3.3	mg/kg	NPSB08-090-111010	4 / 94	0.00042	0.1	3.30E+00	N/A	2.70E+01	c	N/A	N	BSL
	98-82-8	Isopropylbenzene	0.00078 J	12 J	mg/kg	NPSB11-090-FD-011812	9 / 94	0.00042	0.11	1.20E+01	N/A	6 25E+03	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/kg	ND	0 / 94	0.00042	0.11	1.10E-01	N/A	1 00E+06	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/kg	ND	0 / 94	0.00042	0.21	2.10E-01	N/A	1.11E+02	c	N/A	N	BSL
	108-87-2	Methylcyclohexane	0 0022 J	48	mg/kg	NPSB08-090-111010	9 / 94	0.00042	0.24	4.80E+01	N/A	3 29E+04	n	N/A	N	BSL
	75-09-2	Methylene chloride	0.001 J	0.0073 J	mg/kg	NPSB10-090-011212	8 / 94	0.00083	0.28	7.30E-03	N/A	9 60E+02	c	N/A	N	BSL
	91-20-3	Naphthalene	0.00062 J	5.3	mg/kg	NPSB08-090-111010	8 / 94	0.00042	0.089	5.30E+00	N/A	1 80E+01	c	N/A	N	BSL
	104-51-8	n-Butylbenzene	0 0037 J	0 043	mg/kg	ENSB06-090-110910	3 / 94	0.00042	0.067	4.30E-02	N/A	3.41E+04	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	0.00047 J	36 J	mg/kg	NPSB11-090-FD-011812	10 / 94	0.00042	0 5	3.60E+01	N/A	4.10E+03	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	0.043 JH	5.4 J	mg/kg	NPSB11-090-FD-011812	5 / 94	0.00042	0.067	5.40E+00	N/A	4 09E+04	n	N/A	N	BSL
	100-42-5	Styrene	ND	ND	mg/kg	ND	0 / 94	0.00042	0.067	6.70E-02	N/A	7 80E+03	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	0.049 J	3.2	mg/kg	NPSB11-090-FD-011812	3 / 94	0.00042	0.067	3.20E+00	N/A	4 09E+04	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/kg	ND	0 / 94	0.0005	0.11	1.10E-01	N/A	7.70E+01	c	N/A	N	BSL
	108-88-3	Toluene	0 0014 J	0.83	mg/kg	NPSB08-090-111010	4 / 94	0.00042	0.078	8.30E-01	N/A	2 92E+04	n	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 94	0.00042	0.1	1.00E-01	N/A	6.42E+02	n	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 94	0.00042	0.056	5.60E-02	N/A	6 09E+00	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/kg	ND	0 / 94	0.00042	0.18	1.80E-01	N/A	6.40E+00	c	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/kg	ND	0 / 94	0.00042	0.089	8.90E-02	N/A	3.40E+03	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/kg	ND	0 / 94	0.00042	0.11	1.10E-01	N/A	1 26E+00	c	N/A	N	BSL
	1330-20-7	Xylenes, Total	0.002 J	20	mg/kg	NPSB08-090-111010	4 / 94	0.0012	0.29	2.00E+01	N/A	2.70E+03	n	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	0.004 JL	2.6	mg/kg	NPSB08-090-111010	4 / 94	0.0018	0.16	2.60E+00	N/A	2.10E+02	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	0 0022 J	41	mg/kg	NPSB08-090-111010	17 / 94	0.0018	0.56	4.10E+01	N/A	5 30E+01	c	N/A	N	BSL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/kg	ND	0 / 94	0.0018	0.16	1.60E-01	N/A	6 20E+04	n	N/A	N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/kg	ND	0 / 94	0.0018	0.18	1.80E-01	N/A	1 60E+02	c	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/kg	ND	0 / 94	0.0018	0.12	1.20E-01	N/A	1 80E+03	n	N/A	N	BSL
	105-67-9	2,4-Dimethylphenol	0 0073 JL	2.1 JL	mg/kg	WSB08-090-110210	5 / 94	0.0018	0.18	2.10E+00	N/A	1 20E+04	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/kg	ND	0 / 94	0.0033	0.18	1.80E-01	N/A	1 20E+03	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 94	0.0018	0.18	1.80E-01	N/A	2 81E+00	c	N/A	N	BSL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 94	0.0018	0.18	1.80E-01	N/A	2 81E+00	c	N/A	N	BSL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/kg	ND	0 / 94	0.0018	0.23	2.30E-01	N/A	4 96E+04	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/kg	ND	0 / 94	0.0018	0.18	1.80E-01	N/A	5.10E+03	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	0 0022 J	58	mg/kg	NPSB08-090-111010	23 / 94	0.0018	0.66	5.80E+01	N/A	2 20E+03	n	N/A	N	BSL
	95-48-7	2-Methylphenol	0.005 JL	0.02 JL	mg/kg	ENSB07-030-120810	3 / 94	0.0018	0.16	2.00E-02	N/A	3.10E+04	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/kg	ND	0 / 94	0.0018	0.18	1.80E-01	N/A	2 94E+01	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/kg	ND	0 / 94	0.0018	0.26	2.60E-01	N/A	1 36E+03	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol	0.015 JL	0 046 JL	mg/kg	ENSB07-030-120810	3 / 94	0.0018	0.16	4.60E-02	N/A	3.41E+03	n	N/A	N	BSL
	91-94-1	3 3 -Dichlorobenzidine	ND	ND	mg/kg	ND	0 / 93	0.0018	0.17	1.70E-01	N/A	3 80E+00	c	N/A	N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/kg	ND	0 / 94	0.0018	0.14	1.40E-01	N/A	3 55E+01	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/kg	ND	0 / 94	0.0018	0.18	1.80E-01	N/A	4 90E+01	n	N/A	N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 94	0.0018	0.18	1.80E-01	N/A	1.10E-01	c	N/A	Y	ASL

TABLE 2.6
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
North Pit Exposure Area
Direct Contact with Surface and Subsurface Soils (0-10 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
North Pit Exposure Area Surface Pit Soil 0-10 ft bgs	59-50-7	4-Chloro-3-methylphenol	0.008 J	0 008 J	mg/kg	NPSB09-020-111010	1 / 94	0.0018	0.18	8.00E-03	N/A	3.41E+03	n	N/A	N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/kg	ND	0 / 94	0.0018	0.12	1.20E-01	N/A	8 60E+00	c	N/A	N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 94	0.0018	0.12	1.20E-01	N/A	7.99E-02	c	N/A	Y	ASL
	100-01-6	4-Nitroaniline	ND	ND	mg/kg	ND	0 / 94	0.0018	0.18	1.80E-01	N/A	8 60E+01	c	N/A	N	BSL
	100-02-7	4-Nitrophenol	ND	ND	mg/kg	ND	0 / 94	0.0036	0.21	2.10E-01	N/A	1 36E+03	n	N/A	N	BSL
	83-32-9	Acenaphthene	0 0022 J	2.1	mg/kg	NPSB08-090-111010	27 / 94	0.0018	0.12	2.10E+00	N/A	3 30E+04	n	N/A	N	BSL
	208-96-8	Acenaphthylene	0.004 J	0.76	mg/kg	WSB08-090-110210	15 / 94	0.0018	0.12	7.60E-01	N/A	3.72E+04	n	N/A	N	BSL
	98-86-2	Acetophenone	0 0028 J	0 023 JL	mg/kg	NPSS02-000-101310	11 / 94	0.0018	0.13	2.30E-02	N/A	6 81E+04	n	N/A	N	BSL
	120-12-7	Anthracene	0.002 J	0.43	mg/kg	WSB08-090-110210	40 / 94	0.0018	0.12	4.30E-01	N/A	1.70E+05	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	0 0022 J	0.24	mg/kg	WSB07-010-110210	55 / 94	0.0018	0.16	2.40E-01	N/A	2.10E+00	c	N/A	N	BSL
	100-52-7	Benzaldehyde	0 0028 JL	0 011 JL	mg/kg	NPSS02-000-101310	3 / 94	0.0018	0.26	1.10E-02	N/A	1 00E+05	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	0 0039 J	0.38 JL	mg/kg	NPSS05-000-101310	54 / 94	0.0018	0.13	3.80E-01	N/A	2.10E-01	c	N/A	Y	ASL
	205-99-2	Benzo(b)fluoranthene	0 0057 J	0.34	mg/kg	NPSB10-040-011212	52 / 94	0.0018	0.18	3.40E-01	N/A	2.10E+00	c	N/A	N	BSL
	191-24-2	Benzo(g,h,i)perylene	0.004 J	0.16	mg/kg	NPSS03-000-101210	45 / 94	0.0019	0.16	1.60E-01	N/A	1 86E+04	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	0.005 J	0.38 JL	mg/kg	NPSS02-000-101310	51 / 94	0.0018	0.18	3.80E-01	N/A	2.10E+01	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/kg	ND	0 / 94	0.0018	0.13	1.30E-01	N/A	6.25E-01	c	N/A	N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/kg	ND	0 / 94	0.0018	0.16	1.60E-01	N/A	2.77E-01	c	N/A	N	BSL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/kg	ND	0 / 94	0.0018	0.15	1.50E-01	N/A	1 08E+01	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0 0043	84	mg/kg	NPSS01-000-101210	22 / 94	0.0018	3 5	8.40E+01	N/A	5 63E+01	c	N/A	Y	ASL
	85-68-7	Butyl benzyl phthalate	0 0045 J	0 076 J	mg/kg	NPSS07-000-101310	16 / 94	0.0025	0.14	7.60E-02	N/A	9.10E+02	c	N/A	N	BSL
	105-60-2	Caprolactam	0.003 J	0.22	mg/kg	ENSS06-000-101110	13 / 94	0.0022	0.13	2.20E-01	N/A	3 00E+05	n	N/A	N	BSL
	86-74-8	Carbazole	0 0028 JL	0 065 J	mg/kg	NPSS01-000-101210	30 / 94	0.0018	0.12	6.50E-02	N/A	9 54E+01	c	N/A	N	BSL
	218-01-9	Chrysene	0.002 J	0.55	mg/kg	NPSS05-000-101310	63 / 94	0.0018	0.16	5.50E-01	N/A	2.10E+02	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	0 0029 J	0 064	mg/kg	WSB07-010-110210	21 / 94	0.0022	0.12	6.40E-02	N/A	2.10E-01	c	N/A	N	BSL
	132-64-9	Dibenzofuran	0 0021 J	0.58	mg/kg	WSB08-090-110210	15 / 94	0.0018	0.12	5.80E-01	N/A	1 00E+03	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	ND	ND	mg/kg	ND	0 / 94	0.0018	0.18	1.80E-01	N/A	4 90E+05	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	0 0057 J	0.0085	mg/kg	ENSS03FD-000-101110	2 / 94	0.0022	0.13	8.50E-03	N/A	5.45E+05	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	0 0029 J	0.46	mg/kg	ENSB09-090-110910	12 / 94	0.0022	0.14	4.60E-01	N/A	6 20E+04	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	0 0073 J	0 062 J	mg/kg	ENSS03FD-000-101110	5 / 94	0.0022	0.16	6.20E-02	N/A	2.73E+04	n	N/A	N	BSL
	206-44-0	Fluoranthene	0 0021 J	1.1	mg/kg	NPSB08-090-111010	65 / 94	0.0018	0.12	1.10E+00	N/A	2 20E+04	n	N/A	N	BSL
	86-73-7	Fluorene	0 0026 J	5.7	mg/kg	NPSB08-090-111010	24 / 94	0.0018	0.12	5.70E+00	N/A	2 20E+04	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/kg	ND	0 / 94	0.0018	0.14	1.40E-01	N/A	6.91E-01	c	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/kg	ND	0 / 94	0.0018	0.24	2.40E-01	N/A	2 28E+00	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/kg	ND	0 / 94	0.0018	0 2	2.00E-01	N/A	1 02E+01	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/kg	ND	0 / 94	0.0018	0.22	2.20E-01	N/A	4 30E+01	c	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	0 0063 J	0.19	mg/kg	NPSB10-040-011212	39 / 94	0.0018	0.19	1.90E-01	N/A	2.10E+00	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/kg	ND	0 / 94	0.0018	0.17	1.70E-01	N/A	1 80E+03	c	N/A	N	BSL
	91-20-3	Naphthalene	0 0023 J	15	mg/kg	NPSB08-090-111010	14 / 94	0.0018	0 8	1.50E+01	N/A	1 80E+01	c	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/kg	ND	0 / 94	0.0018	0.18	1.80E-01	N/A	5 67E+00	c	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/kg	ND	0 / 94	0.0022	0.22	2.20E-01	N/A	1.36E-01	c	N/A	Y	ASL
	86-30-6	N-Nitrosodiphenylamine	0 0067 J	0.0067 J	mg/kg	ENSB09-010-110910	1 / 94	0.0022	0.12	6.70E-03	N/A	1 95E+02	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	0 0046 J	0.0046 J	mg/kg	WSB07-040-110210	1 / 94	0 002	0.16	4.60E-03	N/A	2.70E+00	c	N/A	N	BSL
	85-01-8	Phenanthrene	0 0042 J	21	mg/kg	NPSB08-090-111010	56 / 94	0.0028	0.73	2.10E+01	N/A	1 86E+04	n	N/A	N	BSL
	108-95-2	Phenol	0.033 JL	0.11 JL	mg/kg	ENSB07-030-120810	3 / 94	0.0022	0.18	1.10E-01	N/A	1 80E+05	n	N/A	N	BSL
	129-00-0	Pyrene	0 0021 J	2.1	mg/kg	NPSB08-090-111010	65 / 94	0.0018	0.12	2.10E+00	N/A	1.70E+04	n	N/A	N	BSL
	57-12-5	Cyanide	0.715 J	34.3	mg/kg	ENSS08-000-101110	14 / 94	0.56	1 3	3.43E+01	N/A	5 83E+02	n	N/A	N	BSL

Notes
(1) The maximum reported concentration was used for screening.
(2) Background data were not considered.
(3) Screening values are the lower of the USEPA industrial RSLs (USEPA, 2013) and TRRP 30-acre commercial/industrial PCLs (TCEQ, 2012a) for direct contact with surface soils; TRRP PCLs for carcinogens were adjusted a 10^{-6} risk.
(4) Rationale for Selection or Deletion:
ASL = Above Screening Level
BSL = Below Screening Level

Definitions:
a= Action level
ARAR = Applicable or relevant and appropriate requirements
CAS No. = Chemical Abstract Registry Number
c = Carcinogen
J = Estimated value
L = Estimated concentration is biased low
mg/kg = milligram/kilogram
n = Noncarcinogen
N/A = Not applicable or available
PCLs = Protective Concentration Levels
RSLs = Regional Screening Levels
TBC = To be considered values
TRRP = Texas Risk Reduction Program
USEPA = United States Environmental Protection Agency

TABLE 2.7
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
North Pit Exposure Area
Migration of Vapors from Subsurface Soils to Ambient Air (> 2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
North Pit Exposure Area Subsurface Soil >2 ft bgs (Outdoor Air Vapors)	7429-90-5	Aluminum	1750	16100	mg/kg	NSPL10-100-011212	57 / 57	20	31	1.61E+04	N/A	N/A	---	N/A	N/A	N/A
	7440-36-0	Antimony	1 62	1.62	mg/kg	NPSB09-020-111010	1 / 57	0.21	0 34	1.62E+00	N/A	N/A	---	N/A	N/A	N/A
	7440-38-2	Arsenic	0.891	8 6	mg/kg	NPSB09-020-111010	57 / 57	0.059	0.16	8.60E+00	N/A	N/A	---	N/A	N/A	N/A
	7440-39-3	Barium	3 66	1170	mg/kg	NPSB01-020-111110	57 / 57	0.079	12	1.17E+03	N/A	N/A	---	N/A	N/A	N/A
	7440-41-7	Beryllium	0.149 J	1.38	mg/kg	NPSB12-040-012512	57 / 57	0.049	0 31	1.38E+00	N/A	N/A	---	N/A	N/A	N/A
	7440-43-9	Cadmium	0 0777 J	31	mg/kg	NPSB09-020-111010	55 / 57	0.04	0.078	3.10E+01	N/A	N/A	---	N/A	N/A	N/A
	7440-47-3	Chromium	1.78	10.6	mg/kg	WSB06-010-120610/ NSPL10-100-011212	57 / 57	0.049	0.14	1.06E+01	N/A	N/A	---	N/A	N/A	N/A
	7440-48-4	Cobalt	0.838	7.7	mg/kg	NPSB08-020-111010	57 / 57	0.03	0.11	7.70E+00	N/A	N/A	---	N/A	N/A	N/A
	7440-50-8	Copper	0.766	222	mg/kg	NPSB09-020-111010	57 / 57	0.1	15	2.22E+02	N/A	N/A	---	N/A	N/A	N/A
	7439-92-1	Lead	2.2	745	mg/kg	NPSB09-020-111010	57 / 57	0.049	5.5	7.45E+02	N/A	N/A	---	N/A	N/A	N/A
	7439-96-5	Manganese	18.4 JH	787	mg/kg	WSB05-110-110310	57 / 57	0.072	12	7.87E+02	N/A	N/A	---	N/A	N/A	N/A
	7440-02-0	Nickel	1.48	10.8	mg/kg	NSPL10-100-011212	57 / 57	0.059	0 38	1.08E+01	N/A	N/A	---	N/A	N/A	N/A
	7782-49-2	Selenium	0.248 J	157	mg/kg	NPSB09-020-111010	53 / 57	0.19	0 34	1.57E+02	N/A	N/A	---	N/A	N/A	N/A
	7440-22-4	Silver	0 0465 J	8.51	mg/kg	NPSB09-020-111010	13 / 57	0.04	0 25	8.51E+00	N/A	N/A	---	N/A	N/A	N/A
	7440-28-0	Thallium	0 0765 J	0 311 J	mg/kg	WSB06-020-120610	39 / 57	0.069	0.16	3.11E-01	N/A	N/A	---	N/A	N/A	N/A
	7440-62-2	Vanadium	5.1	32.6	mg/kg	WSB06-020-120610	57 / 57	0.069	0 36	3.26E+01	N/A	N/A	---	N/A	N/A	N/A
	7440-66-6	Zinc	5 65	2450	mg/kg	NPSB09-020-111010	57 / 57	0.25	29	2.45E+03	N/A	N/A	---	N/A	N/A	N/A
	7439-97-6	Mercury	0 000531 J	28.6	mg/kg	NPSB09-020-111010	55 / 57	0 00023	0.013	2.86E+01	N/A	3.32E+00	n	N/A	Y	ASL
	72-54-8	4,4 -DDD	0 0083	0.0087	mg/kg	NPSB11-090-011812	2 / 57	0 00056	0.0059	8.70E-03	N/A	N/A	---	N/A	N/A	N/A
	72-55-9	4,4 -DDE	0 0043 J	0.12	mg/kg	NPSB02-040-111110	3 / 57	0 00056	0.0059	1.20E-01	N/A	N/A	---	N/A	N/A	N/A
	50-29-3	4,4 -DDT	0 0013 J	0 011 J	mg/kg	NPSB08-090-111010	2 / 57	0 00056	0.0059	1.10E-02	N/A	1.05E+02	c	N/A	N	BSL
	309-00-2	Aldrin	ND	ND	mg/kg	ND	0 / 57	0 00033	0.0035	3.50E-03	N/A	7.17E-01	c	N/A	N	BSL
	319-84-6	alpha-BHC	0.001 J	0.0017 J	mg/kg	ENSB07-090-120810	2 / 57	0 00033	0.0035	1.70E-03	N/A	1.20E+00	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	0.025 J	0 025 J	mg/kg	NPSB02-040-111110	1 / 57	0 00022	0.0023	2.50E-02	N/A	3.55E+02	c	N/A	N	BSL
	319-85-7	beta-BHC	ND	ND	mg/kg	ND	0 / 57	0 00033	0.0035	3.50E-03	N/A	6.20E+00	c	N/A	N	BSL
	319-86-8	delta-BHC	0.001 J	0 011 J	mg/kg	NPSB08-090-111010	2 / 57	0 00022	0.0023	1.10E-02	N/A	8.77E+00	c	N/A	N	BSL
	60-57-1	Dieldrin	0.024	0 024	mg/kg	NPSB02-040-111110	1 / 57	0 00056	0.0059	2.40E-02	N/A	2.74E+00	c	N/A	N	BSL
	959-98-8	Endosulfan I	ND	ND	mg/kg	ND	0 / 57	0 00033	0.0035	3.50E-03	N/A	N/A	---	N/A	N/A	N/A
	33213-65-9	Endosulfan II	ND	ND	mg/kg	ND	0 / 57	0 00067	0.007	7.00E-03	N/A	N/A	---	N/A	N/A	N/A
	1031-07-8	Endosulfan sulfate	ND	ND	mg/kg	ND	0 / 57	0 00067	0.007	7.00E-03	N/A	N/A	---	N/A	N/A	N/A
	72-20-8	Endrin	ND	ND	mg/kg	ND	0 / 57	0 00067	0.007	7.00E-03	N/A	N/A	---	N/A	N/A	N/A
	7421-93-4	Endrin aldehyde	ND	ND	mg/kg	ND	0 / 57	0 00067	0.007	7.00E-03	N/A	N/A	---	N/A	N/A	N/A
	53494-70-5	Endrin ketone	ND	ND	mg/kg	ND	0 / 57	0 00067	0.007	7.00E-03	N/A	N/A	---	N/A	N/A	N/A
	58-89-9	gamma-BHC	ND	ND	mg/kg	ND	0 / 57	0 00022	0.0023	2.30E-03	N/A	N/A	---	N/A	N/A	N/A
	5103-74-2	gamma-Chlordane	0.044 J	0 044 J	mg/kg	NPSB02-040-111110	1 / 57	0 00022	0.0023	4.40E-02	N/A	8.36E+01	c	N/A	N	BSL
	76-44-8	Heptachlor	ND	ND	mg/kg	ND	0 / 57	0 00033	0.0035	3.50E-03	N/A	7 88E-01	c	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	0.021	0 021	mg/kg	NPSB02-040-111110	1 / 57	0 00033	0.0035	2.10E-02	N/A	2.05E+00	c	N/A	N	BSL
	72-43-5	Methoxychlor	ND	ND	mg/kg	ND	0 / 57	0 0038	0 04	4.00E-02	N/A	N/A	---	N/A	N/A	N/A
	8001-35-2	Toxaphene	ND	ND	mg/kg	ND	0 / 57	0 0042	0.045	4.50E-02	N/A	8.25E+01	c	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/kg	ND	0 / 57	0 0027	0.004	4.00E-03	N/A	N/A	---	N/A	N/A	N/A
	11104-28-2	Aroclor 1221	ND	ND	mg/kg	ND	0 / 57	0 0027	0.004	4.00E-03	N/A	N/A	---	N/A	N/A	N/A
	11141-16-5	Aroclor 1232	ND	ND	mg/kg	ND	0 / 57	0 0027	0.004	4.00E-03	N/A	N/A	---	N/A	N/A	N/A
	53469-21-9	Aroclor 1242	ND	ND	mg/kg	ND	0 / 57	0 0027	0.004	4.00E-03	N/A	N/A	---	N/A	N/A	N/A
	12672-29-6	Aroclor 1248	ND	ND	mg/kg	ND	0 / 57	0 0027	0.004	4.00E-03	N/A	N/A	---	N/A	N/A	N/A
	11097-69-1	Aroclor 1254	0.012 J	0 012 J	mg/kg	ENSB02-020-110810	1 / 57	0 0027	0.004	1.20E-02	N/A	N/A	---	N/A	N/A	N/A
	11096-82-5	Aroclor 1260	ND	ND	mg/kg	ND	0 / 57	0.002	0.003	3.00E-03	N/A	N/A	---	N/A	N/A	N/A
	TPCB	Total PCBs	0.02035	0 02035	mg/kg	ENSB02-020-110810	1 / 57	0 0081	0.0128	2.04E-02	N/A	4.69E+00	c	N/A	N	BSL
	630-20-6	1 1 1 2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 57	0 00036	0.084	8.40E-02	N/A	7.83E+00	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/kg	ND	0 / 57	0 00042	0.2	2.00E-01	N/A	5.64E+04	n	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 57	0 00026	0 06	6.00E-02	N/A	N/A	---	N/A	N/A	N/A
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/kg	ND	0 / 57	0 00042	0.16	1.60E-01	N/A	3.32E+05	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/kg	ND	0 / 57	0 00042	0 24	2.40E-01	N/A	1.93E+00	c	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/kg	ND	0 / 57	0 00026	0 06	6.00E-02	N/A	2.65E+04	n	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/kg	ND	0 / 57	0 00042	0.18	1.80E-01	N/A	3.76E+03	n	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/kg	ND	0 / 57	0 00047	0.11	1.10E-01	N/A	1.09E+02	n	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	0 0086	8 3	mg/kg	ESSB09-120-011012	6 / 57	0 00042	0.096	8.30E+00	N/A	1.13E+02	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/kg	ND	0 / 57	0 00036	0.084	8.40E-02	N/A	8 37E-02	c	N/A	Y	ASL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 57	0 00042	0.096	9.60E-02	N/A	5.74E+02	n	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/kg	ND	0 / 57	0 00031	0.072	7.20E-02	N/A	1.19E+00	c	N/A	N	BSL
	78-87-5	1 2-Dichloropropane	ND	ND	mg/kg	ND	0 / 57	0 00026	0 06	6.00E-02	N/A	4.42E+01	n	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	0 0036 J	6 6	mg/kg	NPSB08-090-111010	5 / 57	0 00042	0.096	6.60E+00	N/A	8.33E+01	n	N/A	N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 57	0 00042	0.11	1.10E-01	N/A	8.84E+01	n	N/A	N	BSL
	106-46-7	1 4-Dichlorobenzene	0 0013 JH	0.0013 JH	mg/kg	WSB08-090-110210	1 / 57	0 00036	0.084	1.30E-03	N/A	1.76E+03	n	N/A	N	BSL

TABLE 2.7
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
North Pit Exposure Area
Migration of Vapors from Subsurface Soils to Ambient Air (> 2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
North Pit Exposure Area Subsurface Soil >2 ft bgs (Outdoor Air Vapors)	78-93-3	2-Butanone	0 0037 J	0.02	mg/kg	NSPL10-100-011212	8 / 57	0 0011	0 26	2.00E-02	N/A	1.45E+05	n	N/A	N	BSL
	591-78-6	2-Hexanone	ND	ND	mg/kg	ND	0 / 57	0 00083	0.2	2.00E-01	N/A	5.95E+02	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/kg	ND	0 / 57	0 00052	0.12	1.20E-01	N/A	4.17E+04	n	N/A	N	BSL
	67-64-1	Acetone	0.011 J	0.33 JH	mg/kg	WSB08-090-110210	4 / 57	0 0017	0 55	3.30E-01	N/A	4.30E+05	n	N/A	N	BSL
	71-43-2	Benzene	1.2	1 2	mg/kg	NPSB08-090-111010	1 / 57	0 00031	0.072	1.20E+00	N/A	1.41E+01	c	N/A	N	BSL
	75-27-4	Bromodichloromethane	ND	ND	mg/kg	ND	0 / 57	0 00031	0.072	7.20E-02	N/A	N/A	---	N/A	N/A	N/A
	75-25-2	Bromoform	ND	ND	mg/kg	ND	0 / 57	0 00036	0.084	8.40E-02	N/A	7.24E+01	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/kg	ND	0 / 57	0 00052	0.12	1.20E-01	N/A	5.53E+01	n	N/A	N	BSL
	75-15-0	Carbon disulfide	0.001 J	0.0074 J	mg/kg	NSPL10-100-011212	5 / 57	0 00083	0.19	7.40E-03	N/A	7.74E+03	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	0 0062 JH	0.0062 JH	mg/kg	ENSB09-090-110910	1 / 57	0 00042	0.14	6.20E-03	N/A	5.16E+00	c	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/kg	ND	0 / 57	0 00026	0 06	6.00E-02	N/A	5.53E+02	n	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/kg	ND	0 / 57	0 00052	0.12	1.20E-01	N/A	1.11E+05	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/kg	ND	0 / 57	0 00042	0 22	2.20E-01	N/A	1.35E+00	c	N/A	N	BSL
	74-87-3	Chloromethane	ND	ND	mg/kg	ND	0 / 57	0 00047	0.11	1.10E-01	N/A	1.72E+01	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 57	0 00042	0.18	1.80E-01	N/A	6.63E+02	n	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	0.00069 JH	0 00069 JH	mg/kg	ENSB06-090-110910	1 / 57	0 00026	0 06	6.90E-04	N/A	2.21E+02	n	N/A	N	BSL
	110-82-7	Cyclohexane	0 0035 J	22	mg/kg	NPSB08-090-111010	10 / 57	0 00042	0 24	2.20E+01	N/A	6.63E+04	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/kg	ND	0 / 57	0 00026	0 06	6.00E-02	N/A	N/A	---	N/A	N/A	N/A
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/kg	ND	0 / 57	0 00042	0 22	2.20E-01	N/A	1.11E+03	n	N/A	N	BSL
	100-41-4	Ethylbenzene	0.001 J	3 3	mg/kg	NPSB08-090-111010	9 / 57	0 00042	0.11	3.30E+00	N/A	2.10E+04	n	N/A	N	BSL
	98-82-8	Isopropylbenzene	0.00078 J	12 J	mg/kg	NPSB11-090-FD-011812	16 / 57	0 00042	0.12	1.20E+01	N/A	6.66E+03	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/kg	ND	0 / 57	0 00042	0.12	1.20E-01	N/A	N/A	---	N/A	N/A	N/A
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/kg	ND	0 / 57	0 00042	0 23	2.30E-01	N/A	1.19E+02	c	N/A	N	BSL
	108-87-2	Methylcyclohexane	0 0038 J	67	mg/kg	ESSB09-140-011012	13 / 57	0 00042	2	6.70E+01	N/A	3.32E+04	n	N/A	N	BSL
	75-09-2	Methylene chloride	0 0011 J	0 011 J	mg/kg	NSPL10-100-011212	5 / 57	0 00083	0.3	1.10E-02	N/A	1.11E+03	c	N/A	N	BSL
	91-20-3	Naphthalene	0 0011 J	5 3	mg/kg	NPSB08-090-111010	11 / 57	0 00042	0.096	5.30E+00	N/A	1.93E+02	n	N/A	N	BSL
	104-51-8	n-Butylbenzene	0 0037 J	1.4	mg/kg	ESSB09-120-011012	6 / 57	0 00031	0.072	1.40E+00	N/A	N/A	---	N/A	N/A	N/A
	103-65-1	n-Propylbenzene	0.00047 J	36 J	mg/kg	NPSB11-090-FD-011812	17 / 57	0 00042	0.5	3.60E+01	N/A	4.55E+03	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	0 0039 J	5 6	mg/kg	NPSB11-100-011812	12 / 57	0 00031	0.072	5.60E+00	N/A	N/A	---	N/A	N/A	N/A
	100-42-5	Styrene	0.025	0 025	mg/kg	NSPL10-100-011212	1 / 57	0 00031	0.072	2.50E-02	N/A	8.11E+03	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	0.049 J	5 6	mg/kg	NPSB11-110-011812	7 / 57	0 00031	0.072	5.60E+00	N/A	N/A	---	N/A	N/A	N/A
	127-18-4	Tetrachloroethene	ND	ND	mg/kg	ND	0 / 57	0 0005	0.12	1.20E-01	N/A	8.14E+01	c	N/A	N	BSL
	108-88-3	Toluene	0 0014 J	0.83	mg/kg	NPSB08-090-111010	4 / 57	0 00036	0.084	8.30E-01	N/A	4.53E+04	n	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 57	0 00042	0.11	1.10E-01	N/A	6.63E+02	n	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 57	0 00026	0 06	6.00E-02	N/A	7.74E+00	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/kg	ND	0 / 57	0 00042	0.19	1.90E-01	N/A	2.21E+01	n	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/kg	ND	0 / 57	0 00042	0.096	9.60E-02	N/A	N/A	---	N/A	N/A	N/A
	75-01-4	Vinyl chloride	ND	ND	mg/kg	ND	0 / 57	0 00042	0.12	1.20E-01	N/A	3.68E+00	c	N/A	N	BSL
	1330-20-7	Xylenes, Total	0.002 J	20	mg/kg	NPSB08-090-111010	5 / 57	0 0012	0 31	2.00E+01	N/A	6.74E+03	n	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	0.004 JL	2 6	mg/kg	NPSB08-090-111010	9 / 57	0 0018	0.071	2.60E+00	N/A	N/A	---	N/A	N/A	N/A
	90-12-0	1-Methylnaphthalene	0 0022 J	41	mg/kg	NPSB08-090-111010	16 / 57	0 0018	0 56	4.10E+01	N/A	N/A	---	N/A	N/A	N/A
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/kg	ND	0 / 57	0 0018	0.068	6.80E-02	N/A	N/A	---	N/A	N/A	N/A
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/kg	ND	0 / 57	0 0018	0 08	8.00E-02	N/A	1.70E+02	c	N/A	N	BSL
	120-83-2	2 4-Dichlorophenol	ND	ND	mg/kg	ND	0 / 57	0 0018	0.054	5.40E-02	N/A	N/A	---	N/A	N/A	N/A
	105-67-9	2,4-Dimethylphenol	0 0045 J	2.1 JL	mg/kg	WSB08-090-110210	11 / 57	0 0018	0 08	2.10E+00	N/A	N/A	---	N/A	N/A	N/A
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/kg	ND	0 / 57	0 0037	0 08	8.00E-02	N/A	N/A	---	N/A	N/A	N/A
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 57	0 0018	0 08	8.00E-02	N/A	N/A	---	N/A	N/A	N/A
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 57	0 0018	0.078	7.80E-02	N/A	N/A	---	N/A	N/A	N/A
	91-58-7	2-Chloronaphthalene	ND	ND	mg/kg	ND	0 / 57	0 0018	0.1	1.00E-01	N/A	N/A	---	N/A	N/A	N/A
	95-57-8	2-Chlorophenol	ND	ND	mg/kg	ND	0 / 57	0 0018	0.078	7.80E-02	N/A	N/A	---	N/A	N/A	N/A
	91-57-6	2-Methylnaphthalene	0 0022 J	58	mg/kg	NPSB08-090-111010	16 / 57	0 0018	0 66	5.80E+01	N/A	N/A	---	N/A	N/A	N/A
	95-48-7	2-Methylphenol	0.016 JL	0.02 JL	mg/kg	ENSB07-030-120810	2 / 57	0 0018	0.071	2.00E-02	N/A	N/A	---	N/A	N/A	N/A
	88-74-4	2-Nitroaniline	ND	ND	mg/kg	ND	0 / 57	0 0018	0 08	8.00E-02	N/A	3.43E+01	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/kg	ND	0 / 57	0 0018	0.11	1.10E-01	N/A	N/A	---	N/A	N/A	N/A
	106-44-5	3&4-Methylphenol	0 0029 J	0 046 JL	mg/kg	ENSB07-030-120810	4 / 57	0 0018	0.068	4.60E-02	N/A	N/A	---	N/A	N/A	N/A
	91-94-1	3 3 -Dichlorobenzidine	ND	ND	mg/kg	ND	0 / 57	0 0018	0.075	7.50E-02	N/A	N/A	---	N/A	N/A	N/A
	99-09-2	3-Nitroaniline	ND	ND	mg/kg	ND	0 / 57	0 0018	0.063	6.30E-02	N/A	4.30E+01	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/kg	ND	0 / 57	0 0018	0 08	8.00E-02	N/A	N/A	---	N/A	N/A	N/A
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 57	0 0018	0 08	8.00E-02	N/A	8.42E-01	c	N/A	N	BSL
	59-50-7	4-Chloro-3-methylphenol	0.008 J	0 008 J	mg/kg	NPSB09-020-111010	1 / 57	0 0018	0 08	8.00E-03	N/A	N/A	---	N/A	N/A	N/A

TABLE 2.7
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
North Pit Exposure Area
Migration of Vapors from Subsurface Soils to Ambient Air (> 2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
North Pit Exposure Area Subsurface Soil >2 ft bgs (Outdoor Air Vapors)	106-47-8	4-Chloroaniline	ND	ND	mg/kg	ND	0 / 57	0 0018	0.054	5.40E-02	N/A	N/A	---	N/A	N/A	N/A
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 57	0 0018	0.054	5.40E-02	N/A	2.15E-01	c	N/A	N	BSL
	100-01-6	4-Nitroaniline	ND	ND	mg/kg	ND	0 / 57	0 0018	0 08	8.00E-02	N/A	8.69E+02	n	N/A	N	BSL
	100-02-7	4-Nitrophenol	ND	ND	mg/kg	ND	0 / 57	0 0038	0.092	9.20E-02	N/A	N/A	---	N/A	N/A	N/A
	83-32-9	Acenaphthene	0 0029 J	2.1	mg/kg	NPSB08-090-111010	19 / 57	0 0018	0.054	2.10E+00	N/A	N/A	---	N/A	N/A	N/A
	208-96-8	Acenaphthylene	0 0027 J	0.76	mg/kg	WSB08-090-110210	14 / 57	0 0018	0.054	7.60E-01	N/A	N/A	---	N/A	N/A	N/A
	98-86-2	Acetophenone	0 0063 J	0.0063 J	mg/kg	NPSB12-040-012512	1 / 57	0 0018	0.058	6.30E-03	N/A	N/A	---	N/A	N/A	N/A
	120-12-7	Anthracene	0 0047 J	0.43	mg/kg	WSB08-090-110210	13 / 57	0 0018	0.054	4.30E-01	N/A	N/A	---	N/A	N/A	N/A
	56-55-3	Benz(a)anthracene	0 0022 J	0 2	mg/kg	NPSB10-040-011212	20 / 57	0 0018	0.068	2.00E-01	N/A	3.24E+02	c	N/A	N	BSL
	100-52-7	Benzaldehyde	0 0028 JL	0.0067 JL	mg/kg	WSB05-110-110310	2 / 57	0 0018	0.11	6.70E-03	N/A	N/A	---	N/A	N/A	N/A
	50-32-8	Benzo(a)pyrene	0 0029 J	0.16	mg/kg	NPSB10-040-011212	18 / 57	0 0018	0.056	1.60E-01	N/A	7.32E+01	c	N/A	N	BSL
	205-99-2	Benzo(b)fluoranthene	0 0021 J	0.34	mg/kg	NPSB10-040-011212	14 / 57	0 0018	0 08	3.40E-01	N/A	5.31E+02	c	N/A	N	BSL
	191-24-2	Benzo(g,h,i)perylene	0 0024 J	0.14	mg/kg	WSB07-010-110210	15 / 57	0.002	0.071	1.40E-01	N/A	N/A	---	N/A	N/A	N/A
	207-08-9	Benzo(k)fluoranthene	0.005 J	0.36	mg/kg	NPSB10-040-011212	12 / 57	0 0018	0 08	3.60E-01	N/A	1.32E+04	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/kg	ND	0 / 57	0 0018	0.058	5.80E-02	N/A	9.76E-01	c	N/A	N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/kg	ND	0 / 57	0 0018	0.068	6.80E-02	N/A	3.10E-01	c	N/A	N	BSL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/kg	ND	0 / 57	0 0018	0.066	6.60E-02	N/A	1.79E+01	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0 0049	1 2	mg/kg	NPSB11-090-FD-011812	10 / 57	0 0018	0.16	1.20E+00	N/A	N/A	---	N/A	N/A	N/A
	85-68-7	Butyl benzyl phthalate	0 0097	0.0097	mg/kg	NPSB02-040-111110	1 / 57	0 0028	0.061	9.70E-03	N/A	N/A	---	N/A	N/A	N/A
	105-60-2	Caprolactam	0.003 J	0.0067 J	mg/kg	NPSB12-070-012512	8 / 57	0 0023	0.058	6.70E-03	N/A	N/A	---	N/A	N/A	N/A
	86-74-8	Carbazole	0 0036 J	0 033	mg/kg	NPSB10-040-011212	4 / 57	0 0018	0.054	3.30E-02	N/A	N/A	---	N/A	N/A	N/A
	218-01-9	Chrysene	0.002 J	0 5	mg/kg	NPSB08-090-111010	24 / 57	0 0018	0.071	5.00E-01	N/A	5.11E+04	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	0 0033 J	0 044	mg/kg	NPSB10-040-011212	6 / 57	0 0023	0.054	4.40E-02	N/A	1.70E+02	c	N/A	N	BSL
	132-64-9	Dibenzofuran	0 0021 J	0.72	mg/kg	NPSB11-110-011812	15 / 57	0 0018	0.054	7.20E-01	N/A	N/A	---	N/A	N/A	N/A
	84-66-2	Diethyl phthalate	ND	ND	mg/kg	ND	0 / 57	0 0018	0 08	8.00E-02	N/A	N/A	---	N/A	N/A	N/A
	131-11-3	Dimethyl phthalate	ND	ND	mg/kg	ND	0 / 57	0 0023	0.058	5.80E-02	N/A	N/A	---	N/A	N/A	N/A
	84-74-2	Di-n-butyl phthalate	0 0032	0.46	mg/kg	ENSB09-090-110910	2 / 57	0 0023	0.061	4.60E-01	N/A	N/A	---	N/A	N/A	N/A
	117-84-0	Di-n-octyl phthalate	ND	ND	mg/kg	ND	0 / 57	0 0023	0.071	7.10E-02	N/A	N/A	---	N/A	N/A	N/A
	206-44-0	Fluoranthene	0 0021 J	1.1	mg/kg	NPSB08-090-111010	25 / 57	0 0018	0.054	1.10E+00	N/A	N/A	---	N/A	N/A	N/A
	86-73-7	Fluorene	0 0044 J	5.7	mg/kg	NPSB08-090-111010	17 / 57	0 0018	0.054	5.70E+00	N/A	N/A	---	N/A	N/A	N/A
	118-74-1	Hexachlorobenzene	ND	ND	mg/kg	ND	0 / 57	0 0018	0.063	6.30E-02	N/A	1.65E+00	c	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/kg	ND	0 / 57	0 0018	0.11	1.10E-01	N/A	2.51E+00	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/kg	ND	0 / 57	0 0018	0.088	8.80E-02	N/A	1.02E+01	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/kg	ND	0 / 57	0 0018	0.095	9.50E-02	N/A	3.56E+03	n	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	0 0047 J	0.19	mg/kg	NPSB10-040-011212	10 / 57	0 0018	0.085	1.90E-01	N/A	2.17E+03	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/kg	ND	0 / 57	0 0018	0.073	7.30E-02	N/A	N/A	---	N/A	N/A	N/A
	91-20-3	Naphthalene	0 0042 J	15	mg/kg	NPSB08-090-111010	11 / 57	0 0018	0.8	1.50E+01	N/A	1.93E+02	n	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/kg	ND	0 / 57	0 0018	0 08	8.00E-02	N/A	5.68E+00	c	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/kg	ND	0 / 57	0 0023	0.097	9.70E-02	N/A	N/A	---	N/A	N/A	N/A
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/kg	ND	0 / 57	0 0023	0.054	5.40E-02	N/A	N/A	---	N/A	N/A	N/A
	87-86-5	Pentachlorophenol	0 0046 J	0.0046 J	mg/kg	WSB07-040-110210	1 / 57	0 0021	0.068	4.60E-03	N/A	N/A	---	N/A	N/A	N/A
	85-01-8	Phenanthrene	0 0076 J	21	mg/kg	NPSB08-090-111010	23 / 57	0 0029	0.73	2.10E+01	N/A	N/A	---	N/A	N/A	N/A
	108-95-2	Phenol	0.003 J	0.11 JL	mg/kg	ENSB07-030-120810	4 / 57	0 0023	0 08	1.10E-01	N/A	N/A	---	N/A	N/A	N/A
	129-00-0	Pyrene	0 0021 J	2.1	mg/kg	NPSB08-090-111010	26 / 57	0 0018	0.054	2.10E+00	N/A	N/A	---	N/A	N/A	N/A
	57-12-5	Cyanide	0.844 J	6.35	mg/kg	NPSB02-040-111110	5 / 57	0.62	1	6.35E+00	N/A	N/A	---	N/A	N/A	N/A

Notes

= Maximum detection limit exceeds screening value

= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.

(2) A background study was not conducted for soils deeper than 2 feet bgs.

(3) Screening values are TRRP 30-acre commercial/industrial subsurface soil-to-air PCLs (TCEQ, 2012a), adjusted for carcinogens to a 10^{-6} risk.

(4) Rationale for Selection or Deletion:

ASL = Above Screening Level

BSL = Below Screening Level

Definitions:

ARAR = Applicable or relevant and appropriate requirements

CAS No. = Chemical Abstract Registry Number

c = Carcinogen

J = Estimated value

H = Estimated concentration is biased high

L = Estimated concentration is biased low

mg/kg = milligram/kilogram

n = Noncarcinogen

N/A = Not applicable or available

PCLs = Protective Concentration Levels

TBC = To be considered values

TRRP = Texas Risk Reduction Program

TABLE 2.8
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
North Pit Exposure Area
Leaching from Soils to Class 3 Groundwater (All soils)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	All Soils
Exposure Medium:	Groundwater (Leaching from Soils)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
North Pit Exposure Area All Soil Leaching from soils to groundwater	7429-90-5	Aluminum	635	17800	mg/kg	WSS05-000-100710	108 / 108	2	31	1.78E+04	N/A	1.00E+06	n	N/A	N	BSL
	7440-36-0	Antimony	0.257 J	1.62	mg/kg	NPSB09-020-111010	14 / 108	0.19	2 8	1.62E+00	N/A	2.71E+02	m	N/A	N	BSL
	7440-38-2	Arsenic	0.891	32.3	mg/kg	NPSB07-010-110910	113 / 113	0.055	0.68	3.23E+01	N/A	2.51E+02	m	N/A	N	BSL
	7440-39-3	Barium	3.66	11800	mg/kg	ENSS06-000-101110	108 / 108	0.079	78	1.18E+04	N/A	2.22E+04	m	N/A	N	BSL
	7440-41-7	Beryllium	0.0705 J	1.38	mg/kg	NPSB12-040-012512	106 / 108	0.046	0.57	1.38E+00	N/A	9.24E+01	m	N/A	N	BSL
	7440-43-9	Cadmium	0.0777 J	67.2	mg/kg	NPSB07-010-110910	106 / 108	0.036	0.45	6.72E+01	N/A	7.55E+01	m	N/A	N	BSL
	7440-47-3	Chromium	1.78	61.8	mg/kg	NPSS01-000-101210	108 / 108	0.046	0.57	6.18E+01	N/A	1.20E+05	m	N/A	N	BSL
	7440-48-4	Cobalt	0.518 J	11.3	mg/kg	NPSB09-010-111010	108 / 108	0.027	0.34	1.13E+01	N/A	9.88E+02	n	N/A	N	BSL
	7440-50-8	Copper	0.766	475	mg/kg	NPSB07-010-110910	108 / 108	0.097	16	4.75E+02	N/A	5.21E+04	a	N/A	N	BSL
	7439-92-1	Lead	2.2	1800	mg/kg	NPSS07-000-101310	108 / 108	0.046	5.7	1.80E+03	N/A	1.51E+02	a	N/A	Y	ASL
	7439-96-5	Manganese	18.4 JH	787	mg/kg	WSB05-110-110310	108 / 108	0.064	12	7.87E+02	N/A	5.13E+05	n	N/A	N	BSL
	7440-02-0	Nickel	1.48	15.4	mg/kg	WSS07-000-100710	108 / 108	0.055	0.68	1.54E+01	N/A	2.35E+04	n	N/A	N	BSL
	7782-49-2	Selenium	0.248 J	157	mg/kg	NPSB09-020-111010	98 / 108	0.17	2 8	1.57E+02	N/A	1.15E+02	m	N/A	Y	ASL
	7440-22-4	Silver	0.0465 J	10.2	mg/kg	NPSB07-010-110910	43 / 108	0.036	0.45	1.02E+01	N/A	7.15E+01	n	N/A	N	BSL
	7440-28-0	Thallium	0.0765 J	0.311 J	mg/kg	WSB06-020-120610	65 / 108	0.064	0.79	3.11E-01	N/A	8.75E+01	m	N/A	N	BSL
	7440-62-2	Vanadium	4.17	32.6	mg/kg	WSB06-020-120610	108 / 108	0.064	0.79	3.26E+01	N/A	1.31E+05	n	N/A	N	BSL
	7440-66-6	Zinc	5.65	13700	mg/kg	NPSB07-010-110910	108 / 108	0.24	29	1.37E+04	N/A	3.52E+05	n	N/A	N	BSL
	7439-97-6	Mercury	0.000531 J	58.1	mg/kg	ESSB09-010-011012	112 / 114	0 0002	0.032	5.81E+01	N/A	3.91E-01	m	N/A	Y	ASL
	72-54-8	4,4 -DDD	0.0083	0.045 J	mg/kg	NPSS05-000-101310	3 / 108	0.00052	0.006	4.50E-02	N/A	1.45E+02	c	N/A	N	BSL
	72-55-9	4,4 -DDE	0.0043 J	0.12	mg/kg	NPSB02-040-111110	3 / 108	0.00052	0.006	1.20E-01	N/A	1.32E+02	c	N/A	N	BSL
	50-29-3	4,4 -DDT	0.0013 J	0.011 J	mg/kg	NPSB08-090-111010	5 / 108	0.00052	0.006	1.10E-02	N/A	1.65E+02	c	N/A	N	BSL
	309-00-2	Aldrin	0.024 J	0.024 J	mg/kg	NPSS05-000-101310	1 / 108	0.00031	0.0036	2.40E-02	N/A	1.15E+00	c	N/A	N	BSL
	319-84-6	alpha-BHC	0.001 J	0.0017 J	mg/kg	ENSB07-090-120810	2 / 108	0.00031	0.0036	1.70E-03	N/A	8.86E-02	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	0.025 J	0.025 J	mg/kg	NPSB02-040-111110	1 / 108	0.00021	0.0024	2.50E-02	N/A	8.27E+03	c	N/A	N	BSL
	319-85-7	beta-BHC	0.0022 J	0.012 J	mg/kg	NPSB05-010-111110	2 / 108	0.00031	0.0036	1.20E-02	N/A	3.24E-01	c	N/A	N	BSL
	319-86-8	delta-BHC	0.001 J	0.011 J	mg/kg	NPSB08-090-111010	2 / 108	0.00021	0.0024	1.10E-02	N/A	1.94E+00	c	N/A	N	BSL
	60-57-1	Dieldrin	0.024	0.024	mg/kg	NPSB02-040-111110	1 / 108	0.00052	0.006	2.40E-02	N/A	5.47E-01	c	N/A	N	BSL
	959-98-8	Endosulfan I	ND	ND	mg/kg	ND	0 / 108	0.00031	0.0036	3.60E-03	N/A	4.60E+03	n	N/A	N	BSL
	33213-65-9	Endosulfan II	ND	ND	mg/kg	ND	0 / 108	0.00063	0.0072	7.20E-03	N/A	1.38E+04	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	ND	ND	mg/kg	ND	0 / 108	0.00063	0.0072	7.20E-03	N/A	6.96E+05	n	N/A	N	BSL
	72-20-8	Endrin	0.0044 J	0.061 J	mg/kg	NPSS05-000-101310	2 / 108	0.00063	0.0072	6.10E-02	N/A	3.75E+01	m	N/A	N	BSL
	7421-93-4	Endrin aldehyde	0.0036 J	0.02	mg/kg	ENSS07-000-101110	3 / 108	0.00063	0.0072	2.00E-02	N/A	9.36E+04	n	N/A	N	BSL
	53494-70-5	Endrin ketone	0.036	0.036	mg/kg	NPSS05-000-101310	1 / 108	0.00063	0.0072	3.60E-02	N/A	7.61E+03	n	N/A	N	BSL
	58-89-9	gamma-BHC	ND	ND	mg/kg	ND	0 / 108	0.00021	0.0024	2.40E-03	N/A	4.58E-01	m	N/A	N	BSL
	5103-74-2	gamma-Chlordane	0.001 J	0.044 J	mg/kg	NPSB02-040-111110	1 / 108	0.00021	0.0024	4.40E-02	N/A	4.60E+02	c	N/A	N	BSL
	76-44-8	Heptachlor	ND	ND	mg/kg	ND	0 / 108	0.00031	0.0036	3.60E-03	N/A	9.44E+00	m	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	0.021	0.021	mg/kg	NPSB02-040-111110	1 / 108	0.00031	0.0036	2.10E-02	N/A	2.91E+00	m	N/A	N	BSL
	72-43-5	Methoxychlor	ND	ND	mg/kg	ND	0 / 108	0 0036	0.041	4.10E-02	N/A	6.21E+03	m	N/A	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/kg	ND	0 / 108	0.004	0.052	5.20E-02	N/A	5.75E+02	m	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/kg	ND	0 / 108	0 0024	0.004	4.00E-03	N/A	N/A	---	N/A	N/A	N/A
	11104-28-2	Aroclor 1221	ND	ND	mg/kg	ND	0 / 108	0 0024	0.004	4.00E-03	N/A	N/A	---	N/A	N/A	N/A
	11141-16-5	Aroclor 1232	ND	ND	mg/kg	ND	0 / 108	0 0024	0.004	4.00E-03	N/A	N/A	---	N/A	N/A	N/A
	53469-21-9	Aroclor 1242	ND	ND	mg/kg	ND	0 / 108	0 0024	0.004	4.00E-03	N/A	N/A	---	N/A	N/A	N/A
	12672-29-6	Aroclor 1248	ND	ND	mg/kg	ND	0 / 108	0 0024	0.004	4.00E-03	N/A	N/A	---	N/A	N/A	N/A
	11097-69-1	Aroclor 1254	0.012 J	0.012 J	mg/kg	ENSB02-020-110810	1 / 108	0 0024	0.004	1.20E-02	N/A	N/A	---	N/A	N/A	N/A
	11096-82-5	Aroclor 1260	0.0093 J	0.025	mg/kg	WSS07-000-100710	8 / 108	0 0018	0.003	2.50E-02	N/A	N/A	---	N/A	N/A	N/A
	TPCB	Total PCBs	0.0165	0.0325	mg/kg	WSS07-000-100710	9 / 108	0 0081	0.0128	3.25E-02	N/A	5.30E+02	m	N/A	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 108	0.00036	0.084	8.40E-02	N/A	1.59E+01	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/kg	ND	0 / 108	0.00042	0 2	2.00E-01	N/A	8.10E+01	m	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 108	0.00026	0.06	6.00E-02	N/A	2.59E-01	c	N/A	N	BSL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/kg	ND	0 / 108	0.00042	0.16	1.60E-01	N/A	1.00E+06	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/kg	ND	0 / 108	0.00042	0.24	2.40E-01	N/A	1.00E+00	m	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/kg	ND	0 / 108	0.00026	0.06	6.00E-02	N/A	2.76E+03	n	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/kg	ND	0 / 108	0.00042	0.18	1.80E-01	N/A	2.50E+00	m	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/kg	ND	0 / 108	0.00047	0.11	1.10E-01	N/A	2.40E+02	m	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	0.0086	8.3	mg/kg	ESSB09-120-011012	6 / 108	0.00042	0.096	8.30E+00	N/A	7.25E+03	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/kg	ND	0 / 108	0.00036	0.084	8.40E-02	N/A	1.03E-02	m	N/A	Y	ASL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 108	0.00042	0.096	9.60E-02	N/A	8.94E+02	m	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/kg	ND	0 / 108	0.00031	0.072	7.20E-02	N/A	6.86E-01	m	N/A	N	BSL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/kg	ND	0 / 108	0.00026	0.06	6.00E-02	N/A	1.14E+00	m	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	0.0036 J	6.6	mg/kg	NPSB08-090-111010	5 / 108	0.00042	0.096	6.60E+00	N/A	7.94E+03	n	N/A	N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 108	0.00042	0.11	1.10E-01	N/A	1.01E+03	n	N/A	N	BSL
	106-46-7	1,4-Dichlorobenzene	0.0013 JH	0.0013 JH	mg/kg	WSB08-090-110210	1 / 108	0.00036	0.084	1.30E-03	N/A	1.05E+02	m	N/A	N	BSL

TABLE 2.8
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
North Pit Exposure Area
Leaching from Soils to Class 3 Groundwater (All soils)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	All Soils
Exposure Medium:	Groundwater (Leaching from Soils)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
North Pit Exposure Area All Soil Leaching from soils to groundwater	78-93-3	2-Butanone	0.0037 J	0.02	mg/kg	NSPL10-100-011212	8 / 108	0 0011	0.26	2.00E-02	N/A	4.37E+03	n	N/A	N	BSL
	591-78-6	2-Hexanone	ND	ND	mg/kg	ND	0 / 108	0.00083	0 2	2.00E-01	N/A	4.82E+01	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/kg	ND	0 / 108	0.00052	0.12	1.20E-01	N/A	7.39E+02	n	N/A	N	BSL
	67-64-1	Acetone	0.0019 J	0.33 JH	mg/kg	WSB08-090-110210	4 / 108	0 0017	0.55	3.30E-01	N/A	6.38E+03	n	N/A	N	BSL
	71-43-2	Benzene	1.2	1.2	mg/kg	NPSB08-090-111010	1 / 108	0.00031	0.072	1.20E+00	N/A	1.28E+00	m	N/A	N	BSL
	75-27-4	Bromodichloromethane	ND	ND	mg/kg	ND	0 / 108	0.00031	0.072	7.20E-02	N/A	7.33E-01	c	N/A	N	BSL
	75-25-2	Bromoform	ND	ND	mg/kg	ND	0 / 108	0.00036	0.084	8.40E-02	N/A	7.07E+00	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/kg	ND	0 / 108	0.00052	0.12	1.20E-01	N/A	1.95E+01	n	N/A	N	BSL
	75-15-0	Carbon disulfide	0.001 J	0.0074 J	mg/kg	NSPL10-100-011212	6 / 108	0.00083	0.19	7.40E-03	N/A	2.03E+03	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	0.0062 JH	0.0062 JH	mg/kg	ENSB09-090-110910	1 / 108	0.00042	0.14	6.20E-03	N/A	3.09E+00	m	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/kg	ND	0 / 108	0.00026	0.06	6.00E-02	N/A	5.46E+01	m	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/kg	ND	0 / 108	0.00052	0.12	1.20E-01	N/A	4.61E+03	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/kg	ND	0 / 108	0.00042	0.22	2.20E-01	N/A	1.52E+02	n	N/A	N	BSL
	74-87-3	Chloromethane	ND	ND	mg/kg	ND	0 / 108	0.00047	0.11	1.10E-01	N/A	4.54E+00	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 108	0.00042	0.18	1.80E-01	N/A	1.24E+01	m	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	0.00069 JH	0.00069 JH	mg/kg	ENSB06-090-110910	1 / 108	0.00026	0.06	6.90E-04	N/A	7.44E-02	c	N/A	N	BSL
	110-82-7	Cyclohexane	0.0035 J	22	mg/kg	NPSB08-090-111010	10 / 108	0.00042	0.24	2.20E+01	N/A	8.78E+05	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/kg	ND	0 / 108	0.00026	0.06	6.00E-02	N/A	5.50E-01	c	N/A	N	BSL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/kg	ND	0 / 108	0.00042	0.22	2.20E-01	N/A	3.58E+04	n	N/A	N	BSL
	100-41-4	Ethylbenzene	0.001 J	3.3	mg/kg	NPSB08-090-111010	9 / 108	0.00042	0.11	3.30E+00	N/A	3.82E+02	m	N/A	N	BSL
	98-82-8	Isopropylbenzene	0.00078 J	12 J	mg/kg	NPSB11-090-FD-011812	16 / 108	0.00042	0.12	1.20E+01	N/A	5.19E+04	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/kg	ND	0 / 108	0.00042	0.12	1.20E-01	N/A	7.29E+03	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/kg	ND	0 / 108	0.00042	0.23	2.30E-01	N/A	9.28E+01	n	N/A	N	BSL
	108-87-2	Methylcyclohexane	0.0022 J	67	mg/kg	ESSB09-140-011012	14 / 108	0.00042	2	6.70E+01	N/A	1.00E+06	n	N/A	N	BSL
	75-09-2	Methylene chloride	0.001 J	0.011 J	mg/kg	NSPL10-100-011212	11 / 108	0.00083	0 3	1.10E-02	N/A	6.54E-01	m	N/A	N	BSL
	91-20-3	Naphthalene	0.00062 J	5.3	mg/kg	NPSB08-090-111010	13 / 108	0.00042	0.096	5.30E+00	N/A	4.67E+03	n	N/A	N	BSL
	104-51-8	n-Butylbenzene	0.0037 J	1.4	mg/kg	ESSB09-120-011012	6 / 108	0.00031	0.072	1.40E+00	N/A	2.26E+04	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	0.00047 J	36 J	mg/kg	NPSB11-090-FD-011812	17 / 108	0.00042	0 5	3.60E+01	N/A	6.69E+03	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	0.0039 J	5.6	mg/kg	NPSB11-100-011812	12 / 108	0.00031	0.072	5.60E+00	N/A	1.27E+04	n	N/A	N	BSL
	100-42-5	Styrene	0.025	0.025	mg/kg	NSPL10-100-011212	1 / 108	0.00031	0.072	2.50E-02	N/A	1.63E+02	m	N/A	N	BSL
	98-06-6	tert-Butylbenzene	0.049 J	5.6	mg/kg	NPSB11-110-011812	7 / 108	0.00031	0.072	5.60E+00	N/A	1.49E+04	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/kg	ND	0 / 108	0 0005	0.12	1.20E-01	N/A	2.51E+00	m	N/A	N	BSL
	108-88-3	Toluene	0.0014 J	0.83	mg/kg	NPSB08-090-111010	5 / 108	0.00036	0.084	8.30E-01	N/A	4.11E+02	m	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 108	0.00042	0.11	1.10E-01	N/A	2.45E+01	m	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 108	0.00026	0.06	6.00E-02	N/A	4.02E-01	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/kg	ND	0 / 108	0.00042	0.19	1.90E-01	N/A	1.68E+00	m	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/kg	ND	0 / 108	0.00042	0.096	9.60E-02	N/A	1.91E+04	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/kg	ND	0 / 108	0.00042	0.12	1.20E-01	N/A	1.11E+00	m	N/A	N	BSL
	1330-20-7	Xylenes, Total	0.002 J	20	mg/kg	NPSB08-090-111010	6 / 108	0 0012	0.31	2.00E+01	N/A	6.13E+03	m	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	0.004 JL	2.6	mg/kg	NPSB08-090-111010	10 / 108	0 0018	0.16	2.60E+00	N/A	3.78E+04	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	0.0022 J	41	mg/kg	NPSB08-090-111010	25 / 108	0 0018	0.56	4.10E+01	N/A	3.30E+01	c	N/A	Y	ASL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/kg	ND	0 / 108	0 0018	0.16	1.60E-01	N/A	5.05E+03	n	N/A	N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/kg	ND	0 / 108	0 0018	0.18	1.80E-01	N/A	2.61E+01	n	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/kg	ND	0 / 108	0 0018	0.12	1.20E-01	N/A	5.25E+01	n	N/A	N	BSL
	105-67-9	2,4-Dimethylphenol	0.0045 J	2.1 JL	mg/kg	WSB08-090-110210	11 / 108	0 0018	0.18	2.10E+00	N/A	4.83E+02	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/kg	ND	0 / 108	0 0033	0.18	1.80E-01	N/A	1.40E+01	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 108	0 0018	0.18	1.80E-01	N/A	5.96E-02	c	N/A	Y	ASL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 108	0 0018	0.18	1.80E-01	N/A	5.39E-02	c	N/A	Y	ASL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/kg	ND	0 / 108	0 0018	0.23	2.30E-01	N/A	1.00E+05	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/kg	ND	0 / 108	0 0018	0.18	1.80E-01	N/A	2.44E+02	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	0.0022 J	58	mg/kg	NPSB08-090-111010	31 / 108	0 0018	0.66	5.80E+01	N/A	2.55E+03	n	N/A	N	BSL
	95-48-7	2-Methylphenol	0.005 JL	0.02 JL	mg/kg	ENSB07-030-120810	3 / 108	0 0018	0.16	2.00E-02	N/A	1.06E+03	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/kg	ND	0 / 108	0 0018	0.18	1.80E-01	N/A	3.28E+00	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/kg	ND	0 / 108	0 0018	0.26	2.60E-01	N/A	2.01E+01	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol	0.0029 J	0.046 JL	mg/kg	ENSB07-030-120810	5 / 108	0 0018	0.16	4.60E-02	N/A	9.43E+01	n	N/A	N	BSL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/kg	ND	0 / 107	0 0018	0.17	1.70E-01	N/A	7.02E-01	c	N/A	N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/kg	ND	0 / 108	0 0018	0.14	1.40E-01	N/A	3.82E+00	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/kg	ND	0 / 108	0 0018	0.18	1.80E-01	N/A	7.00E-01	n	N/A	N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 108	0 0018	0.18	1.80E-01	N/A	3.96E+00	c	N/A	N	BSL
	59-50-7	4-Chloro-3-methylphenol	0.008 J	0.008 J	mg/kg	NPSB09-020-111010	1 / 108	0 0018	0.18	8.00E-03	N/A	6.76E+02	n	N/A	N	BSL

TABLE 2.8
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
North Pit Exposure Area
Leaching from Soils to Class 3 Groundwater (All soils)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	All Soils
Exposure Medium:	Groundwater (Leaching from Soils)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
North Pit Expsoure Area All Soil Leaching from soils to groundwater	106-47-8	4-Chloroaniline	ND	ND	mg/kg	ND	0 / 108	0 0018	0.12	1.20E-01	N/A	2.33E-01	c	N/A	N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 108	0 0018	0.12	1.20E-01	N/A	3.58E-01	c	N/A	N	BSL
	100-01-6	4-Nitroaniline	ND	ND	mg/kg	ND	0 / 108	0 0018	0.18	1.80E-01	N/A	1.21E+00	c	N/A	N	BSL
	100-02-7	4-Nitrophenol	ND	ND	mg/kg	ND	0 / 108	0 0036	0.21	2.10E-01	N/A	1.49E+01	n	N/A	N	BSL
	83-32-9	Acenaphthene	0.0022 J	2.1	mg/kg	NPSB08-090-111010	35 / 108	0 0018	0.12	2.10E+00	N/A	3.53E+04	n	N/A	N	BSL
	208-96-8	Acenaphthylene	0.0027 J	0.76	mg/kg	WSB08-090-110210	22 / 108	0 0018	0.12	7.60E-01	N/A	6.10E+04	n	N/A	N	BSL
	98-86-2	Acetophenone	0.0028 J	0.023 JL	mg/kg	NPSS02-000-101310	11 / 108	0 0018	0.13	2.30E-02	N/A	1.23E+03	n	N/A	N	BSL
	120-12-7	Anthracene	0.002 J	0.43	mg/kg	WSB08-090-110210	45 / 108	0 0018	0.12	4.30E-01	N/A	1.00E+06	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	0.0022 J	0.24	mg/kg	WSB07-010-110210	61 / 108	0 0018	0.16	2.40E-01	N/A	1.99E+02	c	N/A	N	BSL
	100-52-7	Benzaldehyde	0.0028 JL	0.011 JL	mg/kg	NPSS02-000-101310	4 / 108	0 0018	0.26	1.10E-02	N/A	1.57E+03	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	0.0029 J	0.38 JL	mg/kg	NPSS05-000-101310	60 / 108	0 0018	0.13	3.80E-01	N/A	3.82E+02	m	N/A	N	BSL
	205-99-2	Benzo(b)fluoranthene	0.0021 J	0.34	mg/kg	NPSB10-040-011212	57 / 108	0 0018	0.18	3.40E-01	N/A	6.73E+02	c	N/A	N	BSL
	191-24-2	Benzo(g,h,i)perylene	0.0024 J	0.16	mg/kg	NPSS03-000-101210	51 / 108	0 0019	0.16	1.60E-01	N/A	1.00E+06	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	0.005 J	0.38 JL	mg/kg	NPSS02-000-101310	54 / 108	0 0018	0.18	3.80E-01	N/A	6.89E+03	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/kg	ND	0 / 108	0 0018	0.13	1.30E-01	N/A	1.32E-01	c	N/A	N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/kg	ND	0 / 108	0 0018	0.16	1.60E-01	N/A	2.36E-02	c	N/A	Y	ASL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/kg	ND	0 / 108	0 0018	0.15	1.50E-01	N/A	2.13E+00	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.0043	84	mg/kg	NPSS01-000-101210	24 / 108	0 0018	3 5	8.40E+01	N/A	8.18E+03	m	N/A	N	BSL
	85-68-7	Butyl benzyl phthalate	0.0045 J	0.076 J	mg/kg	NPSS07-000-101310	16 / 108	0 0025	0.14	7.60E-02	N/A	2.97E+03	c	N/A	N	BSL
	105-60-2	Caprolactam	0.003 J	0.22	mg/kg	ENSS06-000-101110	14 / 108	0 0022	0.13	2.20E-01	N/A	7.01E+03	n	N/A	N	BSL
	86-74-8	Carbazole	0.0028 JL	0.065 J	mg/kg	NPSS01-000-101210	30 / 108	0 0018	0.12	6.50E-02	N/A	5.12E+01	c	N/A	N	BSL
	218-01-9	Chrysene	0.002 J	0.55	mg/kg	NPSS05-000-101310	70 / 108	0 0018	0.16	5.50E-01	N/A	1.73E+04	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	0.0029 J	0.064	mg/kg	WSB07-010-110210	22 / 108	0 0022	0.12	6.40E-02	N/A	1.07E+02	c	N/A	N	BSL
	132-64-9	Dibenzofuran	0.0021 J	0.72	mg/kg	NPSB11-110-011812	23 / 108	0 0018	0.12	7.20E-01	N/A	4.98E+03	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	ND	ND	mg/kg	ND	0 / 108	0 0018	0.18	1.80E-01	N/A	2.33E+04	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	0.0057 J	0.0085	mg/kg	ENSS03FD-000-101110	2 / 108	0 0022	0.13	8.50E-03	N/A	9.29E+03	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	0.0029 J	0.46	mg/kg	ENSB09-090-110910	12 / 108	0 0022	0.14	4.60E-01	N/A	4.95E+05	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	0.0073 J	0.062 J	mg/kg	ENSS03FD-000-101110	5 / 108	0 0022	0.16	6.20E-02	N/A	1.00E+06	n	N/A	N	BSL
	206-44-0	Fluoranthene	0.0021 J	1.1	mg/kg	NPSB08-090-111010	72 / 108	0 0018	0.12	1.10E+00	N/A	2.86E+05	n	N/A	N	BSL
	86-73-7	Fluorene	0.0026 J	5.7	mg/kg	NPSB08-090-111010	32 / 108	0 0018	0.12	5.70E+00	N/A	4.46E+04	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/kg	ND	0 / 108	0 0018	0.14	1.40E-01	N/A	5.65E+01	m	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/kg	ND	0 / 108	0 0018	0.24	2.40E-01	N/A	3.68E+01	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/kg	ND	0 / 108	0 0018	0 2	2.00E-01	N/A	9.64E+02	m	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/kg	ND	0 / 108	0 0018	0.22	2.20E-01	N/A	1.92E+02	n	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	0.0047 J	0.19	mg/kg	NPSB10-040-011212	42 / 108	0 0018	0.19	1.90E-01	N/A	1.94E+03	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/kg	ND	0 / 108	0 0018	0.17	1.70E-01	N/A	3.36E+01	c	N/A	N	BSL
	91-20-3	Naphthalene	0.0023 J	15	mg/kg	NPSB08-090-111010	20 / 108	0 0018	0 8	1.50E+01	N/A	4.67E+03	n	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/kg	ND	0 / 108	0 0018	0.18	1.80E-01	N/A	5.25E+01	n	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/kg	ND	0 / 108	0 0022	0.22	2.20E-01	N/A	3.95E-03	c	N/A	Y	ASL
	86-30-6	N-Nitrosodiphenylamine	0.0067 J	0.0067 J	mg/kg	ENSB09-010-110910	1 / 108	0 0022	0.12	6.70E-03	N/A	3.16E+01	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	0.0046 J	0.0046 J	mg/kg	WSB07-040-110210	1 / 108	0.002	0.16	4.60E-03	N/A	9.16E-01	m	N/A	N	BSL
	85-01-8	Phenanthrene	0.0042 J	21	mg/kg	NPSB08-090-111010	64 / 108	0 0028	0.73	2.10E+01	N/A	6.21E+04	n	N/A	N	BSL
	108-95-2	Phenol	0.003 J	0.11 JL	mg/kg	ENSB07-030-120810	5 / 108	0 0022	0.18	1.10E-01	N/A	2.86E+03	n	N/A	N	BSL
	129-00-0	Pyrene	0.0021 J	2.1	mg/kg	NPSB08-090-111010	73 / 108	0 0018	0.12	2.10E+00	N/A	1.67E+05	n	N/A	N	BSL
	57-12-5	Cyanide	0.715 J	34.3	mg/kg	ENSS08-000-101110	15 / 108	0.56	1 3	3.43E+01	N/A	2.00E+03	m	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value

= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.

(2) Background data were not considered.

(3)Screening values are the TRRP 30-acre commercial/industrial PCLs (TCEQ, 2012a) for soil-to-groundwater leaching and subsequent volatilization to groundwater, adjusted for carcinogens to a 10-6 risk.

(4) Rationale for Selection or Deletion:

ASL = Above Screening Level

BSL = Below Screening Level

Definitions:

a= Action level

ARAR = Applicable or relevant and appropriate requirements

CAS No. = Chemical Abstract Registry Number

c = Carcinogen

J = Estimated value

L = Estimated concentration is biased low

mg/kg = milligram/kilogram

m = MCL-based

n = Noncarcinogen

N/A = Not applicable or available

ND= Not Detected

PCLs = Protective Concentration Levels

TBC = To be considered values

TRRP = Texas Risk Reduction Program

TABLE 2.9
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Direct Contact with Subsurface Waste (>2-10 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Waste
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
South Pit Exposure Area Waste >2-10 ft bgs	7429-90-5	Aluminum	5870	16400	mg/kg	ESSB03-070-120910	9 / 9	23	130	1.64E+04	N/A	5.70E+05	n	N/A	N	BSL
	7440-36-0	Antimony	0.646 J	0.646 J	mg/kg	MWGW09-070-012612	1 / 9	0.27	1.6	6.46E-01	N/A	3.07E+02	n	N/A	N	BSL
	7440-38-2	Arsenic	1.35	12.7	mg/kg	MWGW09-070-012612	9 / 9	0.065	0 39	1.27E+01	N/A	1.60E+00	c	N/A	Y	ASL
	7440-39-3	Barium	134	2910	mg/kg	MWGW09-070-012612	9 / 9	0.087	12	2.91E+03	N/A	1.19E+05	n	N/A	N	BSL
	7440-41-7	Beryllium	0.253 J	0.759 J	mg/kg	ESSB03-070-120910	9 / 9	0.054	0 33	7 59E-01	N/A	2.47E+02	n	N/A	N	BSL
	7440-43-9	Cadmium	0.104 J	0.548 J	mg/kg	MWGW09-070-012612	8 / 9	0.043	0 26	5.48E-01	N/A	8.00E+02	n	N/A	N	BSL
	7440-47-3	Chromium	4.38	501	mg/kg	MWGW09-070-012612	9 / 9	0.054	13	5.01E+02	N/A	7.46E+04	n	N/A	N	BSL
	7440-48-4	Cobalt	2.44	10.4	mg/kg	MWGW09-070-012612	9 / 9	0.033	0.2	1.04E+01	N/A	2.73E+02	n	N/A	N	BSL
	7440-50-8	Copper	3.35	169	mg/kg	MWGW09-070-012612	9 / 9	0.15	0 91	1.69E+02	N/A	3.89E+04	n	N/A	N	BSL
	7439-92-1	Lead	5.89	215	mg/kg	MWGW09-070-012612	9 / 9	0.054	0 33	2.15E+02	N/A	8.00E+02	a	N/A	N	BSL
	7439-96-5	Manganese	130	338	mg/kg	ESSB02-060-110510	9 / 9	0.076	8.3	3.38E+02	N/A	2.30E+03	n	N/A	N	BSL
	7440-02-0	Nickel	3.45	17.3	mg/kg	MWGW09-070-012612	9 / 9	0.065	0 39	1.73E+01	N/A	8.60E+03	n	N/A	N	BSL
	7782-49-2	Selenium	0.322 J	1.18	mg/kg	MWGW09-070-012612	8 / 9	0.27	1.6	1.18E+00	N/A	4.87E+03	n	N/A	N	BSL
	7440-22-4	Silver	0.0787 J	0.351 J	mg/kg	MWGW09-070-012612	3 / 9	0.043	0 26	3 51E-01	N/A	2.27E+03	n	N/A	N	BSL
	7440-28-0	Thallium	0.0902 J	0.206 J	mg/kg	ESSB02-060-110510	6 / 9	0.076	0.46	2 06E-01	N/A	1.00E+01	n	N/A	N	BSL
	7440-62-2	Vanadium	10.7	26.7	mg/kg	ESSB03-070-120910	9 / 9	0.076	0.46	2.67E+01	N/A	6.10E+02	n	N/A	N	BSL
	7440-66-6	Zinc	13.1 JL	226	mg/kg	MWGW09-070-012612	9 / 9	0.27	1.6	2.26E+02	N/A	2.45E+05	n	N/A	N	BSL
	7439-97-6	Mercury	0.00215 J	5.27	mg/kg	MWGW09-070-012612	8 / 9	0 00024	0.0047	5.27E+00	N/A	3.26E+00	n	N/A	Y	ASL
	72-54-8	4,4 -DDD	0.015 J	0.16 JH	mg/kg	MWGW09-070-012612	3 / 9	0 00065	0.072	1 60E-01	N/A	7.20E+00	c	N/A	N	BSL
	72-55-9	4,4 -DDE	0.072	1.1 JH	mg/kg	MWGW09-070-012612	2 / 9	0 00065	0.072	1.10E+00	N/A	5.10E+00	c	N/A	N	BSL
	50-29-3	4,4 -DDT	0.074	0.11 JH	mg/kg	MWGW09-070-012612	2 / 9	0 00065	0.072	1.10E-01	N/A	6.84E+00	c	N/A	N	BSL
	309-00-2	Aldrin	0.0028 J	0.0086 J	mg/kg	ESSB02-060-110510	2 / 9	0 00039	0.043	8 60E-03	N/A	9.70E-02	c	N/A	N	BSL
	319-84-6	alpha-BHC	0.55	0.55	mg/kg	ESSB03-070-120910	1 / 9	0 00039	0.043	5 50E-01	N/A	2.70E-01	c	N/A	Y	ASL
	5103-71-9	alpha-Chlordane	ND	ND	mg/kg	ND	0 / 9	0 00026	0.029	2 90E-02	N/A	5.37E+00	c	N/A	N	BSL
	319-85-7	beta-BHC	0.12	0.83 JH	mg/kg	MWGW09-070-012612	4 / 9	0 00039	0.043	8 30E-01	N/A	9.60E-01	c	N/A	N	BSL
	319-86-8	delta-BHC	ND	ND	mg/kg	ND	0 / 9	0 00026	0.029	2 90E-02	N/A	1.15E+00	c	N/A	N	BSL
	60-57-1	Dieldrin	ND	ND	mg/kg	ND	0 / 9	0 00065	0.072	7 20E-02	N/A	1.10E-01	c	N/A	N	BSL
	959-98-8	Endosulfan I	ND	ND	mg/kg	ND	0 / 9	0 00039	0.043	4 30E-02	N/A	1.36E+03	n	N/A	N	BSL
	33213-65-9	Endosulfan II	0.027 J	0.19 JH	mg/kg	MWGW09-070-012612	2 / 9	0 00078	0.087	1 90E-01	N/A	4.09E+03	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	0.0037 J	2 JH	mg/kg	MWGW09-070-012612	6 / 9	0 00078	0.087	2.00E+00	N/A	4.09E+03	n	N/A	N	BSL
	72-20-8	Endrin	0.021 J	0.52 JH	mg/kg	MWGW09-070-012612	2 / 9	0 00078	0.087	5 20E-01	N/A	1.80E+02	n	N/A	N	BSL
	7421-93-4	Endrin aldehyde	0.14 J	0.58 JH	mg/kg	MWGW09-070-012612	4 / 9	0 00078	0.087	5 80E-01	N/A	2.04E+02	n	N/A	N	BSL
	53494-70-5	Endrin ketone	ND	ND	mg/kg	ND	0 / 9	0 00078	0.087	8.70E-02	N/A	2.04E+02	n	N/A	N	BSL
	58-89-9	gamma-BHC	0.12 J	0.12 J	mg/kg	ESSB04-070-110510	1 / 9	0 00026	0.029	1 20E-01	N/A	1.83E+00	c	N/A	N	BSL
	5103-74-2	gamma-Chlordane	0.011 J	0.13 J	mg/kg	ESSB03-070-120910	3 / 9	0 00026	0.029	1 30E-01	N/A	5.12E+00	c	N/A	N	BSL
	76-44-8	Heptachlor	0.0027	0.0027	mg/kg	ESSB07-090-120810	1 / 9	0 00039	0.043	2.70E-03	N/A	2.76E-01	c	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	0.016 JH	3.8 J	mg/kg	MWGW09-070-012612	5 / 9	0.0019	0.048	3.80E+00	N/A	1.90E-01	c	N/A	Y	ASL
	72-43-5	Methoxychlor	0.35 J	0.5 JH	mg/kg	MWGW09-070-012612	2 / 9	0.0044	0.49	5 00E-01	N/A	3.10E+03	n	N/A	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/kg	ND	0 / 9	0.0049	0 55	5 50E-01	N/A	1.60E+00	c	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/kg	ND	0 / 9	0.003	0 35	3 50E-01	N/A	2.10E+01	c	N/A	N	BSL
	11104-28-2	Aroclor 1221	ND	ND	mg/kg	ND	0 / 9	0.003	0 35	3 50E-01	N/A	5.40E-01	c	N/A	N	BSL
	11141-16-5	Aroclor 1232	ND	ND	mg/kg	ND	0 / 9	0.003	0 35	3 50E-01	N/A	5.40E-01	c	N/A	N	BSL
	53469-21-9	Aroclor 1242	ND	ND	mg/kg	ND	0 / 9	0.003	0 35	3 50E-01	N/A	7.40E-01	c	N/A	N	BSL
	12672-29-6	Aroclor 1248	ND	ND	mg/kg	ND	0 / 9	0.003	0 35	3 50E-01	N/A	7.40E-01	c	N/A	N	BSL
	11097-69-1	Aroclor 1254	ND	ND	mg/kg	ND	0 / 9	0.003	0 35	3 50E-01	N/A	7.40E-01	c	N/A	N	BSL
	11096-82-5	Aroclor 1260	ND	ND	mg/kg	ND	0 / 9	0.0023	0 26	2 60E-01	N/A	7.40E-01	c	N/A	N	BSL
	TPCB	Total PCBs	ND	ND	mg/kg	ND	0 / 9	0 01015	1.18	1.18E+00	N/A	7.10E-01	c	N/A	Y	ASL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 9	0 00048	2.3	2.30E+00	N/A	7.31E+00	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/kg	ND	0 / 9	0 00048	5.5	5.50E+00	N/A	3.80E+04	n	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 9	0 00048	1.6	1.60E+00	N/A	2.80E+00	c	N/A	N	BSL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/kg	ND	0 / 9	0 00048	4.2	4.20E+00	N/A	1.80E+05	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	0.15 J	0.15 J	mg/kg	ESSB04-070-110510	1 / 9	0 00048	6.5	1 50E-01	N/A	1.86E+00	c	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/kg	ND	0 / 9	0 00048	1.6	1.60E+00	N/A	1.70E+01	c	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/kg	ND	0 / 9	0 00048	4.9	4.90E+00	N/A	1.10E+03	n	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/kg	ND	0 / 9	0 00057	2.9	2.90E+00	N/A	9.90E+01	c	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	0.32 J	100	mg/kg	ESSB07-090-120810	8 / 9	0 00048	2.6	1.00E+02	N/A	1.13E+02	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/kg	ND	0 / 9	0 00048	2.3	2.30E+00	N/A	7.91E-02	c	N/A	Y	ASL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 9	0 00048	2.6	2.60E+00	N/A	5.71E+02	n	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/kg	ND	0 / 9	0 00048	1.9	1.90E+00	N/A	1.15E+00	c	N/A	Y	ASL
	78-87-5	1 2-Dichloropropane	ND	ND	mg/kg	ND	0 / 9	0 00048	1.6	1.60E+00	N/A	4.70E+00	c	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	0.014	140	mg/kg	ESSB06-070-110310	9 / 9	0 00048	2.6	1.40E+02	N/A	8.32E+01	n	N/A	Y	ASL
	541-73-1	1 3-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 9	0 00048	2.9	2.90E+00	N/A	8.82E+01	n	N/A	N	BSL

TABLE 2.9
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Direct Contact with Subsurface Waste (>2-10 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Waste
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
South Pit Exposure Area Waste >2-10 ft bgs	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 9	0 00048	2.3	2.30E+00	N/A	1.20E+01	c	N/A	N	BSL
	78-93-3	2-Butanone	0.0076 J	0.0076 J	mg/kg	SPSB10-050-113010	1 / 9	0.0013	7.1	7 60E-03	N/A	1.17E+05	n	N/A	N	BSL
	591-78-6	2-Hexanone	0.77 J	0.77 J	mg/kg	ESSB04-070-110510	1 / 9	0 00096	5.5	7.70E-01	N/A	5.33E+02	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/kg	ND	0 / 9	0 00096	3.2	3.20E+00	N/A	2.76E+04	n	N/A	N	BSL
	67-64-1	Acetone	ND	ND	mg/kg	ND	0 / 9	0.12	15	1.50E+01	N/A	2.93E+05	n	N/A	N	BSL
	71-43-2	Benzene	0.073	240	mg/kg	MWGW09-070-012612	9 / 9	0 00048	1.9	2.40E+02	N/A	5.40E+00	c	N/A	Y	ASL
	75-27-4	Bromodichloromethane	ND	ND	mg/kg	ND	0 / 9	0 00048	1.9	1.90E+00	N/A	1.40E+00	c	N/A	Y	ASL
	75-25-2	Bromoform	ND	ND	mg/kg	ND	0 / 9	0 00048	2.3	2.30E+00	N/A	6.03E+01	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/kg	ND	0 / 9	0 00096	3.2	3.20E+00	N/A	3.20E+01	n	N/A	N	BSL
	75-15-0	Carbon disulfide	0.016	0.4 J	mg/kg	ESSB03-070-120910	2 / 9	0 00096	5.2	4 00E-01	N/A	3.70E+03	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/kg	ND	0 / 9	0 00048	3.9	3.90E+00	N/A	3.00E+00	c	N/A	Y	ASL
	108-90-7	Chlorobenzene	ND	ND	mg/kg	ND	0 / 9	0 00048	1.6	1.60E+00	N/A	5.38E+02	n	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/kg	ND	0 / 9	0 00096	3.2	3.20E+00	N/A	6.10E+04	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/kg	ND	0 / 9	0 00048	5.8	5.80E+00	N/A	1.35E+00	c	N/A	Y	ASL
	74-87-3	Chloromethane	ND	ND	mg/kg	ND	0 / 9	0 00096	2.9	2.90E+00	N/A	1.59E+01	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 9	0 00048	4.9	4.90E+00	N/A	5.01E+02	n	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 9	0 00048	1.6	1.60E+00	N/A	5.30E+01	n	N/A	N	BSL
	110-82-7	Cyclohexane	0.029	48	mg/kg	ESSB07-090-120810	9 / 9	0 00048	3.9	4.80E+01	N/A	2.90E+04	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/kg	ND	0 / 9	0 00048	1.6	1.60E+00	N/A	3.30E+00	c	N/A	N	BSL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/kg	ND	0 / 9	0 00048	5.8	5.80E+00	N/A	4.00E+02	n	N/A	N	BSL
	100-41-4	Ethylbenzene	1.9	250	mg/kg	SPSB02-050-120210	9 / 9	0.025	2.9	2.50E+02	N/A	2.70E+01	c	N/A	Y	ASL
	98-82-8	Isopropylbenzene	0.04	95	mg/kg	SPSB02-050-120210	9 / 9	0 00048	3.2	9.50E+01	N/A	6.25E+03	n	N/A	N	BSL
	79-20-9	Methyl acetate	0.4 J	0.4 J	mg/kg	SPSL01-070-120210	1 / 9	0 00048	3.2	4 00E-01	N/A	1.00E+06	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/kg	ND	0 / 9	0 00048	6.1	6.10E+00	N/A	1.11E+02	c	N/A	N	BSL
	108-87-2	Methylcyclohexane	0.035	130	mg/kg	ESSB06-070-110310	9 / 9	0 00048	4.9	1.30E+02	N/A	3.29E+04	n	N/A	N	BSL
	75-09-2	Methylene chloride	0.53 J	0.53 J	mg/kg	ESSB06-070-110310	1 / 9	0 00096	8.1	5 30E-01	N/A	9.60E+02	c	N/A	N	BSL
	91-20-3	Naphthalene	1.1 J	91	mg/kg	MWGW09-070-012612	9 / 9	0.025	2.6	9.10E+01	N/A	1.80E+01	c	N/A	Y	ASL
	104-51-8	n-Butylbenzene	0.15 J	26	mg/kg	ESSB06-070-110310	3 / 9	0 00048	1.9	2.60E+01	N/A	3.41E+04	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	0.021	77	mg/kg	ESSB06-070-110310	9 / 9	0 00048	2.9	7.70E+01	N/A	4.10E+03	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	0.24 J	28	mg/kg	MWGW09-070-012612	8 / 9	0 00048	1.9	2.80E+01	N/A	4.09E+04	n	N/A	N	BSL
	100-42-5	Styrene	0.019	1.7	mg/kg	SPSL01-070-120210	3 / 9	0 00048	1.9	1.70E+00	N/A	7.80E+03	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	0.22 J	9.3 J	mg/kg	MWGW09-070-012612	5 / 9	0 00048	1.9	9.30E+00	N/A	4.09E+04	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/kg	ND	0 / 9	0 00057	3.2	3.20E+00	N/A	7.70E+01	c	N/A	N	BSL
	108-88-3	Toluene	0.0056	250	mg/kg	MWGW09-070-012612	9 / 9	0 00048	2.3	2.50E+02	N/A	2.92E+04	n	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 9	0 00048	2.9	2.90E+00	N/A	6.42E+02	n	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 9	0 00048	1.6	1.60E+00	N/A	6.09E+00	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/kg	ND	0 / 9	0 00048	5.2	5.20E+00	N/A	6.40E+00	c	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/kg	ND	0 / 9	0 00048	2.6	2.60E+00	N/A	3.40E+03	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/kg	ND	0 / 9	0 00048	3.2	3.20E+00	N/A	1.26E+00	c	N/A	Y	ASL
	1330-20-7	Xylenes, Total	0.061	550	mg/kg	ESSB06-070-110310	9 / 9	0.0014	8.4	5.50E+02	N/A	2.70E+03	n	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	1.2	100	mg/kg	MWGW09-070-012612	8 / 9	0.037	1.7	1.00E+02	N/A	2.10E+02	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	2.1	250	mg/kg	ESSB03-070-120910	9 / 9	0.033	4	2.50E+02	N/A	5.30E+01	c	N/A	Y	ASL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/kg	ND	0 / 9	0.0035	1.2	1.20E+00	N/A	6.20E+04	n	N/A	N	BSL
	88-06-2	2 4 6-Trichlorophenol	ND	ND	mg/kg	ND	0 / 9	0.0042	1.4	1.40E+00	N/A	1.60E+02	c	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/kg	ND	0 / 9	0.0028	0 96	9 60E-01	N/A	1.80E+03	n	N/A	N	BSL
	105-67-9	2,4-Dimethylphenol	0.12 JL	72	mg/kg	MWGW09-070-012612	6 / 9	0.0042	1.4	7.20E+01	N/A	1.20E+04	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/kg	ND	0 / 9	0.0042	1.4	1.40E+00	N/A	1.20E+03	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 9	0.0042	1.4	1.40E+00	N/A	2.81E+00	c	N/A	N	BSL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 9	0.004	1.4	1.40E+00	N/A	2.81E+00	c	N/A	N	BSL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/kg	ND	0 / 9	0.0052	1.8	1.80E+00	N/A	4.96E+04	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/kg	ND	0 / 9	0.004	1.4	1.40E+00	N/A	5.10E+03	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	3.5	470	mg/kg	ESSB03-070-120910	9 / 9	0.039	4.7	4.70E+02	N/A	2.20E+03	n	N/A	N	BSL
	95-48-7	2-Methylphenol	0.33	55	mg/kg	MWGW09-070-012612	5 / 9	0.0037	1.3	5.50E+01	N/A	3.10E+04	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/kg	ND	0 / 9	0.0042	1.4	1.40E+00	N/A	2.94E+01	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/kg	ND	0 / 9	0.0058	2	2.00E+00	N/A	1.36E+03	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol	0.17	60	mg/kg	MWGW09-070-012612	4 / 9	0.0035	1.2	6.00E+01	N/A	3.41E+03	n	N/A	N	BSL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/kg	ND	0 / 9	0.0039	1.3	1.30E+00	N/A	3.80E+00	c	N/A	N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/kg	ND	0 / 9	0.0033	1.1	1.10E+00	N/A	3.55E+01	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/kg	ND	0 / 9	0.0042	1.4	1.40E+00	N/A	4.90E+01	n	N/A	N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 9	0.0042	1.4	1.40E+00	N/A	1.10E-01	c	N/A	Y	ASL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/kg	ND	0 / 9	0.0042	1.4	1.40E+00	N/A	3.41E+03	n	N/A	N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/kg	ND	0 / 9	0.0028	0 96	9 60E-01	N/A	8.60E+00	c	N/A	N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 9	0.0028	0 96	9 60E-01	N/A	7.99E-02	c	N/A	Y	ASL

TABLE 2.9
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Direct Contact with Subsurface Waste (>2-10 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Waste
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
South Pit Exposure Area Waste >2-10 ft bgs	100-01-6	4-Nitroaniline	ND	ND	mg/kg	ND	0 / 9	0.0042	1.4	1.40E+00	N/A	8.60E+01	c	N/A	N	BSL
	100-02-7	4-Nitrophenol	ND	ND	mg/kg	ND	0 / 9	0.0048	1.7	1.70E+00	N/A	1.36E+03	n	N/A	N	BSL
	83-32-9	Acenaphthene	0.068 JL	17	mg/kg	ESSB03-070-120910	9 / 9	0.0028	0 96	1.70E+01	N/A	3.30E+04	n	N/A	N	BSL
	208-96-8	Acenaphthylene	0.067 JL	6.6	mg/kg	ESSB03-070-120910	7 / 9	0.0028	0 96	6.60E+00	N/A	3.72E+04	n	N/A	N	BSL
	98-86-2	Acetophenone	0.07 J	63	mg/kg	MWGW09-070-012612	6 / 9	0.003	1	6.30E+01	N/A	6.81E+04	n	N/A	N	BSL
	120-12-7	Anthracene	0.092 JL	12	mg/kg	MWGW09-070-012612	9 / 9	0.0028	0 96	1.20E+01	N/A	1.70E+05	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	0.055 JL	9.8	mg/kg	MWGW09-070-012612	9 / 9	0.0035	1.2	9.80E+00	N/A	2.10E+00	c	N/A	Y	ASL
	100-52-7	Benzaldehyde	ND	ND	mg/kg	ND	0 / 9	0.0058	2	2.00E+00	N/A	1.00E+05	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	0.037 JL	11	mg/kg	MWGW09-070-012612	9 / 9	0.0029	1	1.10E+01	N/A	2.10E-01	c	N/A	Y	ASL
	205-99-2	Benzo(b)fluoranthene	0.012 JL	4.6	mg/kg	MWGW09-070-012612	8 / 9	0.0042	1.4	4.60E+00	N/A	2.10E+00	c	N/A	Y	ASL
	191-24-2	Benzo(g,h,i)perylene	0.023 JL	10	mg/kg	MWGW09-070-012612	6 / 9	0.0037	1.3	1.00E+01	N/A	1.86E+04	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	0.02 JL	2.7	mg/kg	MWGW09-070-012612	8 / 9	0.0042	1.4	2.70E+00	N/A	2.10E+01	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/kg	ND	0 / 9	0.003	1	1.00E+00	N/A	6.25E-01	c	N/A	Y	ASL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/kg	ND	0 / 9	0.0035	1.2	1.20E+00	N/A	2.77E-01	c	N/A	Y	ASL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/kg	ND	0 / 9	0.0034	1.2	1.20E+00	N/A	1.08E+01	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.97	0.97	mg/kg	SPSB02-050-120210	1 / 9	0.0083	2.9	9.70E-01	N/A	5.63E+01	c	N/A	N	BSL
	85-68-7	Butyl benzyl phthalate	ND	ND	mg/kg	ND	0 / 9	0.0031	1.1	1.10E+00	N/A	9.10E+02	c	N/A	N	BSL
	105-60-2	Caprolactam	36	36	mg/kg	MWGW09-070-012612	1 / 9	0.003	1	3.60E+01	N/A	3.10E+05	n	N/A	N	BSL
	86-74-8	Carbazole	ND	ND	mg/kg	ND	0 / 9	0.0028	0 96	9 60E-01	N/A	9.54E+01	c	N/A	N	BSL
	218-01-9	Chrysene	0.12 JL	18	mg/kg	MWGW09-070-012612	9 / 9	0.0037	1.3	1.80E+01	N/A	2.10E+02	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	0.0088 JL	3.7	mg/kg	MWGW09-070-012612	5 / 9	0.0028	0 96	3.70E+00	N/A	2.10E-01	c	N/A	Y	ASL
	132-64-9	Dibenzofuran	0.15 JL	18	mg/kg	ESSB03-070-120910	8 / 9	0.0028	0 96	1.80E+01	N/A	1.00E+03	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	ND	ND	mg/kg	ND	0 / 9	0.0042	1.4	1.40E+00	N/A	4.90E+05	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	ND	ND	mg/kg	ND	0 / 9	0.003	1	1.00E+00	N/A	5.45E+05	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	0.037 J	0.037 J	mg/kg	SPSL01-070-120210	1 / 9	0.0031	1.1	3.70E-02	N/A	6.20E+04	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	ND	ND	mg/kg	ND	0 / 9	0.0037	1.3	1.30E+00	N/A	2.73E+04	n	N/A	N	BSL
	206-44-0	Fluoranthene	0.085 JL	9.7	mg/kg	MWGW09-070-012612	9 / 9	0.0028	0 96	9.70E+00	N/A	2.20E+04	n	N/A	N	BSL
	86-73-7	Fluorene	0.34 JL	32	mg/kg	ESSB03-070-120910	9 / 9	0.0028	0 96	3.20E+01	N/A	2.20E+04	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/kg	ND	0 / 9	0.0033	1.1	1.10E+00	N/A	6.91E-01	c	N/A	Y	ASL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/kg	ND	0 / 9	0.0055	1.9	1.90E+00	N/A	2.28E+00	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/kg	ND	0 / 9	0.0045	1.6	1.60E+00	N/A	1.02E+01	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/kg	ND	0 / 9	0.0049	1.7	1.70E+00	N/A	4.30E+01	c	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	0.01 JL	2	mg/kg	MWGW09-070-012612	4 / 9	0.0044	1.5	2.00E+00	N/A	2.10E+00	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/kg	ND	0 / 9	0.0038	1.3	1.30E+00	N/A	1.80E+03	c	N/A	N	BSL
	91-20-3	Naphthalene	0.43	97	mg/kg	ESSB03-070-120910	9 / 9	0.042	1.4	9.70E+01	N/A	1.80E+01	c	N/A	Y	ASL
	98-95-3	Nitrobenzene	ND	ND	mg/kg	ND	0 / 9	0.0042	1.4	1.40E+00	N/A	5.67E+00	c	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/kg	ND	0 / 9	0.005	1.7	1.70E+00	N/A	1.36E-01	c	N/A	Y	ASL
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/kg	ND	0 / 9	0.0028	0 96	9 60E-01	N/A	1.95E+02	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	ND	ND	mg/kg	ND	0 / 9	0.0035	1.2	1.20E+00	N/A	2.70E+00	c	N/A	N	BSL
	85-01-8	Phenanthrene	1.3	230	mg/kg	MWGW09-070-012612	9 / 9	0.078	2.3	2.30E+02	N/A	1.86E+04	n	N/A	N	BSL
	108-95-2	Phenol	0.046 JL	20 JL	mg/kg	MWGW09-070-012612	4 / 9	0.0042	1.4	2.00E+01	N/A	1.80E+05	n	N/A	N	BSL
	129-00-0	Pyrene	0.14 JL	22	mg/kg	MWGW09-070-012612	9 / 9	0.0028	1.3	2.20E+01	N/A	1.70E+04	n	N/A	N	BSL
	57-12-5	Cyanide	1.75 J	4.02	mg/kg	ESSB04-070-110510	3 / 9	0.69	0 97	4.02E+00	N/A	5.83E+02	n	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value
= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.
(2) A background study was not completed.
(3) Screening values are the lower of the USEPA industrial RSLs (USEP, 2013) and TRRP 30-acre commercial/industrial PCLs (TCEQ, 2012a) for direct contact with surface soils; TRRP PCLs for carcinogens were adjusted a 10^{-6} risk.
(4) Rationale for Selection or Deletion:
ASL = Above Screening Level
BSL = Below Screening Level

Definitions:
a= Action level
ARAR = Applicable or relevant and appropriate requirements
CAS No. = Chemical Abstract Registry Number
c = Carcinogen
J = Estimated value
L = Estimated concentration is biased low
mg/kg = milligram/kilogram
n = Noncarcinogen
N/A = Not applicable or available
ND = Not Detected
PCLs = Protective Concentration Levels
RSLs = Regional Screening Levels
TBC = To be considered values
TRRP = Texas Risk Reduction Program
USEPA = United States Environmental Protection Agency

TABLE 2.10
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Migration of Vapors from Subsurface Waste to Ambient Air (All Waste)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	N/C	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
South Pit Exposure Area All Waste (Outdoor Air Vapors)	7429-90-5	Aluminum	3510	25700	mg/kg	SPSB05-130-FD-120310	20 / 20	21	130	2.57E+04	N/A	N/A	---	N/A	N/A	N/A
	7440-36-0	Antimony	0 646 J	0 646 J	mg/kg	MWGW09-070-012612	1 / 20	0.26	1.6	6.46E-01	N/A	N/A	---	N/A	N/A	N/A
	7440-38-2	Arsenic	1.23	12.7	mg/kg	MWGW09-070-012612	20 / 20	0.063	0 39	1.27E+01	N/A	N/A	---	N/A	N/A	N/A
	7440-39-3	Barium	68.3	4120	mg/kg	SPSL06-160-120310	20 / 20	0.085	12	4.12E+03	N/A	N/A	---	N/A	N/A	N/A
	7440-41-7	Beryllium	0 201 J	0 946	mg/kg	SPSB04-150-120210	20 / 20	0.053	0 33	9.46E-01	N/A	N/A	---	N/A	N/A	N/A
	7440-43-9	Cadmium	0 053 J	0 548 J	mg/kg	MWGW09-070-012612	19 / 20	0.042	0 26	5.48E-01	N/A	N/A	---	N/A	N/A	N/A
	7440-47-3	Chromium	3.47	501	mg/kg	MWGW09-070-012612	20 / 20	0.053	13	5.01E+02	N/A	N/A	---	N/A	N/A	N/A
	7440-48-4	Cobalt	1.59	10.4	mg/kg	MWGW09-070-012612	20 / 20	0.032	0.2	1.04E+01	N/A	N/A	---	N/A	N/A	N/A
	7440-50-8	Copper	2.22	169	mg/kg	MWGW09-070-012612	20 / 20	0.15	0 91	1.69E+02	N/A	N/A	---	N/A	N/A	N/A
	7439-92-1	Lead	3.4	215	mg/kg	MWGW09-070-012612	20 / 20	0.053	0 33	2.15E+02	N/A	N/A	---	N/A	N/A	N/A
	7439-96-5	Manganese	65.1	514	mg/kg	SPSB04-150-120210	20 / 20	0.074	11	5.14E+02	N/A	N/A	---	N/A	N/A	N/A
	7440-02-0	Nickel	2.43	17.3	mg/kg	MWGW09-070-012612	20 / 20	0.063	0 39	1.73E+01	N/A	N/A	---	N/A	N/A	N/A
	7782-49-2	Selenium	0 286 J	1.18	mg/kg	MWGW09-070-012612	18 / 20	0.26	1.6	1.18E+00	N/A	N/A	---	N/A	N/A	N/A
	7440-22-4	Silver	0.0559 J	0.429 J	mg/kg	SPSB04-150-120210	8 / 20	0.042	0 26	4.29E-01	N/A	N/A	---	N/A	N/A	N/A
	7440-28-0	Thallium	0.0902 J	0 246 J	mg/kg	SPSB04-150-120210	13 / 20	0.074	0.46	2.46E-01	N/A	N/A	---	N/A	N/A	N/A
	7440-62-2	Vanadium	8.17	26.7	mg/kg	ESSB03-070-120910	20 / 20	0.074	0.46	2.67E+01	N/A	N/A	---	N/A	N/A	N/A
	7440-66-6	Zinc	10.2	226	mg/kg	MWGW09-070-012612	20 / 20	0.26	1.6	2.26E+02	N/A	N/A	---	N/A	N/A	N/A
	7439-97-6	Mercury	0.0012 J	5.27	mg/kg	MWGW09-070-012612	19 / 20	0 00024	0.0047	5.27E+00	N/A	3.32E+00	n	N/A	Y	ASL
	72-54-8	4,4 -DDD	0 015 J	1 J	mg/kg	SPSL06-160-120310	8 / 20	0 00065	0.072	1.00E+00	N/A	N/A	---	N/A	N/A	N/A
	72-55-9	4,4 -DDE	0.05 J	1.1 JH	mg/kg	MWGW09-070-012612/ SPSB02-100-120210	6 / 20	0 00065	0.072	1.10E+00	N/A	N/A	---	N/A	N/A	N/A
	50-29-3	4,4 -DDT	0.0047	0.45	mg/kg	SPSB02-100-120210	7 / 20	0 00065	0.072	4.50E-01	N/A	1.05E+02	c	N/A	N	BSL
	309-00-2	Aldrin	0.0028 J	0.22 J	mg/kg	SPSB05-130-120310	5 / 20	0 00039	0.043	2.20E-01	N/A	7.17E-01	c	N/A	N	BSL
	319-84-6	alpha-BHC	0 2 J	0.55	mg/kg	ESSB03-070-120910	2 / 20	0 00039	0.043	5.50E-01	N/A	1.20E+00	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	0.18	0.68	mg/kg	SPSL06-160-120310	2 / 20	0 00026	0.029	6.80E-01	N/A	3.55E+02	c	N/A	N	BSL
	319-85-7	beta-BHC	0.0088	0.83 JH	mg/kg	MWGW09-070-012612	10 / 20	0 00039	0.043	8.30E-01	N/A	6.20E+00	c	N/A	N	BSL
	319-86-8	delta-BHC	ND	ND	mg/kg	ND	0 / 20	0 00026	0.029	2.90E-02	N/A	8.77E+00	c	N/A	N	BSL
	60-57-1	Dieldrin	0 025	0.11	mg/kg	SPSB07-120-120110	2 / 20	0 00065	0.072	1.10E-01	N/A	2.74E+00	c	N/A	N	BSL
	959-98-8	Endosulfan I	ND	ND	mg/kg	ND	0 / 20	0 00039	0.043	4.30E-02	N/A	N/A	---	N/A	N/A	N/A
	33213-65-9	Endosulfan II	0 027 J	0.56 J	mg/kg	SPSL06-160-120310	5 / 20	0 00078	0.087	5.60E-01	N/A	N/A	---	N/A	N/A	N/A
	1031-07-8	Endosulfan sulfate	0.0037 J	2 JH	mg/kg	MWGW09-070-012612	11 / 20	0 00078	0.087	2.00E+00	N/A	N/A	---	N/A	N/A	N/A
	72-20-8	Endrin	0 021 J	1.3	mg/kg	SPSL06-160-120310	7 / 20	0 00078	0.087	1.30E+00	N/A	N/A	---	N/A	N/A	N/A
	7421-93-4	Endrin aldehyde	0 032	1.7	mg/kg	SPSL06-160-120310	9 / 20	0 00078	0.087	1.70E+00	N/A	N/A	---	N/A	N/A	N/A
	53494-70-5	Endrin ketone	ND	ND	mg/kg	ND	0 / 20	0 00078	0.087	8.70E-02	N/A	N/A	---	N/A	N/A	N/A
	58-89-9	gamma-BHC	0.0086 J	0.12 J	mg/kg	ESSB04-070-110510	5 / 20	0 00026	0.029	1.20E-01	N/A	N/A	---	N/A	N/A	N/A
	5103-74-2	gamma-Chlordane	0.0046 J	0.51 J	mg/kg	SPSL06-160-120310	8 / 20	0 00026	0.029	5.10E-01	N/A	8.36E+01	c	N/A	N	BSL
	76-44-8	Heptachlor	0.0027	0.0027	mg/kg	ESSB07-090-120810	1 / 20	0 00039	0.043	2.70E-03	N/A	7.88E-01	c	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	0 016 JH	3.8 J	mg/kg	MWGW09-070-012612	11 / 20	0 00039	0.048	3.80E+00	N/A	2.05E+00	c	N/A	Y	ASL
	72-43-5	Methoxychlor	0.35 J	2.4	mg/kg	SPSB06-130-120310	5 / 20	0.0044	0.49	2.40E+00	N/A	N/A	---	N/A	N/A	N/A
	8001-35-2	Toxaphene	ND	ND	mg/kg	ND	0 / 20	0.0049	0 55	5.50E-01	N/A	8.25E+01	c	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/kg	ND	0 / 20	0.0028	0 35	3.50E-01	N/A	N/A	---	N/A	N/A	N/A
	11104-28-2	Aroclor 1221	ND	ND	mg/kg	ND	0 / 20	0.0028	0 35	3.50E-01	N/A	N/A	---	N/A	N/A	N/A
	11141-16-5	Aroclor 1232	ND	ND	mg/kg	ND	0 / 20	0.0028	0 35	3.50E-01	N/A	N/A	---	N/A	N/A	N/A
	53469-21-9	Aroclor 1242	ND	ND	mg/kg	ND	0 / 20	0.0028	0 35	3.50E-01	N/A	N/A	---	N/A	N/A	N/A
	12672-29-6	Aroclor 1248	ND	ND	mg/kg	ND	0 / 20	0.0028	0 35	3.50E-01	N/A	N/A	---	N/A	N/A	N/A
	11097-69-1	Aroclor 1254	0.22 J	0.22 J	mg/kg	SPSB04-150-120210	1 / 20	0.0028	0 35	2.20E-01	N/A	N/A	---	N/A	N/A	N/A
	11096-82-5	Aroclor 1260	ND	ND	mg/kg	ND	0 / 20	0.0021	0 26	2.60E-01	N/A	N/A	---	N/A	N/A	N/A
	TPCB	Total PCBs	0 332	0 332	mg/kg	SPSB04-150-120210	1 / 20	0 00945	1.18	3.32E-01	N/A	4.69E+00	c	N/A	N	BSL
	630-20-6	1 1 1 2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 20	0 00046	2.3	2.30E+00	N/A	7.83E+00	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/kg	ND	0 / 20	0 00046	5.5	5.50E+00	N/A	5.64E+04	n	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 20	0 00046	1.6	1.60E+00	N/A	N/A	---	N/A	N/A	N/A
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/kg	ND	0 / 20	0 00046	4.2	4.20E+00	N/A	3.32E+05	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	0.15 J	0.15 J	mg/kg	ESSB04-070-110510	1 / 20	0 00046	6.5	1.50E-01	N/A	1.93E+00	c	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	0.35 J	0.35 J	mg/kg	ESSL06-140-110310	1 / 20	0 00046	1.6	3.50E-01	N/A	2.65E+04	n	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/kg	ND	0 / 20	0 00046	4.9	4.90E+00	N/A	3.76E+03	n	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/kg	ND	0 / 20	0 00055	2.9	2.90E+00	N/A	1.09E+02	n	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	0.32 J	100	mg/kg	ESSB07-090-120810	19 / 20	0 00048	2.6	1.00E+02	N/A	1.13E+02	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/kg	ND	0 / 20	0 00046	2.3	2.30E+00	N/A	8.37E-02	c	N/A	Y	ASL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 20	0 00046	2.6	2.60E+00	N/A	5.74E+02	n	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/kg	ND	0 / 20	0 00046	1.9	1.90E+00	N/A	1.19E+00	c	N/A	Y	ASL
	78-87-5	1 2-Dichloropropane	ND	ND	mg/kg	ND	0 / 20	0 00046	1.6	1.60E+00	N/A	4.42E+01	n	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	0 014	140	mg/kg	ESSB06-070-110310	20 / 20	0 00046	2.6	1.40E+02	N/A	8.33E+01	n	N/A	Y	ASL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 20	0 00046	2.9	2.90E+00	N/A	8.84E+01	n	N/A	N	BSL
	106-46-7	1 4-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 20	0 00046	2.3	2.30E+00	N/A	1.76E+03	n	N/A	N	BSL

TABLE 2.10
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Migration of Vapors from Subsurface Waste to Ambient Air (All Waste)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	N/C	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
South Pit Exposure Area All Waste (Outdoor Air Vapors)	78-93-3	2-Butanone	0.0065 J	0.0076 J	mg/kg	SPSB10-050-113010	2 / 20	0.0013	7.1	7.60E-03	N/A	1.45E+05	n	N/A	N	BSL
	591-78-6	2-Hexanone	0.77 J	0.77 J	mg/kg	ESSB04-070-110510	1 / 20	0 00092	5.5	7.70E-01	N/A	5.95E+02	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/kg	ND	0 / 20	0 00092	3.2	3.20E+00	N/A	4.17E+04	n	N/A	N	BSL
	67-64-1	Acetone	0 065 J	1.7 J	mg/kg	SPSB02-100-120210	4 / 20	0.0018	15	1.70E+00	N/A	4.30E+05	n	N/A	N	BSL
	71-43-2	Benzene	0 073	240	mg/kg	MWGW09-070-012612	20 / 20	0 00048	1.9	2.40E+02	N/A	1.41E+01	c	N/A	Y	ASL
	75-27-4	Bromodichloromethane	ND	ND	mg/kg	ND	0 / 20	0 00046	1.9	1.90E+00	N/A	N/A	---	N/A	N/A	N/A
	75-25-2	Bromoform	ND	ND	mg/kg	ND	0 / 20	0 00046	2.3	2.30E+00	N/A	7.24E+01	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/kg	ND	0 / 20	0 00092	3.2	3.20E+00	N/A	5.53E+01	n	N/A	N	BSL
	75-15-0	Carbon disulfide	0 016	0.4 J	mg/kg	ESSB03-070-120910	4 / 20	0 00092	5.2	4.00E-01	N/A	7.74E+03	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/kg	ND	0 / 20	0 00046	3.9	3.90E+00	N/A	5.16E+00	c	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/kg	ND	0 / 20	0 00046	1.6	1.60E+00	N/A	5.53E+02	n	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/kg	ND	0 / 20	0 00092	3.2	3.20E+00	N/A	1.11E+05	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/kg	ND	0 / 20	0 00046	5.8	5.80E+00	N/A	1.35E+00	c	N/A	Y	ASL
	74-87-3	Chloromethane	ND	ND	mg/kg	ND	0 / 20	0 00092	2.9	2.90E+00	N/A	1.72E+01	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 20	0 00046	4.9	4.90E+00	N/A	6.63E+02	n	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 20	0 00046	1.6	1.60E+00	N/A	2.21E+02	n	N/A	N	BSL
	110-82-7	Cyclohexane	0 029	91	mg/kg	ESSL06-140-110310	20 / 20	0 00046	3.9	9.10E+01	N/A	6.63E+04	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/kg	ND	0 / 20	0 00046	1.6	1.60E+00	N/A	N/A	---	N/A	N/A	N/A
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/kg	ND	0 / 20	0 00046	5.8	5.80E+00	N/A	1.11E+03	n	N/A	N	BSL
	100-41-4	Ethylbenzene	1 9	250	mg/kg	SPSB02-050-120210	20 / 20	0.023	2.9	2.50E+02	N/A	2.10E+04	n	N/A	N	BSL
	98-82-8	Isopropylbenzene	0.04	95	mg/kg	SPSB02-050-120210	20 / 20	0 00046	3.2	9.50E+01	N/A	6.66E+03	n	N/A	N	BSL
	79-20-9	Methyl acetate	0.4 J	0.4 J	mg/kg	SPSL01-070-120210	1 / 20	0 00046	3.2	4.00E-01	N/A	N/A	---	N/A	N/A	N/A
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/kg	ND	0 / 20	0 00046	6.1	6.10E+00	N/A	1.19E+02	c	N/A	N	BSL
	108-87-2	Methylcyclohexane	0 035	240	mg/kg	ESSL06-140-110310	20 / 20	0 00048	4.9	2.40E+02	N/A	3.32E+04	n	N/A	N	BSL
	75-09-2	Methylene chloride	0.0011 J	0.74 J	mg/kg	ESSL06-140-110310	2 / 20	0 00092	8.1	7.40E-01	N/A	1.11E+03	c	N/A	N	BSL
	91-20-3	Naphthalene	0.19 JH	91	mg/kg	MWGW09-070-012612	20 / 20	0 00048	2.6	9.10E+01	N/A	1.93E+02	n	N/A	N	BSL
	104-51-8	n-Butylbenzene	0 031	26	mg/kg	ESSB06-070-110310	5 / 20	0 00046	1.9	2.60E+01	N/A	N/A	---	N/A	N/A	N/A
	103-65-1	n-Propylbenzene	0 021	77	mg/kg	ESSB06-070-110310	20 / 20	0 00046	2.9	7.70E+01	N/A	4.55E+03	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	0 057	31	mg/kg	SPSB09-130-113010	19 / 20	0 00046	1.9	3.10E+01	N/A	N/A	---	N/A	N/A	N/A
	100-42-5	Styrene	0 019	2.8	mg/kg	SPSB03-130-120110	4 / 20	0 00046	1.9	2.80E+00	N/A	8.11E+03	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	0 043 J	9.3 J	mg/kg	MWGW09-070-012612	11 / 20	0 00046	1.9	9.30E+00	N/A	N/A	---	N/A	N/A	N/A
	127-18-4	Tetrachloroethene	ND	ND	mg/kg	ND	0 / 20	0 00055	3.2	3.20E+00	N/A	8.14E+01	c	N/A	N	BSL
	108-88-3	Toluene	0.0056	250	mg/kg	MWGW09-070-012612	20 / 20	0 00048	2.3	2.50E+02	N/A	4.53E+04	n	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 20	0 00046	2.9	2.90E+00	N/A	6.63E+02	n	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 20	0 00046	1.6	1.60E+00	N/A	7.74E+00	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/kg	ND	0 / 20	0 00046	5.2	5.20E+00	N/A	2.21E+01	n	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/kg	ND	0 / 20	0 00046	2.6	2.60E+00	N/A	N/A	---	N/A	N/A	N/A
	75-01-4	Vinyl chloride	ND	ND	mg/kg	ND	0 / 20	0 00046	3.2	3.20E+00	N/A	3.68E+00	c	N/A	N	BSL
	1330-20-7	Xylenes, Total	0 061	550	mg/kg	ESSB06-070-110310	20 / 20	0.0014	8.4	5.50E+02	N/A	6.74E+03	n	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	0.42	100	mg/kg	MWGW09-070-012612	19 / 20	0.0037	1.9	1.00E+02	N/A	N/A	---	N/A	N/A	N/A
	90-12-0	1-Methylnaphthalene	1.7	250	mg/kg	ESSB03-070-120910	20 / 20	0.027	4.2	2.50E+02	N/A	N/A	---	N/A	N/A	N/A
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/kg	ND	0 / 20	0.0035	1.2	1.20E+00	N/A	N/A	---	N/A	N/A	N/A
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/kg	ND	0 / 20	0.0042	1.4	1.40E+00	N/A	1.70E+02	c	N/A	N	BSL
	120-83-2	2 4-Dichlorophenol	ND	ND	mg/kg	ND	0 / 20	0.0028	0 96	9.60E-01	N/A	N/A	---	N/A	N/A	N/A
	105-67-9	2,4-Dimethylphenol	0 087 JL	94	mg/kg	SPSL06-160-120310	17 / 20	0.0042	2.2	9.40E+01	N/A	N/A	---	N/A	N/A	N/A
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/kg	ND	0 / 20	0.0042	1.4	1.40E+00	N/A	N/A	---	N/A	N/A	N/A
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 20	0.0042	1.4	1.40E+00	N/A	N/A	---	N/A	N/A	N/A
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 20	0.004	1.4	1.40E+00	N/A	N/A	---	N/A	N/A	N/A
	91-58-7	2-Chloronaphthalene	ND	ND	mg/kg	ND	0 / 20	0.0052	1.8	1.80E+00	N/A	N/A	---	N/A	N/A	N/A
	95-57-8	2-Chlorophenol	ND	ND	mg/kg	ND	0 / 20	0.004	1.4	1.40E+00	N/A	N/A	---	N/A	N/A	N/A
	91-57-6	2-Methylnaphthalene	2 6	470	mg/kg	ESSB03-070-120910	20 / 20	0.032	4.9	4.70E+02	N/A	N/A	---	N/A	N/A	N/A
	95-48-7	2-Methylphenol	0 029 JL	55	mg/kg	MWGW09-070-012612	16 / 20	0.0037	1.9	5.50E+01	N/A	N/A	---	N/A	N/A	N/A
	88-74-4	2-Nitroaniline	ND	ND	mg/kg	ND	0 / 20	0.0042	1.4	1.40E+00	N/A	3.43E+01	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/kg	ND	0 / 20	0.0058	2	2.00E+00	N/A	N/A	---	N/A	N/A	N/A
	106-44-5	3&4-Methylphenol	0.17	110	mg/kg	SPSL06-160-120310	11 / 20	0.0035	5.7	1.10E+02	N/A	N/A	---	N/A	N/A	N/A
	91-94-1	3 3 -Dichlorobenzidine	ND	ND	mg/kg	ND	0 / 20	0.0039	1.3	1.30E+00	N/A	N/A	---	N/A	N/A	N/A
	99-09-2	3-Nitroaniline	ND	ND	mg/kg	ND	0 / 20	0.0033	1.1	1.10E+00	N/A	4.30E+01	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/kg	ND	0 / 20	0.0042	1.4	1.40E+00	N/A	N/A	---	N/A	N/A	N/A
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 20	0.0042	1.4	1.40E+00	N/A	8.42E-01	c	N/A	Y	ASL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/kg	ND	0 / 20	0.0042	1.4	1.40E+00	N/A	N/A	---	N/A	N/A	N/A
	106-47-8	4-Chloroaniline	ND	ND	mg/kg	ND	0 / 20	0.0028	0 96	9.60E-01	N/A	N/A	---	N/A	N/A	N/A
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 20	0.0028	0 96	9.60E-01	N/A	2.15E-01	c	N/A	Y	ASL
	100-01-6	4-Nitroaniline	ND	ND	mg/kg	ND	0 / 20	0.0042	1.4	1.40E+00	N/A	8.69E+02	n	N/A	N	BSL

TABLE 2.10
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Migration of Vapors from Subsurface Waste to Ambient Air (All Waste)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	N/C	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Deletion (4)
South Pit Exposure Area All Waste (Outdoor Air Vapors)	100-02-7	4-Nitrophenol	ND	ND	mg/kg	ND	0 / 20	0.0048	1.7	1.70E+00	N/A	N/A	---	N/A	N/A	N/A
	83-32-9	Acenaphthene	0 051	17	mg/kg	ESSB03-070-120910	20 / 20	0.0028	0 96	1.70E+01	N/A	N/A	---	N/A	N/A	N/A
	208-96-8	Acenaphthylene	0 067 JL	6.6	mg/kg	ESSB03-070-120910	17 / 20	0.0028	0 96	6.60E+00	N/A	N/A	---	N/A	N/A	N/A
	98-86-2	Acetophenone	0.07 J	82	mg/kg	SPSL06-160-120310	12 / 20	0.003	1.6	8.20E+01	N/A	N/A	---	N/A	N/A	N/A
	120-12-7	Anthracene	0 092 JL	12	mg/kg	MWGW09-070-012612	20 / 20	0.0028	1.5	1.20E+01	N/A	N/A	---	N/A	N/A	N/A
	56-55-3	Benz(a)anthracene	0 055 JL	9.8	mg/kg	MWGW09-070-012612	20 / 20	0.0035	1.2	9.80E+00	N/A	3.24E+02	c	N/A	N	BSL
	100-52-7	Benzaldehyde	0.31 JL	0.31 JL	mg/kg	SPSB10-130-113010	1 / 20	0.0058	2	3.10E-01	N/A	N/A	---	N/A	N/A	N/A
	50-32-8	Benzo(a)pyrene	0 037 JL	11	mg/kg	MWGW09-070-012612	20 / 20	0.0029	1	1.10E+01	N/A	7.32E+01	c	N/A	N	BSL
	205-99-2	Benzo(b)fluoranthene	0 012 JL	4.6	mg/kg	MWGW09-070-012612	18 / 20	0.0042	1.4	4.60E+00	N/A	5.31E+02	c	N/A	N	BSL
	191-24-2	Benzo(g,h,i)perylene	0 023 JL	10	mg/kg	MWGW09-070-012612	16 / 20	0.0037	1.3	1.00E+01	N/A	N/A	---	N/A	N/A	N/A
	207-08-9	Benzo(k)fluoranthene	0.02 JL	2.7	mg/kg	MWGW09-070-012612	18 / 20	0.0042	1.4	2.70E+00	N/A	1.32E+04	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/kg	ND	0 / 20	0.003	1	1.00E+00	N/A	9.76E-01	c	N/A	Y	ASL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/kg	ND	0 / 20	0.0035	1.2	1.20E+00	N/A	3.10E-01	c	N/A	Y	ASL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/kg	ND	0 / 20	0.0034	1.2	1.20E+00	N/A	1.79E+01	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.97	0.97	mg/kg	SPSB02-050-120210	1 / 20	0.0083	2.9	9.70E-01	N/A	N/A	---	N/A	N/A	N/A
	85-68-7	Butyl benzyl phthalate	0.68	0.68	mg/kg	SPSB02-100-120210	1 / 20	0.0031	1.1	6.80E-01	N/A	N/A	---	N/A	N/A	N/A
	105-60-2	Caprolactam	36	36	mg/kg	MWGW09-070-012612	1 / 20	0.003	1	3.60E+01	N/A	N/A	---	N/A	N/A	N/A
	86-74-8	Carbazole	ND	ND	mg/kg	ND	0 / 20	0.0028	0 96	9.60E-01	N/A	N/A	---	N/A	N/A	N/A
	218-01-9	Chrysene	0.12 JL	18	mg/kg	MWGW09-070-012612	20 / 20	0.0037	1.3	1.80E+01	N/A	5.11E+04	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	0.0088 JL	3.7	mg/kg	MWGW09-070-012612	11 / 20	0.0028	0 96	3.70E+00	N/A	1.70E+02	c	N/A	N	BSL
	132-64-9	Dibenzofuran	0.15 JL	18	mg/kg	ESSB03-070-120910	18 / 20	0.0028	0 96	1.80E+01	N/A	N/A	---	N/A	N/A	N/A
	84-66-2	Diethyl phthalate	ND	ND	mg/kg	ND	0 / 20	0.0042	1.4	1.40E+00	N/A	N/A	---	N/A	N/A	N/A
	131-11-3	Dimethyl phthalate	ND	ND	mg/kg	ND	0 / 20	0.003	1	1.00E+00	N/A	N/A	---	N/A	N/A	N/A
	84-74-2	Di-n-butyl phthalate	0 037 J	0.7	mg/kg	SPSB07-120-120110	4 / 20	0.0031	1.1	7.00E-01	N/A	N/A	---	N/A	N/A	N/A
	117-84-0	Di-n-octyl phthalate	ND	ND	mg/kg	ND	0 / 20	0.0037	1.3	1.30E+00	N/A	N/A	---	N/A	N/A	N/A
	206-44-0	Fluoranthene	0 085 JL	9.7	mg/kg	MWGW09-070-012612	20 / 20	0.0028	0 96	9.70E+00	N/A	N/A	---	N/A	N/A	N/A
	86-73-7	Fluorene	0.34 JL	32	mg/kg	ESSB03-070-120910	20 / 20	0.0028	1.5	3.20E+01	N/A	N/A	---	N/A	N/A	N/A
	118-74-1	Hexachlorobenzene	ND	ND	mg/kg	ND	0 / 20	0.0033	1.1	1.10E+00	N/A	1.65E+00	c	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/kg	ND	0 / 20	0.0055	1.9	1.90E+00	N/A	2.51E+00	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/kg	ND	0 / 20	0.0045	1.6	1.60E+00	N/A	1.02E+01	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/kg	ND	0 / 20	0.0049	1.7	1.70E+00	N/A	3.56E+03	n	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	0.01 JL	2	mg/kg	MWGW09-070-012612	10 / 20	0.0044	1.5	2.00E+00	N/A	2.17E+03	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/kg	ND	0 / 20	0.0038	1.3	1.30E+00	N/A	N/A	---	N/A	N/A	N/A
	91-20-3	Naphthalene	0.43 JH	97	mg/kg	ESSB03-070-120910	20 / 20	0.039	2.2	9.70E+01	N/A	1.93E+02	n	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/kg	ND	0 / 20	0.0042	1.4	1.40E+00	N/A	5.68E+00	c	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/kg	ND	0 / 20	0.005	1.7	1.70E+00	N/A	N/A	---	N/A	N/A	N/A
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/kg	ND	0 / 20	0.0028	0 96	9.60E-01	N/A	N/A	---	N/A	N/A	N/A
	87-86-5	Pentachlorophenol	ND	ND	mg/kg	ND	0 / 20	0.0035	1.2	1.20E+00	N/A	N/A	---	N/A	N/A	N/A
	85-01-8	Phenanthrene	1 3	230	mg/kg	MWGW09-070-012612	20 / 20	0.039	5.4	2.30E+02	N/A	N/A	---	N/A	N/A	N/A
	108-95-2	Phenol	0 046 JL	80	mg/kg	SPSB06-130-120310	13 / 20	0.0042	6.7	8.00E+01	N/A	N/A	---	N/A	N/A	N/A
	129-00-0	Pyrene	0.14 JL	22	mg/kg	MWGW09-070-012612	20 / 20	0.0028	1.3	2.20E+01	N/A	N/A	---	N/A	N/A	N/A
	57-12-5	Cyanide	0.737 J	18.2	mg/kg	SPSL06-160-120310	9 / 20	0.66	0 97	1.82E+01	N/A	N/A	---	N/A	N/A	N/A

Notes

= Maximum detection limit exceeds screening value

= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.

(2) A background study was not completed.

(3) Screening values are TRRP 30-acre commercial/industrial subsurface soil-to-air PCLs (TCEQ, 2012a), adjusted for carcinogens to a 10^{-6} risk.

(4) Rationale for Selection or Deletion:

ASL = Above Screening Level

BSL = Below Screening Level

Definitions:

ARAR = Applicable or relevant and appropriate requirements

CAS No. = Chemical Abstract Registry Number

c = Carcinogen

J = Estimated value

H = Estimated concentration is biased high

L = Estimated concentration is biased low

mg/kg = milligram/kilogram

n = Noncarcinogen

N/A = Not applicable or available

PCLs = Protective Concentration Levels

TBC = To be considered values

TRRP = Texas Risk Reduction Program

TABLE 2.11
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Leaching from Subsurface Waste to Class 3 Groundwater (All Waste)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	All Soils
Exposure Medium:	Groundwater (Leaching from Soils)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
South Pit Exposure Area All Waste (Leaching of COPCs)	7429-90-5	Aluminum	3510	25700	mg/kg	SPSB05-130-FD-120310	20 / 20	21	130	2.57E+04	N/A	1.00E+06	n	N/A	N	BSL
	7440-36-0	Antimony	0.646 J	0 646 J	mg/kg	MWGW09-070-012612	1 / 20	0.26	1.6	6.46E-01	N/A	2.71E+02	m	N/A	N	BSL
	7440-38-2	Arsenic	1.23	12.7	mg/kg	MWGW09-070-012612	20 / 20	0.063	0 39	1.27E+01	N/A	2.51E+02	m	N/A	N	BSL
	7440-39-3	Barium	68 3	4120	mg/kg	SPSL06-160-120310	20 / 20	0.085	12	4.12E+03	N/A	2.22E+04	m	N/A	N	BSL
	7440-41-7	Beryllium	0.201 J	0 946	mg/kg	SPSB04-150-120210	20 / 20	0.053	0 33	9.46E-01	N/A	9.24E+01	m	N/A	N	BSL
	7440-43-9	Cadmium	0.053 J	0 548 J	mg/kg	MWGW09-070-012612	19 / 20	0.042	0 26	5.48E-01	N/A	7.55E+01	m	N/A	N	BSL
	7440-47-3	Chromium	3.47	501	mg/kg	MWGW09-070-012612	20 / 20	0.053	13	5.01E+02	N/A	1.20E+05	m	N/A	N	BSL
	7440-48-4	Cobalt	1.59	10.4	mg/kg	MWGW09-070-012612	20 / 20	0.032	0.2	1.04E+01	N/A	9.88E+02	n	N/A	N	BSL
	7440-50-8	Copper	2.22	169	mg/kg	MWGW09-070-012612	20 / 20	0.15	0 91	1.69E+02	N/A	5.21E+04	a	N/A	N	BSL
	7439-92-1	Lead	3.4	215	mg/kg	MWGW09-070-012612	20 / 20	0.053	0 33	2.15E+02	N/A	1.51E+02	a	N/A	Y	ASL
	7439-96-5	Manganese	65.1	514	mg/kg	SPSB04-150-120210	20 / 20	0.074	11	5.14E+02	N/A	5.13E+05	n	N/A	N	BSL
	7440-02-0	Nickel	2.43	17.3	mg/kg	MWGW09-070-012612	20 / 20	0.063	0 39	1.73E+01	N/A	2.35E+04	n	N/A	N	BSL
	7782-49-2	Selenium	0.286 J	1.18	mg/kg	MWGW09-070-012612	18 / 20	0.26	1.6	1.18E+00	N/A	1.15E+02	m	N/A	N	BSL
	7440-22-4	Silver	0 0559 J	0.429 J	mg/kg	SPSB04-150-120210	8 / 20	0.042	0 26	4 29E-01	N/A	7.15E+01	n	N/A	N	BSL
	7440-28-0	Thallium	0 0902 J	0 246 J	mg/kg	SPSB04-150-120210	13 / 20	0.074	0.46	2.46E-01	N/A	8.75E+01	m	N/A	N	BSL
	7440-62-2	Vanadium	8.17	26.7	mg/kg	ESSB03-070-120910	20 / 20	0.074	0.46	2.67E+01	N/A	1.31E+05	n	N/A	N	BSL
	7440-66-6	Zinc	10 2	226	mg/kg	MWGW09-070-012612	20 / 20	0.26	1.6	2.26E+02	N/A	3.52E+05	n	N/A	N	BSL
	7439-97-6	Mercury	0 0012 J	5.27	mg/kg	MWGW09-070-012612	19 / 20	0.00024	0.0047	5.27E+00	N/A	3.91E-01	m	N/A	Y	ASL
	72-54-8	4,4 -DDD	0.015 J	1 J	mg/kg	SPSL06-160-120310	8 / 20	0.00065	0.072	1.00E+00	N/A	1.45E+02	c	N/A	N	BSL
	72-55-9	4,4 -DDE	0.05 J	1.1 JH	mg/kg	MWGW09-070-012612/ SPSB02-100-120210	6 / 20	0.00065	0.072	1.10E+00	N/A	1.32E+02	c	N/A	N	BSL
	50-29-3	4,4 -DDT	0 0047	0.45	mg/kg	SPSB02-100-120210	7 / 20	0.00065	0.072	4 50E-01	N/A	1.65E+02	c	N/A	N	BSL
	309-00-2	Aldrin	0 0028 J	0.22 J	mg/kg	SPSB05-130-120310	5 / 20	0.00039	0.043	2 20E-01	N/A	1.15E+00	c	N/A	N	BSL
	319-84-6	alpha-BHC	0 2 J	0.55	mg/kg	ESSB03-070-120910	2 / 20	0.00039	0.043	5 50E-01	N/A	8.86E-02	c	N/A	Y	ASL
	5103-71-9	alpha-Chlordane	0.18	0.68	mg/kg	SPSL06-160-120310	2 / 20	0.00026	0.029	6 80E-01	N/A	8.27E+03	c	N/A	N	BSL
	319-85-7	beta-BHC	0 0088	0.83 JH	mg/kg	MWGW09-070-012612	10 / 20	0.00039	0.043	8 30E-01	N/A	3.24E-01	c	N/A	Y	ASL
	319-86-8	delta-BHC	ND	ND	mg/kg	ND	0 / 20	0.00026	0.029	2 90E-02	N/A	1.94E+00	c	N/A	N	BSL
	60-57-1	Dieldrin	0.025	0.11	mg/kg	SPSB07-120-120110	2 / 20	0.00065	0.072	1.10E-01	N/A	5.47E-01	c	N/A	N	BSL
	959-98-8	Endosulfan I	ND	ND	mg/kg	ND	0 / 20	0.00039	0.043	4 30E-02	N/A	4.60E+03	n	N/A	N	BSL
	33213-65-9	Endosulfan II	0.027 J	0.56 J	mg/kg	SPSL06-160-120310	5 / 20	0.00078	0.087	5 60E-01	N/A	1.38E+04	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	0 0037 J	2 JH	mg/kg	MWGW09-070-012612	11 / 20	0.00078	0.087	2.00E+00	N/A	6.96E+05	n	N/A	N	BSL
	72-20-8	Endrin	0.021 J	1.3	mg/kg	SPSL06-160-120310	7 / 20	0.00078	0.087	1.30E+00	N/A	3.75E+01	m	N/A	N	BSL
	7421-93-4	Endrin aldehyde	0.032	1.7	mg/kg	SPSL06-160-120310	9 / 20	0.00078	0.087	1.70E+00	N/A	9.36E+04	n	N/A	N	BSL
	53494-70-5	Endrin ketone	ND	ND	mg/kg	ND	0 / 20	0.00078	0.087	8.70E-02	N/A	7.61E+03	n	N/A	N	BSL
	58-89-9	gamma-BHC	0 0086 J	0.12 J	mg/kg	ESSB04-070-110510	5 / 20	0.00026	0.029	1 20E-01	N/A	4.58E-01	m	N/A	N	BSL
	5103-74-2	gamma-Chlordane	0 0046 J	0.51 J	mg/kg	SPSL06-160-120310	8 / 20	0.00026	0.029	5.10E-01	N/A	4.60E+02	c	N/A	N	BSL
	76-44-8	Heptachlor	0 0027	0.0027	mg/kg	ESSB07-090-120810	1 / 20	0.00039	0.043	2.70E-03	N/A	9.44E+00	m	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	0.016 JH	3.8 J	mg/kg	MWGW09-070-012612	11 / 20	0.00039	0.048	3.80E+00	N/A	2.91E+00	m	N/A	Y	ASL
	72-43-5	Methoxychlor	0.35 J	2.4	mg/kg	SPSB06-130-120310	5 / 20	0 0044	0.49	2.40E+00	N/A	6.21E+03	m	N/A	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/kg	ND	0 / 20	0 0049	0 55	5 50E-01	N/A	5.75E+02	m	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/kg	ND	0 / 20	0 0028	0 35	3 50E-01	N/A	N/A	---	N/A	N/A	N/A
	11104-28-2	Aroclor 1221	ND	ND	mg/kg	ND	0 / 20	0 0028	0 35	3 50E-01	N/A	N/A	---	N/A	N/A	N/A
	11141-16-5	Aroclor 1232	ND	ND	mg/kg	ND	0 / 20	0 0028	0 35	3 50E-01	N/A	N/A	---	N/A	N/A	N/A
	53469-21-9	Aroclor 1242	ND	ND	mg/kg	ND	0 / 20	0 0028	0 35	3 50E-01	N/A	N/A	---	N/A	N/A	N/A
	12672-29-6	Aroclor 1248	ND	ND	mg/kg	ND	0 / 20	0 0028	0 35	3 50E-01	N/A	N/A	---	N/A	N/A	N/A
	11097-69-1	Aroclor 1254	0.22 J	0.22 J	mg/kg	SPSB04-150-120210	1 / 20	0 0028	0 35	2 20E-01	N/A	N/A	---	N/A	N/A	N/A
	11096-82-5	Aroclor 1260	ND	ND	mg/kg	ND	0 / 20	0 0021	0 26	2 60E-01	N/A	N/A	---	N/A	N/A	N/A
	TPCB	Total PCBs	0.332	0 332	mg/kg	SPSB04-150-120210	1 / 20	0.00945	1.18	3 32E-01	N/A	5.30E+02	m	N/A	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 20	0.00046	2.3	2.30E+00	N/A	1.59E+01	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/kg	ND	0 / 20	0.00046	5.5	5.50E+00	N/A	8.10E+01	m	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/kg	ND	0 / 20	0.00046	1.6	1.60E+00	N/A	2.59E-01	c	N/A	Y	ASL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/kg	ND	0 / 20	0.00046	4.2	4.20E+00	N/A	1.00E+06	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	0.15 J	0.15 J	mg/kg	ESSB04-070-110510	1 / 20	0.00046	6.5	1 50E-01	N/A	1.00E+00	m	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	0.35 J	0.35 J	mg/kg	ESSL06-140-110310	1 / 20	0.00046	1.6	3 50E-01	N/A	2.76E+03	n	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/kg	ND	0 / 20	0.00046	4.9	4.90E+00	N/A	2.50E+00	m	N/A	Y	ASL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/kg	ND	0 / 20	0.00055	2.9	2.90E+00	N/A	2.40E+02	m	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	0.32 J	100	mg/kg	ESSB07-090-120810	19 / 20	0.00048	2.6	1.00E+02	N/A	7.25E+03	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/kg	ND	0 / 20	0.00046	2.3	2.30E+00	N/A	1.03E-02	m	N/A	Y	ASL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 20	0.00046	2.6	2.60E+00	N/A	8.94E+02	m	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/kg	ND	0 / 20	0.00046	1.9	1.90E+00	N/A	6.86E-01	m	N/A	Y	ASL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/kg	ND	0 / 20	0.00046	1.6	1.60E+00	N/A	1.14E+00	m	N/A	Y	ASL
	108-67-8	1 3 5-Trimethylbenzene	0.014	140	mg/kg	ESSB06-070-110310	20 / 20	0.00046	2.6	1.40E+02	N/A	7.94E+03	n	N/A	N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 20	0.00046	2.9	2.90E+00	N/A	1.01E+03	n	N/A	N	BSL

TABLE 2.11
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Leaching from Subsurface Waste to Class 3 Groundwater (All Waste)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	All Soils
Exposure Medium:	Groundwater (Leaching from Soils)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
South Pit Exposure Area All Waste (Leaching of COPCs)	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/kg	ND	0 / 20	0.00046	2.3	2.30E+00	N/A	1.05E+02	m	N/A	N	BSL
	78-93-3	2-Butanone	0 0065 J	0.0076 J	mg/kg	SPSB10-050-113010	2 / 20	0 0013	7.1	7 60E-03	N/A	4.37E+03	n	N/A	N	BSL
	591-78-6	2-Hexanone	0.77 J	0.77 J	mg/kg	ESSB04-070-110510	1 / 20	0.00092	5.5	7.70E-01	N/A	4.82E+01	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/kg	ND	0 / 20	0.00092	3.2	3.20E+00	N/A	7.39E+02	n	N/A	N	BSL
	67-64-1	Acetone	0.065 J	1.7 J	mg/kg	SPSB02-100-120210	4 / 20	0 0018	15	1.70E+00	N/A	6.38E+03	n	N/A	N	BSL
	71-43-2	Benzene	0.073	240	mg/kg	MWGW09-070-012612	20 / 20	0.00048	1.9	2.40E+02	N/A	1.28E+00	m	N/A	Y	ASL
	75-27-4	Bromodichloromethane	ND	ND	mg/kg	ND	0 / 20	0.00046	1.9	1.90E+00	N/A	7.33E-01	c	N/A	Y	ASL
	75-25-2	Bromoform	ND	ND	mg/kg	ND	0 / 20	0.00046	2.3	2.30E+00	N/A	7.07E+00	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/kg	ND	0 / 20	0.00092	3.2	3.20E+00	N/A	1.95E+01	n	N/A	N	BSL
	75-15-0	Carbon disulfide	0.016	0.4 J	mg/kg	ESSB03-070-120910	4 / 20	0.00092	5.2	4 00E-01	N/A	2.03E+03	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/kg	ND	0 / 20	0.00046	3.9	3.90E+00	N/A	3.09E+00	m	N/A	Y	ASL
	108-90-7	Chlorobenzene	ND	ND	mg/kg	ND	0 / 20	0.00046	1.6	1.60E+00	N/A	5.46E+01	m	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/kg	ND	0 / 20	0.00092	3.2	3.20E+00	N/A	4.61E+03	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/kg	ND	0 / 20	0.00046	5.8	5.80E+00	N/A	1.52E+02	n	N/A	N	BSL
	74-87-3	Chloromethane	ND	ND	mg/kg	ND	0 / 20	0.00092	2.9	2.90E+00	N/A	4.54E+00	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 20	0.00046	4.9	4.90E+00	N/A	1.24E+01	m	N/A	N	BSL
	10061-01-5	cis-1 3-Dichloropropene	ND	ND	mg/kg	ND	0 / 20	0.00046	1.6	1.60E+00	N/A	7.44E-02	c	N/A	Y	ASL
	110-82-7	Cyclohexane	0.029	91	mg/kg	ESSL06-140-110310	20 / 20	0.00046	3.9	9.10E+01	N/A	8.78E+05	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/kg	ND	0 / 20	0.00046	1.6	1.60E+00	N/A	5.50E-01	c	N/A	Y	ASL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/kg	ND	0 / 20	0.00046	5.8	5.80E+00	N/A	3.58E+04	n	N/A	N	BSL
	100-41-4	Ethylbenzene	1 9	250	mg/kg	SPSB02-050-120210	20 / 20	0.023	2.9	2.50E+02	N/A	3.82E+02	m	N/A	N	BSL
	98-82-8	Isopropylbenzene	0.04	95	mg/kg	SPSB02-050-120210	20 / 20	0.00046	3.2	9.50E+01	N/A	5.19E+04	n	N/A	N	BSL
	79-20-9	Methyl acetate	0.4 J	0.4 J	mg/kg	SPSL01-070-120210	1 / 20	0.00046	3.2	4 00E-01	N/A	7.29E+03	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/kg	ND	0 / 20	0.00046	6.1	6.10E+00	N/A	9.28E+01	n	N/A	N	BSL
	108-87-2	Methylcyclohexane	0.035	240	mg/kg	ESSL06-140-110310	20 / 20	0.00048	4.9	2.40E+02	N/A	1.00E+06	n	N/A	N	BSL
	75-09-2	Methylene chloride	0 0011 J	0.74 J	mg/kg	ESSL06-140-110310	2 / 20	0.00092	8.1	7.40E-01	N/A	6.54E-01	m	N/A	Y	ASL
	91-20-3	Naphthalene	0.19 JH	91	mg/kg	MWGW09-070-012612	20 / 20	0.00048	2.6	9.10E+01	N/A	4.67E+03	n	N/A	N	BSL
	104-51-8	n-Butylbenzene	0.031	26	mg/kg	ESSB06-070-110310	5 / 20	0.00046	1.9	2.60E+01	N/A	2.26E+04	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	0.021	77	mg/kg	ESSB06-070-110310	20 / 20	0.00046	2.9	7.70E+01	N/A	6.69E+03	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	0.057	31	mg/kg	SPSB09-130-113010	19 / 20	0.00046	1.9	3.10E+01	N/A	1.27E+04	n	N/A	N	BSL
	100-42-5	Styrene	0.019	2.8	mg/kg	SPSB03-130-120110	4 / 20	0.00046	1.9	2.80E+00	N/A	1.63E+02	m	N/A	N	BSL
	98-06-6	tert-Butylbenzene	0.043 J	9.3 J	mg/kg	MWGW09-070-012612	11 / 20	0.00046	1.9	9.30E+00	N/A	1.49E+04	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/kg	ND	0 / 20	0.00055	3.2	3.20E+00	N/A	2.51E+00	m	N/A	Y	ASL
	108-88-3	Toluene	0 0056	250	mg/kg	MWGW09-070-012612	20 / 20	0.00048	2.3	2.50E+02	N/A	4.11E+02	m	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/kg	ND	0 / 20	0.00046	2.9	2.90E+00	N/A	2.45E+01	m	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/kg	ND	0 / 20	0.00046	1.6	1.60E+00	N/A	4.02E-01	c	N/A	Y	ASL
	79-01-6	Trichloroethene	ND	ND	mg/kg	ND	0 / 20	0.00046	5.2	5.20E+00	N/A	1.68E+00	m	N/A	Y	ASL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/kg	ND	0 / 20	0.00046	2.6	2.60E+00	N/A	1.91E+04	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/kg	ND	0 / 20	0.00046	3.2	3.20E+00	N/A	1.11E+00	m	N/A	Y	ASL
	1330-20-7	Xylenes, Total	0.061	550	mg/kg	ESSB06-070-110310	20 / 20	0 0014	8.4	5.50E+02	N/A	6.13E+03	m	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	0.42	100	mg/kg	MWGW09-070-012612	19 / 20	0 0037	1.9	1.00E+02	N/A	3.78E+04	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	1.7	250	mg/kg	ESSB03-070-120910	20 / 20	0.027	4.2	2.50E+02	N/A	3.30E+01	c	N/A	Y	ASL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/kg	ND	0 / 20	0 0035	1.2	1.20E+00	N/A	5.05E+03	n	N/A	N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/kg	ND	0 / 20	0 0042	1.4	1.40E+00	N/A	2.61E+01	n	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/kg	ND	0 / 20	0 0028	0 96	9 60E-01	N/A	5.25E+01	n	N/A	N	BSL
	105-67-9	2,4-Dimethylphenol	0.087 JL	94	mg/kg	SPSL06-160-120310	17 / 20	0 0042	2.2	9.40E+01	N/A	4.83E+02	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/kg	ND	0 / 20	0 0042	1.4	1.40E+00	N/A	1.40E+01	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 20	0 0042	1.4	1.40E+00	N/A	5.96E-02	c	N/A	Y	ASL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/kg	ND	0 / 20	0.004	1.4	1.40E+00	N/A	5.39E-02	c	N/A	Y	ASL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/kg	ND	0 / 20	0 0052	1.8	1.80E+00	N/A	1.00E+05	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/kg	ND	0 / 20	0.004	1.4	1.40E+00	N/A	2.44E+02	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	2 6	470	mg/kg	ESSB03-070-120910	20 / 20	0.032	4.9	4.70E+02	N/A	2.55E+03	n	N/A	N	BSL
	95-48-7	2-Methylphenol	0.029 JL	55	mg/kg	MWGW09-070-012612	16 / 20	0 0037	1.9	5.50E+01	N/A	1.06E+03	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/kg	ND	0 / 20	0 0042	1.4	1.40E+00	N/A	3.28E+00	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/kg	ND	0 / 20	0 0058	2	2.00E+00	N/A	2.01E+01	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol	0.17	110	mg/kg	SPSL06-160-120310	11 / 20	0 0035	5.7	1.10E+02	N/A	9.43E+01	n	N/A	Y	ASL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/kg	ND	0 / 20	0 0039	1.3	1.30E+00	N/A	7.02E-01	c	N/A	Y	ASL
	99-09-2	3-Nitroaniline	ND	ND	mg/kg	ND	0 / 20	0 0033	1.1	1.10E+00	N/A	3.82E+00	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/kg	ND	0 / 20	0 0042	1.4	1.40E+00	N/A	7.00E-01	n	N/A	Y	ASL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 20	0 0042	1.4	1.40E+00	N/A	3.96E+00	c	N/A	N	BSL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/kg	ND	0 / 20	0 0042	1.4	1.40E+00	N/A	6.76E+02	n	N/A	N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/kg	ND	0 / 20	0 0028	0 96	9 60E-01	N/A	2.33E-01	c	N/A	Y	ASL

TABLE 2.11
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
South Pit Exposure Area
Leaching from Subsurface Waste to Class 3 Groundwater (All Waste)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	All Soils
Exposure Medium:	Groundwater (Leaching from Soils)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
South Pit Exposure Area All Waste (Leaching of COPCs)	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/kg	ND	0 / 20	0 0028	0 96	9 60E-01	N/A	3.58E-01	c	N/A	Y	ASL
	100-01-6	4-Nitroaniline	ND	ND	mg/kg	ND	0 / 20	0 0042	1.4	1.40E+00	N/A	1.21E+00	c	N/A	Y	ASL
	100-02-7	4-Nitrophenol	ND	ND	mg/kg	ND	0 / 20	0 0048	1.7	1.70E+00	N/A	1.49E+01	n	N/A	N	BSL
	83-32-9	Acenaphthene	0.051	17	mg/kg	ESSB03-070-120910	20 / 20	0 0028	0 96	1.70E+01	N/A	3.53E+04	n	N/A	N	BSL
	208-96-8	Acenaphthylene	0.067 JL	6.6	mg/kg	ESSB03-070-120910	17 / 20	0 0028	0 96	6.60E+00	N/A	6.10E+04	n	N/A	N	BSL
	98-86-2	Acetophenone	0.07 J	82	mg/kg	SPSL06-160-120310	12 / 20	0.003	1.6	8.20E+01	N/A	1.23E+03	n	N/A	N	BSL
	120-12-7	Anthracene	0.092 JL	12	mg/kg	MWGW09-070-012612	20 / 20	0 0028	1.5	1.20E+01	N/A	1.00E+06	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	0.055 JL	9.8	mg/kg	MWGW09-070-012612	20 / 20	0 0035	1.2	9.80E+00	N/A	1.99E+02	c	N/A	N	BSL
	100-52-7	Benzaldehyde	0.31 JL	0.31 JL	mg/kg	SPSB10-130-113010	1 / 20	0 0058	2	3.10E-01	N/A	1.57E+03	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	0.037 JL	11	mg/kg	MWGW09-070-012612	20 / 20	0 0029	1	1.10E+01	N/A	3.82E+02	m	N/A	N	BSL
	205-99-2	Benzo(b)fluoranthene	0.012 JL	4.6	mg/kg	MWGW09-070-012612	18 / 20	0 0042	1.4	4.60E+00	N/A	6.73E+02	c	N/A	N	BSL
	191-24-2	Benzo(g,h,i)perylene	0.023 JL	10	mg/kg	MWGW09-070-012612	16 / 20	0 0037	1.3	1.00E+01	N/A	1.00E+06	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	0.02 JL	2.7	mg/kg	MWGW09-070-012612	18 / 20	0 0042	1.4	2.70E+00	N/A	6.89E+03	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/kg	ND	0 / 20	0.003	1	1.00E+00	N/A	1.32E-01	c	N/A	Y	ASL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/kg	ND	0 / 20	0 0035	1.2	1.20E+00	N/A	2.36E-02	c	N/A	Y	ASL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/kg	ND	0 / 20	0 0034	1.2	1.20E+00	N/A	2.13E+00	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.97	0.97	mg/kg	SPSB02-050-120210	1 / 20	0 0083	2.9	9.70E-01	N/A	8.18E+03	m	N/A	N	BSL
	85-68-7	Butyl benzyl phthalate	0.68	0.68	mg/kg	SPSB02-100-120210	1 / 20	0 0031	1.1	6 80E-01	N/A	2.97E+03	c	N/A	N	BSL
	105-60-2	Caprolactam	36	36	mg/kg	MWGW09-070-012612	1 / 20	0.003	1	3.60E+01	N/A	7.01E+03	n	N/A	N	BSL
	86-74-8	Carbazole	ND	ND	mg/kg	ND	0 / 20	0 0028	0 96	9 60E-01	N/A	5.12E+01	c	N/A	N	BSL
	218-01-9	Chrysene	0.12 JL	18	mg/kg	MWGW09-070-012612	20 / 20	0 0037	1.3	1.80E+01	N/A	1.73E+04	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	0 0088 JL	3.7	mg/kg	MWGW09-070-012612	11 / 20	0 0028	0 96	3.70E+00	N/A	1.07E+02	c	N/A	N	BSL
	132-64-9	Dibenzofuran	0.15 JL	18	mg/kg	ESSB03-070-120910	18 / 20	0 0028	0 96	1.80E+01	N/A	4.98E+03	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	ND	ND	mg/kg	ND	0 / 20	0 0042	1.4	1.40E+00	N/A	2.33E+04	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	ND	ND	mg/kg	ND	0 / 20	0.003	1	1.00E+00	N/A	9.29E+03	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	0.037 J	0.7	mg/kg	SPSB07-120-120110	4 / 20	0 0031	1.1	7 00E-01	N/A	4.95E+05	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	ND	ND	mg/kg	ND	0 / 20	0 0037	1.3	1.30E+00	N/A	1.00E+06	n	N/A	N	BSL
	206-44-0	Fluoranthene	0.085 JL	9.7	mg/kg	MWGW09-070-012612	20 / 20	0 0028	0 96	9.70E+00	N/A	2.86E+05	n	N/A	N	BSL
	86-73-7	Fluorene	0.34 JL	32	mg/kg	ESSB03-070-120910	20 / 20	0 0028	1.5	3.20E+01	N/A	4.46E+04	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/kg	ND	0 / 20	0 0033	1.1	1.10E+00	N/A	5.65E+01	m	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/kg	ND	0 / 20	0 0055	1.9	1.90E+00	N/A	3.68E+01	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/kg	ND	0 / 20	0 0045	1.6	1.60E+00	N/A	9.64E+02	m	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/kg	ND	0 / 20	0 0049	1.7	1.70E+00	N/A	1.92E+02	n	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	0.01 JL	2	mg/kg	MWGW09-070-012612	10 / 20	0 0044	1.5	2.00E+00	N/A	1.94E+03	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/kg	ND	0 / 20	0 0038	1.3	1.30E+00	N/A	3.36E+01	c	N/A	N	BSL
	91-20-3	Naphthalene	0.43 JH	97	mg/kg	ESSB03-070-120910	20 / 20	0.039	2.2	9.70E+01	N/A	4.67E+03	n	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/kg	ND	0 / 20	0 0042	1.4	1.40E+00	N/A	5.25E+01	n	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/kg	ND	0 / 20	0.005	1.7	1.70E+00	N/A	3.95E-03	c	N/A	Y	ASL
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/kg	ND	0 / 20	0 0028	0 96	9 60E-01	N/A	3.16E+01	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	ND	ND	mg/kg	ND	0 / 20	0 0035	1.2	1.20E+00	N/A	9.16E-01	m	N/A	Y	ASL
	85-01-8	Phenanthrene	1 3	230	mg/kg	MWGW09-070-012612	20 / 20	0.039	5.4	2.30E+02	N/A	6.21E+04	n	N/A	N	BSL
	108-95-2	Phenol	0.046 JL	80	mg/kg	SPSB06-130-120310	13 / 20	0 0042	6.7	8.00E+01	N/A	2.86E+03	n	N/A	N	BSL
	129-00-0	Pyrene	0.14 JL	22	mg/kg	MWGW09-070-012612	20 / 20	0 0028	1.3	2.20E+01	N/A	1.67E+05	n	N/A	N	BSL
	57-12-5	Cyanide	0.737 J	18.2	mg/kg	SPSL06-160-120310	9 / 20	0.66	0 97	1.82E+01	N/A	2.00E+03	m	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value

= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.

(2) A background study was not completed.

(3)Screening values are the TRRP 30-acre commercial/industrial PCLs (TCEQ, 2012a) for leaching from soil to a Class 3 groundwater-bearing unit, adjusted for carcinogens to a 10-6 risk.

(4) Rationale for Selection or Deletion:

ASL = Above Screening Level

BSL = Below Screening Level

Definitions:

a= Action level

ARAR = Applicable or relevant and appropriate requirements

CAS No. = Chemical Abstract Registry Number

c = Carcinogen

J = Estimated value

L = Estimated concentration is biased low

mg/kg = milligram/kilogram

m = MCL-based

n = Noncarcinogen

N/A = Not applicable or available

ND= Not Detected

PCLs = Protective Concentration Levels

TBC = To be considered values

TRRP = Texas Risk Reduction Program

TABLE 2.12
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Upper Transmissive Unit - South Pit Exposure Area
Groundwater Class 3 and Migration of Volatile Compounds to Ambient Air
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
On-Site Groundwater Upper Transmissive Unit South Pit Expsoure Area	7429-90-5	Aluminum	0.0467	0.67	mg/l	MWGW08-022714	6 / 7	0.008	0.02	6.70E-01	N/A	7.30E+03	n	N/A	N	BSL
	7440-36-0	Antimony	0.0332	0.0638	mg/l	MWGW12-022714	2 / 7	0.0016	0.004	6.38E-02	N/A	6.00E-01	m	N/A	N	BSL
	7440-38-2	Arsenic	0.00377 J	2.4	mg/l	MWGW12-022714	7 / 7	0.002	0.025	2.40E+00	N/A	1.00E+00	m	N/A	Y	ASL
	7440-39-3	Barium	0.0433	1.99	mg/l	MWGW12-022714	7 / 7	0.0018	0.022	1.99E+00	N/A	2.00E+02	m	N/A	N	BSL
	7440-41-7	Beryllium	ND	ND	mg/l	ND	0 / 7	0.0014	0.0035	3.50E-03	N/A	4.00E-01	m	N/A	N	BSL
	7440-43-9	Cadmium	ND	ND	mg/l	ND	0 / 7	0.0016	0.004	4.00E-03	N/A	5.00E-01	m	N/A	N	BSL
	7440-47-3	Chromium	0.00608 J	0.404	mg/l	MWGW02-022714	3 / 7	0.002	0.005	4.04E-01	N/A	1.00E+01	m	N/A	N	BSL
	7440-48-4	Cobalt	0.00168 J	0.161	mg/l	MWGW02-022714	4 / 7	0.0016	0.004	1.61E-01	N/A	2.20E+00	n	N/A	N	BSL
	7440-50-8	Copper	ND	ND	mg/l	ND	0 / 7	0.002	0.005	5.00E-03	N/A	1.30E+02	a	N/A	N	BSL
	7439-92-1	Lead	0.0122 J	0.0122 J	mg/l	MWGW02-022714	1 / 7	0.0014	0.0035	1.22E-02	N/A	1.50E+00	a	N/A	N	BSL
	7439-96-5	Manganese	0 206	6.04	mg/l	MWGW07-022714	7 / 7	0.012	0.062	6.04E+00	N/A	1.00E+03	n	N/A	N	BSL
	7440-02-0	Nickel	0.00293 J	0.632	mg/l	MWGW02-022714	6 / 7	0.002	0.025	6.32E-01	N/A	1.50E+02	n	N/A	N	BSL
	7782-49-2	Selenium	0.0101 J	0.0101 J	mg/l	MWGW02-022714	1 / 7	0.002	0.005	1.01E-02	N/A	5.00E+00	m	N/A	N	BSL
	7440-22-4	Silver	ND	ND	mg/l	ND	0 / 7	0.0016	0.004	4.00E-03	N/A	3.70E+01	n	N/A	N	BSL
	7440-28-0	Thallium	ND	ND	mg/l	ND	0 / 7	0.002	0.005	5.00E-03	N/A	2.00E-01	m	N/A	N	BSL
	7440-62-2	Vanadium	0.0025 J	1.39	mg/l	MWGW12-022714	7 / 7	0.0018	0.022	1.39E+00	N/A	1.30E+01	n	N/A	N	BSL
	7440-66-6	Zinc	0.00459 J	0.326	mg/l	MWGW02-022714	4 / 7	0.004	0.01	3.26E-01	N/A	2.20E+03	n	N/A	N	BSL
	7439-97-6	Mercury	0.000727	0 000727	mg/l	MWGW02-022714	1 / 7	0 00004	0 00004	7.27E-04	N/A	2.00E-01	m	N/A	N	BSL
	72-54-8	4,4 -DDD	0.00075	0.0009	mg/l	MWGW07-022714	2 / 7	0.000025	0.0012	9.00E-04	N/A	8.50E-02	c	N/A	N	BSL
	72-55-9	4,4 -DDE	0.00016	0.0044	mg/l	MWGW12-022714	2 / 7	0.000025	0.0012	4.40E-03	N/A	6.00E-02	c	N/A	N	BSL
	50-29-3	4,4 -DDT	0.00011	0.00046	mg/l	MWGW07-022714	3 / 7	0.000025	0.0012	4.60E-04	N/A	6.00E-02	c	N/A	N	BSL
	309-00-2	Aldrin	ND	ND	mg/l	ND	0 / 7	0.000012	0 00062	6.20E-04	N/A	1.20E-03	c	N/A	N	BSL
	319-84-6	alpha-BHC	0.0075	0.0075	mg/l	MWGW02-022714	1 / 7	0.000012	0 00062	7.50E-03	N/A	3.20E-03	c	N/A	Y	ASL
	5103-71-9	alpha-Chlordane	ND	ND	mg/l	ND	0 / 7	0.000025	0.0012	1.20E-03	N/A	5.80E-02	c	N/A	N	BSL
	319-85-7	beta-BHC	0.000063	0.0075	mg/l	MWGW12-022714	4 / 7	0.000012	0 00062	7.50E-03	N/A	1.10E-02	c	N/A	N	BSL
	319-86-8	delta-BHC	ND	ND	mg/l	ND	0 / 7	0.000012	0 00062	6.20E-04	N/A	1.10E-02	c	N/A	N	BSL
	60-57-1	Dieldrin	0.0049	0.0049	mg/l	MWGW02-022714	1 / 7	0.000025	0.0012	4.90E-03	N/A	1.30E-03	c	N/A	Y	ASL
	959-98-8	Endosulfan I	ND	ND	mg/l	ND	0 / 7	0.000012	0 00062	6.20E-04	N/A	1.50E+01	n	N/A	N	BSL
	33213-65-9	Endosulfan II	0.000099	0.0002	mg/l	MWGW07-022714	4 / 7	0.000025	0.0012	2.00E-04	N/A	4.40E+01	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	0.000088	0.00024	mg/l	MWGW08-022714	2 / 7	0.000025	0.0012	2.40E-04	N/A	4.40E+01	n	N/A	N	BSL
	72-20-8	Endrin	0.00067	0.00077	mg/l	MWGW07-022714	2 / 7	0.000025	0.0012	7.70E-04	N/A	2.00E-01	m	N/A	N	BSL
	7421-93-4	Endrin aldehyde	0.0003	0.0035	mg/l	MWGW12-022714	2 / 7	0.000025	0.0012	3.50E-03	N/A	2.20E+00	n	N/A	N	BSL
	53494-70-5	Endrin ketone	ND	ND	mg/l	ND	0 / 7	0.000025	0.0012	1.20E-03	N/A	2.20E+00	n	N/A	N	BSL
	58-89-9	gamma-BHC	0.00017	0.0021	mg/l	MWGW02-022714	2 / 7	0.000012	0 00062	2.10E-03	N/A	2.00E-02	m	N/A	N	BSL
	5103-74-2	gamma-Chlordane	ND	ND	mg/l	ND	0 / 7	0.000025	0.0012	1.20E-03	N/A	5.80E-02	c	N/A	N	BSL
	76-44-8	Heptachlor	0.00044	0.0058	mg/l	MWGW12-022714	4 / 7	0.000012	0 00062	5.80E-03	N/A	4.00E-02	m	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	0.00017	0.00021	mg/l	MWGW07-FD-022714	2 / 7	0.000012	0 00062	2.10E-04	N/A	2.00E-02	m	N/A	N	BSL
	72-43-5	Methoxychlor	0.00097	0.0012	mg/l	MWGW07-FD-022714	2 / 7	0 00012	0.0062	1.20E-03	N/A	4.00E+00	m	N/A	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/l	ND	0 / 7	0 00025	0.012	1.20E-02	N/A	3.00E-01	m	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/l	ND	0 / 7	0.0001	0.01	1.00E-02	N/A	5.00E-02	m	N/A	N	BSL
	11104-28-2	Aroclor 1221	ND	ND	mg/l	ND	0 / 7	0.0005	0.05	5.00E-02	N/A	5.00E-02	m	N/A	N	BSL
	11141-16-5	Aroclor 1232	ND	ND	mg/l	ND	0 / 7	0.0005	0.05	5.00E-02	N/A	5.00E-02	m	N/A	N	BSL
	53469-21-9	Aroclor 1242	ND	ND	mg/l	ND	0 / 7	0.0005	0.05	5.00E-02	N/A	5.00E-02	m	N/A	N	BSL
	12672-29-6	Aroclor 1248	ND	ND	mg/l	ND	0 / 7	0.0005	0.05	5.00E-02	N/A	5.00E-02	m	N/A	N	BSL
	11097-69-1	Aroclor 1254	ND	ND	mg/l	ND	0 / 7	0.0005	0.05	5.00E-02	N/A	5.00E-02	m	N/A	N	BSL
	11096-82-5	Aroclor 1260	ND	ND	mg/l	ND	0 / 7	0.0001	0.01	1.00E-02	N/A	5.00E-02	m	N/A	N	BSL
	TPCB	Total PCBs	ND	ND	mg/l	ND	0 / 7	0.0001	0.05	5.00E-02	N/A	5.00E-02	m	N/A	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 7	0.0003	0.0075	7.50E-03	N/A	7.90E-01	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	2.00E+01	m	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 7	0.0005	0.012	1.20E-02	N/A	1.00E-01	c	N/A	N	BSL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/l	ND	0 / 7	0.001	0.025	2.50E-02	N/A	1.70E+03	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/l	ND	0 / 7	0.0003	0.0075	7.50E-03	N/A	5.00E-01	m	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	1.50E+03	n	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	7.00E-01	m	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/l	ND	0 / 7	0.0005	0.012	1.20E-02	N/A	7.00E+00	m	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	0 008	0.13	mg/l	MWGW02-022714	7 / 7	0.0003	0.0075	1.30E-01	N/A	3.40E+01	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	5.00E-03	m	N/A	N	BSL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/l	ND	0 / 7	0.0005	0.012	1.20E-02	N/A	6.00E+01	m	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	5.00E-01	m	N/A	N	BSL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/l	ND	0 / 7	0.0005	0.012	1.20E-02	N/A	5.00E-01	m	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	0.0021	0.039	mg/l	MWGW02-022714	7 / 7	0.0003	0.0075	3.90E-02	N/A	2.30E+01	n	N/A	N	BSL
	541-73-1	1 3-Dichlorobenzene	ND	ND	mg/l	ND	0 / 7	0.0004	0.01	1.00E-02	N/A	3.40E+01	n	N/A	N	BSL

TABLE 2.12
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Upper Transmissive Unit - South Pit Exposure Area
Groundwater Class 3 and Migration of Volatile Compounds to Ambient Air
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
On-Site Groundwater Upper Transmissive Unit South Pit Exposure Area	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/l	ND	0 / 7	0.0004	0.01	1.00E-02	N/A	7.50E+00	m	N/A	N	BSL
	78-93-3	2-Butanone	0.0035	0.33	mg/l	MWGW02-022714	3 / 7	0.0005	0.012	3.30E-01	N/A	4.40E+03	n	N/A	N	BSL
	591-78-6	2-Hexanone	0 028	0.028	mg/l	MWGW12-022714	1 / 7	0.001	0.025	2.80E-02	N/A	3.70E+01	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	0.0063	0.048 J	mg/l	MWGW02-022714	2 / 7	0.0007	0.018	4.80E-02	N/A	5.80E+02	n	N/A	N	BSL
	67-64-1	Acetone	0 006	0 9	mg/l	MWGW02-022714	4 / 7	0.002	0.05	9.00E-01	N/A	6.60E+03	n	N/A	N	BSL
	71-43-2	Benzene	0.0019	5 8	mg/l	MWGW02-022714	7 / 7	0.0002	0.05	5.80E+00	N/A	5.00E-01	m	N/A	Y	ASL
	75-27-4	Bromodichloromethane	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	3.30E-01	c	N/A	N	BSL
	75-25-2	Bromoform	ND	ND	mg/l	ND	0 / 7	0.0004	0.01	1.00E-02	N/A	2.60E+00	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/l	ND	0 / 7	0.0004	0.01	1.00E-02	N/A	8.30E+00	n	N/A	N	BSL
	75-15-0	Carbon disulfide	0.0014 J	0.043 J	mg/l	MWGW02-022714	2 / 7	0.0006	0.015	4.30E-02	N/A	7.30E+02	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/l	ND	0 / 7	0.0005	0.012	1.20E-02	N/A	4.30E-01	c	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/l	ND	0 / 7	0.0003	0.0075	7.50E-03	N/A	1.00E+01	m	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/l	ND	0 / 7	0.0003	0.0075	7.50E-03	N/A	2.90E+03	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	4.30E-01	c	N/A	N	BSL
	74-87-3	Chloromethane	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	7.90E-01	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	7.00E+00	m	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	mg/l	ND	0 / 7	0.0001	0.0025	2.50E-03	N/A	3.80E-02	c	N/A	N	BSL
	110-82-7	Cyclohexane	0.0017	0.074	mg/l	MWGW02-022714	7 / 7	0.0003	0.0075	7.40E-02	N/A	1.10E+03	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/l	ND	0 / 7	0.0003	0.0075	7.50E-03	N/A	2.40E-01	c	N/A	N	BSL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/l	ND	0 / 7	0.0003	0.0075	7.50E-03	N/A	1.10E+01	n	N/A	N	BSL
	100-41-4	Ethylbenzene	0.0078	0.36	mg/l	MWGW02-022714	7 / 7	0.0003	0.0075	3.60E-01	N/A	7.00E+01	m	N/A	N	BSL
	98-82-8	Isopropylbenzene	0.0022 J	0.025	mg/l	MWGW07-022714	7 / 7	0.0003	0.0075	2.50E-02	N/A	7.30E+02	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/l	ND	0 / 7	0.001	0.025	2.50E-02	N/A	7.30E+03	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	7.30E+01	n	N/A	N	BSL
	108-87-2	Methylcyclohexane	0.0011	0.044	mg/l	MWGW02-022714	7 / 7	0.0003	0.0075	4.40E-02	N/A	2.60E+02	n	N/A	N	BSL
	75-09-2	Methylene chloride	ND	ND	mg/l	ND	0 / 7	0.0004	0.01	1.00E-02	N/A	5.00E-01	m	N/A	N	BSL
	91-20-3	Naphthalene	0.0058	0.11	mg/l	MWGW02-022714	7 / 7	0.0003	0.0075	1.10E-01	N/A	5.70E+01	n	N/A	N	BSL
	104-51-8	n-Butylbenzene	0.0019	0.0019	mg/l	MWGW20-022714	1 / 7	0.0004	0.01	1.90E-03	N/A	3.70E+02	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	0 002 J	0.013	mg/l	MWGW07-022714	7 / 7	0.0003	0.0075	1.30E-02	N/A	2.90E+02	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	0.0012	0.01	mg/l	MWGW07-022714	5 / 7	0.0003	0.0075	1.00E-02	N/A	2.90E+02	n	N/A	N	BSL
	100-42-5	Styrene	0.0015	0.016	mg/l	MWGW07-022714	4 / 7	0.0003	0.0075	1.60E-02	N/A	1.00E+01	m	N/A	N	BSL
	98-06-6	tert-Butylbenzene	0.00064 J	0.0071	mg/l	MWGW03-022714	3 / 7	0.0003	0.0075	7.10E-03	N/A	2.90E+02	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/l	ND	0 / 7	0.0003	0.0075	7.50E-03	N/A	5.00E-01	m	N/A	N	BSL
	108-88-3	Toluene	0.0012	1.4	mg/l	MWGW02-022714	7 / 7	0.0002	0.01	1.40E+00	N/A	1.00E+02	m	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	1.00E+01	m	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	2.00E-01	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	5.00E-01	m	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/l	ND	0 / 7	0.0003	0.0075	7.50E-03	N/A	2.20E+03	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/l	ND	0 / 7	0.0002	0.005	5.00E-03	N/A	8.30E-02	c	N/A	N	BSL
	1330-20-7	Xylenes, Total	0 018	1.4	mg/l	MWGW02-022714	7 / 7	0.0005	0.012	1.40E+00	N/A	1.00E+03	m	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	0 001	0.012	mg/l	MWGW02-022714	3 / 7	0.000032	0 00032	1.20E-02	N/A	3.70E+02	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	0.00027	0.052	mg/l	MWGW07-FD-022714	7 / 7	0 00003	0.0003	5.20E-02	N/A	7.00E-01	c	N/A	N	BSL
	95-95-4	2,4,5-Trichlorophenol	0.00012 J	0.0042	mg/l	MWGW02-022714	4 / 7	0 00004	0.0004	4.20E-03	N/A	7.30E+02	n	N/A	N	BSL
	88-06-2	2,4,6-Trichlorophenol	0.00007 J	0.0064	mg/l	MWGW02-022714	4 / 7	0 00006	0.0006	6.40E-03	N/A	7.30E+00	n	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	0.0016	0.0017	mg/l	MWGW07-FD-022714	2 / 7	0.000065	0 00065	1.70E-03	N/A	2.20E+01	n	N/A	N	BSL
	105-67-9	2,4-Dimethylphenol	0.000077 J	43	mg/l	MWGW02-022714	7 / 7	0.000033	0.33	4.30E+01	N/A	1.50E+02	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/l	ND	0 / 7	0 00005	0.0005	5.00E-04	N/A	1.50E+01	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/l	ND	0 / 7	0 00003	0.0003	3.00E-04	N/A	3.00E-02	c	N/A	N	BSL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/l	ND	0 / 7	0 00005	0.0005	5.00E-04	N/A	3.00E-02	c	N/A	N	BSL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/l	ND	0 / 7	0 00004	0.0004	4.00E-04	N/A	5.80E+02	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/l	ND	0 / 7	0 00004	0.0004	4.00E-04	N/A	3.70E+01	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	0.00024	0.072	mg/l	MWGW02-022714	6 / 7	0.000034	0 00034	7.20E-02	N/A	2.90E+01	n	N/A	N	BSL
	95-48-7	2-Methylphenol	0.00013 J	54	mg/l	MWGW12-022714	7 / 7	0.000033	0.33	5.40E+01	N/A	3.70E+02	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/l	ND	0 / 7	0.000038	0 00038	3.80E-04	N/A	2.20E+00	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/l	ND	0 / 7	0.000024	0 00024	2.40E-04	N/A	1.50E+01	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol	0.0026	57	mg/l	MWGW12-022714	6 / 7	0 00003	0.3	5.70E+01	N/A	3.70E+01	n	N/A	Y	ASL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/l	ND	0 / 7	0.000024	0 00024	2.40E-04	N/A	4.50E-02	c	N/A	N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/l	ND	0 / 7	0.000056	0 00056	5.60E-04	N/A	2.20E+00	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/l	ND	0 / 7	0.000073	0 00073	7.30E-04	N/A	7.30E-01	n	N/A	N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/l	ND	0 / 7	0.000047	0 00047	4.70E-04	N/A	1.40E-03	c	N/A	N	BSL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/l	ND	0 / 7	0.000022	0 00022	2.20E-04	N/A	3.70E+01	n	N/A	N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/l	ND	0 / 7	0.000021	0 00021	2.10E-04	N/A	1.00E-01	c	N/A	N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/l	ND	0 / 7	0.000043	0 00043	4.30E-04	N/A	1.40E-03	c	N/A	N	BSL
	100-01-6	4-Nitroaniline	ND	ND	mg/l	ND	0 / 7	0 00004	0.0004	4.00E-04	N/A	1.00E+00	c	N/A	N	BSL

TABLE 2.12
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Upper Transmissive Unit - South Pit Exposure Area
Groundwater Class 3 and Migration of Volatile Compounds to Ambient Air
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
On-Site Groundwater Upper Transmissive Unit South Pit Exposure Area	100-02-7	4-Nitrophenol	ND	ND	mg/l	ND	0 / 7	0 00006	0.0006	6.00E-04	N/A	1.50E+01	n	N/A	N	BSL
	83-32-9	Acenaphthene	0.000073 J	0.024	mg/l	MWGW12-022714	6 / 7	0 00003	0.0003	2.40E-02	N/A	4.40E+02	n	N/A	N	BSL
	208-96-8	Acenaphthylene	0.000055 J	0.00049	mg/l	MWGW07-FD-022714	3 / 7	0.000021	0 00021	4.90E-04	N/A	4.40E+02	n	N/A	N	BSL
	98-86-2	Acetophenone	0.0035	14	mg/l	MWGW02-022714	7 / 7	0 00003	0.3	1.40E+01	N/A	7.30E+02	n	N/A	N	BSL
	120-12-7	Anthracene	0.00058	0.0017 J	mg/l	MWGW02-022714	2 / 7	0 00002	0.0002	1.70E-03	N/A	2.20E+03	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	ND	ND	mg/l	ND	0 / 7	0.000025	0 00025	2.50E-04	N/A	2.80E-02	c	N/A	N	BSL
	100-52-7	Benzaldehyde	0.01	0.024	mg/l	MWGW07-022714	3 / 7	0.000046	0 00046	2.40E-02	N/A	7.30E+02	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	ND	ND	mg/l	ND	0 / 7	0 00003	0.0003	3.00E-04	N/A	2.00E-02	m	N/A	N	BSL
	205-99-2	Benzo(b)fluoranthene	ND	ND	mg/l	ND	0 / 7	0.000028	0 00028	2.80E-04	N/A	2.80E-02	c	N/A	N	BSL
	191-24-2	Benzo(g,h,i)perylene	ND	ND	mg/l	ND	0 / 7	0.000026	0 00026	2.60E-04	N/A	2.20E+02	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	ND	ND	mg/l	ND	0 / 7	0.000028	0 00028	2.80E-04	N/A	2.80E-01	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/l	ND	0 / 7	0.000022	0 00022	2.20E-04	N/A	1.90E-02	c	N/A	N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/l	ND	0 / 7	0.000029	0 00029	2.90E-04	N/A	1.90E-02	c	N/A	N	BSL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/l	ND	0 / 7	0.000064	0 00064	6.40E-04	N/A	2.90E-01	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.000067 J	0.0011 J	mg/l	MWGW02-022714	4 / 7	0.000033	0 00033	1.10E-03	N/A	6.00E-01	m	N/A	N	BSL
	85-68-7	Butyl benzyl phthalate	ND	ND	mg/l	ND	0 / 7	0.000021	0 00021	2.10E-04	N/A	1.10E+01	c	N/A	N	BSL
	105-60-2	Caprolactam	0.00061	0.00061	mg/l	MWGW03-022714	1 / 7	0.000059	0 00059	6.10E-04	N/A	3.70E+03	n	N/A	N	BSL
	86-74-8	Carbazole	0.00063	0.00063	mg/l	MWGW20-022714	1 / 7	0.000025	0 00025	6.30E-04	N/A	1.00E+00	c	N/A	N	BSL
	218-01-9	Chrysene	0.000059 J	0 000059 J	mg/l	MWGW20-022714	1 / 7	0.000046	0 00046	5.90E-05	N/A	2.80E+00	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	ND	ND	mg/l	ND	0 / 7	0.000026	0 00026	2.60E-04	N/A	2.80E-03	c	N/A	N	BSL
	132-64-9	Dibenzofuran	0.0015	0.0018	mg/l	MWGW07-FD-022714	2 / 7	0.000025	0 00025	1.80E-03	N/A	2.90E+01	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	0 013	0.013	mg/l	MWGW12-022714	1 / 7	0.000021	0 00021	1.30E-02	N/A	5.80E+03	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	ND	ND	mg/l	ND	0 / 7	0 00003	0.0003	3.00E-04	N/A	5.80E+03	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	0 001	0.001	mg/l	MWGW20-022714	1 / 7	0 00003	0.0003	1.00E-03	N/A	7.30E+02	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	0.0098	0.0098	mg/l	MWGW12-022714	1 / 7	0.000023	0 00023	9.80E-03	N/A	2.90E+02	n	N/A	N	BSL
	206-44-0	Fluoranthene	0.00016 J	0.00016 J	mg/l	MWGW20-022714	1 / 7	0 00002	0.0002	1.60E-04	N/A	2.90E+02	n	N/A	N	BSL
	86-73-7	Fluorene	0 001	0.0031	mg/l	MWGW07-FD-022714	4 / 7	0.000021	0 00021	3.10E-03	N/A	2.90E+02	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/l	ND	0 / 7	0 00007	0.0007	7.00E-04	N/A	1.00E-01	m	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/l	ND	0 / 7	0 00005	0.0005	5.00E-04	N/A	1.90E-01	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/l	ND	0 / 7	0.000054	0 00054	5.40E-04	N/A	9.80E-01	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/l	ND	0 / 7	0.000034	0 00034	3.40E-04	N/A	5.10E+00	n	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	ND	ND	mg/l	ND	0 / 7	0.000051	0 00051	5.10E-04	N/A	2.80E-02	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/l	ND	0 / 7	0 00003	0.0003	3.00E-04	N/A	2.20E+01	c	N/A	N	BSL
	91-20-3	Naphthalene	0.0028	0.059	mg/l	MWGW02-022714	6 / 7	0 00005	0.0005	5.90E-02	N/A	5.70E+01	n	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/l	ND	0 / 7	0 00005	0.0005	5.00E-04	N/A	1.50E+01	n	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/l	ND	0 / 7	0 00004	0.0004	4.00E-04	N/A	2.90E-03	c	N/A	N	BSL
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/l	ND	0 / 7	0.000029	0 00029	2.90E-04	N/A	4.20E+00	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	0.00022	0.086	mg/l	MWGW02-022714	6 / 7	0.000046	0 00046	8.60E-02	N/A	1.00E-01	m	N/A	N	BSL
	85-01-8	Phenanthrene	0.0017	0.013	mg/l	MWGW02-022714	4 / 7	0 00002	0.0002	1.30E-02	N/A	2.20E+02	n	N/A	N	BSL
	108-95-2	Phenol	0.000085 J	34	mg/l	MWGW12-022714	6 / 7	0.000032	0.32	3.40E+01	N/A	2.20E+03	n	N/A	N	BSL
	129-00-0	Pyrene	0.00035	0.00035	mg/l	MWGW20-022714	1 / 7	0.000022	0 00022	3.50E-04	N/A	2.20E+02	n	N/A	N	BSL
	57-12-5	Cyanide	0.00724 J	0.131	mg/l	MWGW02-022714	6 / 7	0.005	0.005	1.31E-01	N/A	2.00E+01	m	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value
= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.
(2) A background study was not completed.
(3) For Upper Transmissive Unit, screening values are TRRP 30-Acre Commercial/Industrial PCLs (TCEQ, 2012a) for Class 3 Groundwater adjusted for carcinogens to a 10^{-6} risk.
(4) Rationale for Selection or Deletion:
ASL = Above Screening Level
BSL = Below Screening Level
(5) Screening value for m-cresol assumed (the lower of screening values for m&p-cresol)

Definitions:

a= Action level
ARAR = Applicable or relevant and appropriate requirements
CAS No. = Chemical Abstract Registry Number
c = Carcinogen
m = primary MCL-based
mg/l = milligram/liter
n = Noncarcinogen
N/A = Not applicable or available
ND = Not Detected
PCLs = Protective Concentration Levels
TBC = To be considered values
TRRP = Texas Risk Reduction Program

TABLE 2.13
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Second Transmissive Unit -South Pit Exposure Area
Ingestion of Groundwater
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3] [4] [5]	Screening Value Type	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection of Detection [6]
On-Site Groundwater Second Transmissive Unit South Pit Exposure Area	7429-90-5	Aluminum	0.00936 J	0.0359	mg/l	MWGW11-FD-022514	5 / 5	0.004	0.004	3.59E-02	N/A	1.60E+01	n	0.2	SDWS	N	BSL
	7440-36-0	Antimony	ND	ND	mg/l	ND	0 / 5	0.0008	0.0016	1.60E-03	N/A	6.00E-03	n	0.006	MCL	N	BSL
	7440-38-2	Arsenic	0.00577	0.0177	mg/l	MWGW201-022514	5 / 5	0.001	0.002	1.77E-02	N/A	4.50E-05	c	0.01	MCL	Y	ASL
	7440-39-3	Barium	0.0307	0.0544	mg/l	MWGW201-022514	5 / 5	0.0009	0.0009	5.44E-02	N/A	2.90E+00	n	2.0	MCL	N	BSL
	7440-41-7	Beryllium	ND	ND	mg/l	ND	0 / 5	0.0007	0.0014	1.40E-03	N/A	1.60E-02	n	0.004	MCL	N	BSL
	7440-43-9	Cadmium	ND	ND	mg/l	ND	0 / 5	0.0008	0.0008	8.00E-04	N/A	6.90E-03	n	0.005	MCL	N	BSL
	7440-47-3	Chromium	0.00163 J	0.00957 J	mg/l	MWGW203-022514	2 / 5	0.001	0.002	9.57E-03	N/A	1.00E-01	m	0.10	MCL	N	BSL
	7440-48-4	Cobalt	0.00191 J	0.00785	mg/l	MWGW201-022514	3 / 5	0.0008	0.0016	7.85E-03	N/A	4.70E-03	n	N/A		Y	ASL
	7440-50-8	Copper	ND	ND	mg/l	ND	0 / 5	0.001	0.002	2.00E-03	N/A	6.20E-01	n	1.3	MCL	N	BSL
	7439-92-1	Lead	ND	ND	mg/l	ND	0 / 5	0.0007	0.0014	1.40E-03	N/A	1.50E-02	m	0.015	a	N	BSL
	7439-96-5	Manganese	0.0423	0.575	mg/l	MWGW201-022514	5 / 5	0.0025	0.005	5.75E-01	N/A	3.20E-01	n	0.05	SDWS	Y	ASL
	7440-02-0	Nickel	0.00139 J	0.00179 J	mg/l	MWGW201-022514	4 / 5	0.001	0.002	1.79E-03	N/A	3.00E-01	n	N/A		N	BSL
	7782-49-2	Selenium	0.00109 J	0.0087 J	mg/l	MWGW203-022514	5 / 5	0.001	0.002	8.70E-03	N/A	7.80E-02	n	0.05	MCL	N	BSL
	7440-22-4	Silver	ND	ND	mg/l	ND	0 / 5	0.0008	0.0008	8.00E-04	N/A	7.10E-02	n	0.1	SDWS	N	BSL
	7440-28-0	Thallium	ND	ND	mg/l	ND	0 / 5	0.001	0.002	2.00E-03	N/A	1.60E-04	n	0.002	MCL	Y	ASL
	7440-62-2	Vanadium	0.0279	0.0578	mg/l	MWGW201-022514	5 / 5	0.0009	0.0018	5.78E-02	N/A	6.30E-02	n	N/A		N	BSL
	7440-66-6	Zinc	0.00212 J	0.00522	mg/l	MWGW202-022514	3 / 5	0.002	0.004	5.22E-03	N/A	4.70E+00	n	5.0	SDWS	N	BSL
	7439-97-6	Mercury	0.000144 J	0.000144 J	mg/l	MWGW202-022514	1 / 5	0 00004	0 00004	1.44E-04	N/A	6.30E-04	n	0.002	MCL	N	BSL
	72-54-8	4,4 -DDD	0.0000045	0.00008	mg/l	MWGW11-022514	5 / 5	0.0000025	0.0000025	8.00E-05	N/A	2.70E-05	c	N/A		Y	ASL
	72-55-9	4 4 -DDE	0.0000071	0 0000071	mg/l	MWGW11-022514	1 / 5	0.0000025	0.0000025	7.10E-06	N/A	2.00E-04	c	N/A		N	BSL
	50-29-3	4,4 -DDT	0.0000034	0.0001	mg/l	MWGW201-022514	5 / 5	0.0000025	0.0000025	1.00E-04	N/A	2.00E-04	c	N/A		N	BSL
	309-00-2	Aldrin	ND	ND	mg/l	ND	0 / 5	0.0000012	0.0000012	1.20E-06	N/A	4.00E-06	c	N/A		N	BSL
	319-84-6	alpha-BHC	0.0000067	0.000011	mg/l	MWGW201-022514	2 / 5	0.0000012	0.0000012	1.10E-05	N/A	6.20E-06	c	N/A		Y	ASL
	5103-71-9	alpha-Chlordane	ND	ND	mg/l	ND	0 / 5	0.0000025	0.0000025	2.50E-06	N/A	2.60E-04	c	0.002	MCL	N	BSL
	319-85-7	beta-BHC	0.0000035	0.000078	mg/l	MWGW11-FD-022514	3 / 5	0.0000012	0.0000012	7.80E-05	N/A	2.20E-05	c	N/A		Y	ASL
	319-86-8	delta-BHC	0.0000032	0.000028	mg/l	MWGW11-022514	3 / 5	0.0000012	0.0000012	2.80E-05	N/A	5.10E-05	c	N/A		N	BSL
	60-57-1	Dieldrin	0.0000026	0 0000048	mg/l	MWGW11-022514	2 / 5	0.0000025	0.0000025	4.80E-06	N/A	1.50E-06	c	N/A		Y	ASL
	959-98-8	Endosulfan I	0.0000017	0.000006	mg/l	MWGW11-022514	5 / 5	0.0000012	0.0000012	6.00E-06	N/A	4.90E-02	n	N/A		N	BSL
	33213-65-9	Endosulfan II	0.0000064	0 0000068	mg/l	MWGW11-FD-022514	2 / 5	0.0000025	0.0000025	6.80E-06	N/A	1.50E-01	n	N/A		N	BSL
	1031-07-8	Endosulfan sulfate	0.0000033	0.00002	mg/l	MWGW11-FD-022514	3 / 5	0.0000025	0.0000025	2.00E-05	N/A	1.50E-01	n	N/A		N	BSL
	72-20-8	Endrin	ND	ND	mg/l	ND	0 / 5	0.0000025	0.0000025	2.50E-06	N/A	1.70E-03	n	0.002	MCL	N	BSL
	7421-93-4	Endrin aldehyde	0.0000072	0 0000075	mg/l	MWGW11-022514	2 / 5	0.0000025	0.0000025	7.50E-06	N/A	7.30E-03	n	N/A		N	BSL
	53494-70-5	Endrin ketone	ND	ND	mg/l	ND	0 / 5	0.0000025	0.0000025	2.50E-06	N/A	7.30E-03	n	N/A		N	BSL
	58-89-9	gamma-BHC	0.0000077	0.000015	mg/l	MWGW11-022514	4 / 5	0.0000012	0.0000012	1.50E-05	N/A	3.60E-05	c	0.0002	MCL	N	BSL
	5103-74-2	gamma-Chlordane	0.0000033	0.000021	mg/l	MWGW203-022514	5 / 5	0.0000025	0.0000025	2.10E-05	N/A	2.60E-04	c	0.002	MCL	N	BSL
	76-44-8	Heptachlor	0.0000019	0 0000024	mg/l	MWGW201-022514	2 / 5	0.0000012	0.0000012	2.40E-06	N/A	1.80E-06	c	0.0004	MCL	Y	ASL
	1024-57-3	Heptachlor epoxide	0.0000025	0 0000028	mg/l	MWGW11-022514	2 / 5	0.0000012	0.0000012	2.80E-06	N/A	3.30E-06	c	0.0002	MCL	N	BSL
	72-43-5	Methoxychlor	ND	ND	mg/l	ND	0 / 5	0.000012	0.000012	1.20E-05	N/A	2.70E-02	n	0.04	MCL	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/l	ND	0 / 5	0.000025	0.000025	2.50E-05	N/A	1.30E-05	c	0.003	MCL	Y	ASL
	12674-11-2	Aroclor 1016	ND	ND	mg/l	ND	0 / 5	0.0001	0.0001	1.00E-04	N/A	9.60E-04	c	N/A		N	BSL
	11104-28-2	Aroclor 1221	ND	ND	mg/l	ND	0 / 5	0.0005	0.0005	5.00E-04	N/A	4.00E-06	c	N/A		Y	ASL
	11141-16-5	Aroclor 1232	ND	ND	mg/l	ND	0 / 5	0.0005	0.0005	5.00E-04	N/A	4.00E-06	c	N/A		Y	ASL
	53469-21-9	Aroclor 1242	ND	ND	mg/l	ND	0 / 5	0.0005	0.0005	5.00E-04	N/A	3.40E-05	c	N/A		Y	ASL
	12672-29-6	Aroclor 1248	ND	ND	mg/l	ND	0 / 5	0.0005	0.0005	5.00E-04	N/A	3.40E-05	c	N/A		Y	ASL
	11097-69-1	Aroclor 1254	ND	ND	mg/l	ND	0 / 5	0.0005	0.0005	5.00E-04	N/A	3.40E-05	c	N/A		Y	ASL
	11096-82-5	Aroclor 1260	ND	ND	mg/l	ND	0 / 5	0.0001	0.0001	1.00E-04	N/A	3.40E-05	c	N/A		Y	ASL
	TPCB	Total PCBs	ND	ND	mg/l	ND	0 / 5	0.0001	0.0005	5.00E-04	N/A	5.00E-04	m	0.0005	MCL	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	5.00E-04	c	N/A		N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	7.50E+00	n	0.2	MCL	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 5	0.0005	0.0005	5.00E-04	N/A	6.60E-05	c	N/A		Y	ASL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/l	ND	0 / 5	0.001	0.001	1.00E-03	N/A	5.30E+01	n	N/A		N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	2.40E-04	c	0.005	MCL	Y	ASL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	2.40E-03	c	N/A		N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	2.60E-01	n	0.007	MCL	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/l	ND	0 / 5	0.0005	0.0005	5.00E-04	N/A	9.90E-04	c	0.07	MCL	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	1.50E-02	n	N/A		N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	6.50E-06	c	0.00005	MCL	Y	ASL
	95-50-1	1 2-Dichlorobenzene	ND	ND	mg/l	ND	0 / 5	0.0005	0.0005	5.00E-04	N/A	2.80E-01	n	0.6	MCL	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	1.50E-04	c	0.005	MCL	Y	ASL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/l	ND	0 / 5	0.0005	0.0005	5.00E-04	N/A	3.80E-04	c	0.005	MCL	Y	ASL
	108-67-8	1,3,5-Trimethylbenzene	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	8.70E-02	n	N/A		N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/l	ND	0 / 5	0.0004	0.0004	4.00E-04	N/A	7.30E-01	n	N/A		N	BSL

TABLE 2.13
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Second Transmissive Unit -South Pit Exposure Area
Ingestion of Groundwater
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3] [4] [5]	Screening Value Type	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection of Detection [6]
On-Site Groundwater Second Transmissive Unit South Pit Exposure Area	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/l	ND	0 / 5	0.0004	0.0004	4.00E-04	N/A	4.20E-04	c	0.075	MCL	N	BSL
	78-93-3	2-Butanone	ND	ND	mg/l	ND	0 / 5	0.0005	0.0005	5.00E-04	N/A	4.90E+00	n	N/A		N	BSL
	591-78-6	2-Hexanone	ND	ND	mg/l	ND	0 / 5	0.001	0.001	1.00E-03	N/A	3.40E-02	n	N/A		N	BSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/l	ND	0 / 5	0.0007	0.0007	7.00E-04	N/A	1.00E+00	n	N/A		N	BSL
	67-64-1	Acetone	ND	ND	mg/l	ND	0 / 5	0.002	0.002	2.00E-03	N/A	1.20E+01	n	N/A		N	BSL
	71-43-2	Benzene	0.00041 J	0.00042 J	mg/l	MWGW11-022514	2 / 5	0.0002	0.0002	4.20E-04	N/A	3.90E-04	c	0.005	MCL	Y	ASL
	75-27-4	Bromodichloromethane	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	1.20E-04	c	0.08	MCL	Y	ASL
	75-25-2	Bromoform	ND	ND	mg/l	ND	0 / 5	0.0004	0.0004	4.00E-04	N/A	7.90E-03	c	0.08	MCL	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/l	ND	0 / 5	0.0004	0.0004	4.00E-04	N/A	7.00E-03	n	N/A		N	BSL
	75-15-0	Carbon disulfide	ND	ND	mg/l	ND	0 / 5	0.0006	0.0006	6.00E-04	N/A	7.20E-01	n	N/A		N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/l	ND	0 / 5	0.0005	0.0005	5.00E-04	N/A	3.90E-04	c	0.005	MCL	Y	ASL
	108-90-7	Chlorobenzene	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	7.20E-02	n	0.1	MCL	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	2.10E+01	n	N/A		N	BSL
	67-66-3	Chloroform	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	1.90E-04	c	0.08	MCL	Y	ASL
	74-87-3	Chloromethane	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	1.90E-01	n	N/A		N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	2.80E-02	n	0.07	MCL	N	BSL
	10061-01-5	cis-1 3-Dichloropropene	ND	ND	mg/l	ND	0 / 5	0.0001	0.0001	1.00E-04	N/A	1.70E-04	c	N/A		N	BSL
	110-82-7	Cyclohexane	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	1.30E+01	n	N/A		N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	1.50E-04	c	0.08	MCL	Y	ASL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	1.90E-01	n	N/A		N	BSL
	100-41-4	Ethylbenzene	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	1.30E-03	c	0.7	MCL	N	BSL
	98-82-8	Isopropylbenzene	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	3.90E-01	n	N/A		N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/l	ND	0 / 5	0.001	0.001	1.00E-03	N/A	1.60E+01	n	N/A		N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	1.20E-02	c	N/A		N	BSL
	108-87-2	Methylcyclohexane	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	1.20E+02	n	N/A		N	BSL
	75-09-2	Methylene chloride	ND	ND	mg/l	ND	0 / 5	0.0004	0.0004	4.00E-04	N/A	9.90E-03	c	0.005	MCL	N	BSL
	91-20-3	Naphthalene	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	1.40E-04	c	N/A		Y	ASL
	104-51-8	n-Butylbenzene	ND	ND	mg/l	ND	0 / 5	0.0004	0.0004	4.00E-04	N/A	7.80E-01	n	N/A		N	BSL
	103-65-1	n-Propylbenzene	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	5.30E-01	n	N/A		N	BSL
	135-98-8	sec-Butylbenzene	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	1.60E+00	n	N/A		N	BSL
	100-42-5	Styrene	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	1.10E+00	n	0.1	MCL	N	BSL
	98-06-6	tert-Butylbenzene	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	5.10E-01	n	N/A		N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	9.70E-03	c	0.005	MCL	N	BSL
	108-88-3	Toluene	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	8.60E-01	n	1.0	MCL	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	8.60E-02	n	0.1	MCL	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	9.10E-04	c	N/A		N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	4.40E-04	c	0.005	MCL	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/l	ND	0 / 5	0.0003	0.0003	3.00E-04	N/A	1.10E+00	n	N/A		N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/l	ND	0 / 5	0.0002	0.0002	2.00E-04	N/A	1.50E-05	c	0.002	MCL	Y	ASL
	1330-20-7	Xylenes, Total	ND	ND	mg/l	ND	0 / 5	0.0005	0.0005	5.00E-04	N/A	1.90E-01	n	10.0	MCL	N	BSL
	92-52-4	1,1 -Biphenyl	ND	ND	mg/l	ND	0 / 5	0.000032	0.000032	3.20E-05	N/A	8.30E-04	n	N/A		N	BSL
	90-12-0	1-Methylnaphthalene	ND	ND	mg/l	ND	0 / 5	0 00003	0 00003	3.00E-05	N/A	9.70E-04	c	N/A		N	BSL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/l	ND	0 / 5	0 00004	0 00004	4.00E-05	N/A	8.90E-01	n	N/A		N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/l	ND	0 / 5	0 00006	0 00006	6.00E-05	N/A	3.50E-03	c	N/A		N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/l	ND	0 / 5	0.000065	0.000065	6.50E-05	N/A	3.50E-02	n	N/A		N	BSL
	105-67-9	2,4-Dimethylphenol	ND	ND	mg/l	ND	0 / 5	0.000033	0.000033	3.30E-05	N/A	2.70E-01	n	N/A		N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/l	ND	0 / 5	0 00005	0 00005	5.00E-05	N/A	3.00E-02	n	N/A		N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/l	ND	0 / 5	0 00003	0 00003	3.00E-05	N/A	2.00E-04	c	N/A		N	BSL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/l	ND	0 / 5	0 00005	0 00005	5.00E-05	N/A	4.20E-05	c	N/A		Y	ASL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/l	ND	0 / 5	0 00004	0 00004	4.00E-05	N/A	5.50E-01	n	N/A		N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/l	ND	0 / 5	0 00004	0 00004	4.00E-05	N/A	7.10E-02	n	N/A		N	BSL
	91-57-6	2-Methylnaphthalene	ND	ND	mg/l	ND	0 / 5	0.000034	0.000034	3.40E-05	N/A	2.70E-02	n	N/A		N	BSL
	95-48-7	2-Methylphenol	0.00012 J	0.00012 J	mg/l	MWGW203-022514	1 / 5	0.000033	0.000033	1.20E-04	N/A	7.20E-01	n	N/A		N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/l	ND	0 / 5	0.000038	0.000038	3.80E-05	N/A	1.50E-01	n	N/A		N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/l	ND	0 / 5	0.000024	0.000024	2.40E-05	N/A	4.90E-02	n	N/A		N	BSL
	106-44-5	3&4-Methylphenol	ND	ND	mg/l	ND	0 / 5	0 00003	0 00003	3.00E-05	N/A	1.40E+00	n	N/A		N	BSL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/l	ND	0 / 5	0.000024	0.000024	2.40E-05	N/A	1.10E-04	c	N/A		N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/l	ND	0 / 5	0.000056	0.000056	5.60E-05	N/A	7.30E-03	n	N/A		N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/l	ND	0 / 5	0.000073	0.000073	7.30E-05	N/A	1.20E-03	n	N/A		N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/l	ND	0 / 5	0.000047	0.000047	4.70E-05	N/A	6.10E-06	c	N/A		Y	ASL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/l	ND	0 / 5	0.000022	0.000022	2.20E-05	N/A	1.10E+00	n	N/A		N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/l	ND	0 / 5	0.000021	0.000021	2.10E-05	N/A	3.20E-04	c	N/A		N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/l	ND	0 / 5	0.000043	0.000043	4.30E-05	N/A	6.10E-06	c	N/A		Y	ASL
	100-01-6	4-Nitroaniline	ND	ND	mg/l	ND	0 / 5	0 00004	0 00004	4.00E-05	N/A	3.30E-03	c	N/A		N	BSL

TABLE 2.13
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Second Transmissive Unit -South Pit Exposure Area
Ingestion of Groundwater
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (4) (5)	Screening Value Type	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection of Detection (6)
On-Site Groundwater Second Transmissive Unit South Pit Exposure Area	100-02-7	4-Nitrophenol	ND	ND	mg/l	ND	0 / 5	0 00006	0 00006	6.00E-05	N/A	4.90E-02	n	N/A		N	BSL
	83-32-9	Acenaphthene	ND	ND	mg/l	ND	0 / 5	0 00003	0 00003	3.00E-05	N/A	4.00E-01	n	N/A		N	BSL
	208-96-8	Acenaphthylene	ND	ND	mg/l	ND	0 / 5	0.000021	0.000021	2.10E-05	N/A	1.50E+00	n	N/A		N	BSL
	98-86-2	Acetophenone	0.0029	0.015	mg/l	MWGW201-022514	5 / 5	0 00003	0 00012	1.50E-02	N/A	1.50E+00	n	N/A		N	BSL
	120-12-7	Anthracene	ND	ND	mg/l	ND	0 / 5	0 00002	0 00002	2.00E-05	N/A	1.30E+00	n	N/A		N	BSL
	56-55-3	Benz(a)anthracene	ND	ND	mg/l	ND	0 / 5	0.000025	0.000025	2.50E-05	N/A	2.90E-05	c	N/A		N	BSL
	100-52-7	Benzaldehyde	ND	ND	mg/l	ND	0 / 5	0.000046	0.000046	4.60E-05	N/A	1.50E+00	n	N/A		N	BSL
	50-32-8	Benzo(a)pyrene	ND	ND	mg/l	ND	0 / 5	0 00003	0 00003	3.00E-05	N/A	2.90E-06	c	0.0002	MCL	Y	ASL
	205-99-2	Benzo(b)fluoranthene	ND	ND	mg/l	ND	0 / 5	0.000028	0.000028	2.80E-05	N/A	2.90E-05	c	N/A		N	BSL
	191-24-2	Benzo(g,h,i)perylene	ND	ND	mg/l	ND	0 / 5	0.000026	0.000026	2.60E-05	N/A	7.30E-01	n	N/A		N	BSL
	207-08-9	Benzo(k)fluoranthene	ND	ND	mg/l	ND	0 / 5	0.000028	0.000028	2.80E-05	N/A	2.90E-04	c	N/A		N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/l	ND	0 / 5	0.000022	0.000022	2.20E-05	N/A	4.60E-02	n	N/A		N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/l	ND	0 / 5	0.000029	0.000029	2.90E-05	N/A	1.20E-05	c	N/A		Y	ASL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/l	ND	0 / 5	0.000064	0.000064	6.40E-05	N/A	3.10E-04	c	N/A		N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.000049 J	0.00021	mg/l	MWGW202-022514	5 / 5	0.000033	0.000033	2.10E-04	N/A	4.80E-03	c	0.006	MCL	N	BSL
	85-68-7	Butyl benzyl phthalate	ND	ND	mg/l	ND	0 / 5	0.000021	0.000021	2.10E-05	N/A	1.40E-02	c	N/A		N	BSL
	105-60-2	Caprolactam	ND	ND	mg/l	ND	0 / 5	0.000059	0.000059	5.90E-05	N/A	7.70E+00	n	N/A		N	BSL
	86-74-8	Carbazole	ND	ND	mg/l	ND	0 / 5	0.000025	0.000025	2.50E-05	N/A	4.60E-03	c	N/A		N	BSL
	218-01-9	Chrysene	ND	ND	mg/l	ND	0 / 5	0.000046	0.000046	4.60E-05	N/A	2.90E-03	c	N/A		N	BSL
	53-70-3	Dibenz(a,h)anthracene	ND	ND	mg/l	ND	0 / 5	0.000026	0.000026	2.60E-05	N/A	2.90E-06	c	N/A		Y	ASL
	132-64-9	Dibenzofuran	ND	ND	mg/l	ND	0 / 5	0.000025	0.000025	2.50E-05	N/A	5.80E-03	n	N/A		N	BSL
	84-66-2	Diethyl phthalate	0.000052 J	0.000052 J	mg/l	MWGW201-022514	1 / 5	0.000021	0.000021	5.20E-05	N/A	1.10E+01	n	N/A		N	BSL
	131-11-3	Dimethyl phthalate	ND	ND	mg/l	ND	0 / 5	0 00003	0 00003	3.00E-05	N/A	2.00E+01	n	N/A		N	BSL
	84-74-2	Di-n-butyl phthalate	0.00011 J	0.00011 J	mg/l	MWGW201-022514	1 / 5	0 00003	0 00003	1.10E-04	N/A	6.70E-01	n	N/A		N	BSL
	117-84-0	Di-n-octyl phthalate	0.000063 J	0.000063 J	mg/l	MWGW11-022514	1 / 5	0.000023	0.000023	6.30E-05	N/A	1.60E-01	n	N/A		N	BSL
	206-44-0	Fluoranthene	ND	ND	mg/l	ND	0 / 5	0 00002	0 00002	2.00E-05	N/A	6.30E-01	n	N/A		N	BSL
	86-73-7	Fluorene	ND	ND	mg/l	ND	0 / 5	0.000021	0.000021	2.10E-05	N/A	2.20E-01	n	N/A		N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/l	ND	0 / 5	0 00007	0 00007	7.00E-05	N/A	4.20E-05	c	0.001	MCL	Y	ASL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/l	ND	0 / 5	0 00005	0 00005	5.00E-05	N/A	2.60E-04	c	N/A		N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/l	ND	0 / 5	0.000054	0.000054	5.40E-05	N/A	2.20E-02	n	0.05	MCL	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/l	ND	0 / 5	0.000034	0.000034	3.40E-05	N/A	7.90E-04	c	N/A		N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	ND	ND	mg/l	ND	0 / 5	0.000051	0.000051	5.10E-05	N/A	2.90E-05	c	N/A		Y	ASL
	78-59-1	Isophorone	ND	ND	mg/l	ND	0 / 5	0 00003	0 00003	3.00E-05	N/A	6.70E-02	c	N/A		N	BSL
	91-20-3	Naphthalene	ND	ND	mg/l	ND	0 / 5	0 00005	0 00005	5.00E-05	N/A	1.40E-04	c	N/A		N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/l	ND	0 / 5	0 00005	0 00005	5.00E-05	N/A	1.20E-04	c	N/A		N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/l	ND	0 / 5	0 00004	0 00004	4.00E-05	N/A	9.30E-06	c	N/A		Y	ASL
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/l	ND	0 / 5	0.000029	0.000029	2.90E-05	N/A	1.00E-02	c	N/A		N	BSL
	87-86-5	Pentachlorophenol	ND	ND	mg/l	ND	0 / 5	0.000046	0.000046	4.60E-05	N/A	3.50E-05	c	0.001	MCL	Y	ASL
	85-01-8	Phenanthrene	0.00016 J	0.00018 J	mg/l	MWGW11-FD-022514	2 / 5	0 00002	0 00002	1.80E-04	N/A	7.30E-01	n	N/A		N	BSL
	108-95-2	Phenol	ND	ND	mg/l	ND	0 / 5	0.000032	0.000032	3.20E-05	N/A	4.50E+00	n	N/A		N	BSL
	129-00-0	Pyrene	0.000054 J	0.000054 J	mg/l	MWGW11-FD-022514	2 / 5	0.000022	0.000022	5.40E-05	N/A	8.70E-02	n	N/A		N	BSL
	57-12-5	Cyanide	ND	ND	mg/l	ND	0 / 5	0.005	0.005	5.00E-03	N/A	1.40E-03	n	0.2	MCL	Y	ASL

Notes

= Maximum detection limit exceeds screening value
= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.
(2) A background study was not completed.
(3) Screening values are the USEPA Tap Water RSLs (USEPA, 2013). If an RSL was not available, the TRRP 30-acre Residential PCLs (TCEQ, 2012a) for Class 1 and 2 Groundwater were used; TRRP PCLs for carcinogens were adjusted a 10-6 risk.
(4) Screening value for m-cresol assumed for m&p-cresol (he lower of screening values for m-cresol and p-cresol)
(5) Screening values were not available for chromium, lead, and total PCBs. The MCL was used as the screening value.
(6) Ra ionale for Selection or Deletion:
ASL = Above Screening Level
BSL = Below Screening Level

Definitions:
a= Action level
ARAR = Applicable or relevant and appropriate requirements
CAS No. = Chemical Abstract Registry Number
c = Carcinogen
MCL = Maximum Contaminant Level
m = primary MCL-based
mg/l = milligram/liter
n = Noncarcinogen
N/A = Not applicable or available
ND = Not Detected
PCLs = Protective Concentration Levels
RSLs = Regional Screening Levels
SDWS = Secondary Drinking Water Standard
TBC = To be considered values
TRRP = Texas Risk Reduction Program
USEPA = United States Environmental Protection Agency

TABLE 2.14
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Upper Transmissive Unit - North Pit Exposure Area
Groundwater Class 3 and Migration of Volatile Compounds to Ambient Air
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
On-Site Groundwater Upper Transmissive Unit North Pit Exposure Area	7429-90-5	Aluminum	0.00801 J	0.114	mg/l	MWGW06-022614	6 / 6	0.008	0.02	1.14E-01	N/A	7.30E+03	n	N/A	N	BSL
	7440-36-0	Antimony	ND	ND	mg/l	ND	0 / 6	0.0016	0.004	4.00E-03	N/A	6.00E-01	m	N/A	N	BSL
	7440-38-2	Arsenic	0.00638 J	0.0298	mg/l	MWGW06-022614	6 / 6	0.002	0.005	2.98E-02	N/A	1.00E+00	m	N/A	N	BSL
	7440-39-3	Barium	0 052	0.319	mg/l	MWGW06-022614	6 / 6	0.0018	0.0045	3.19E-01	N/A	2.00E+02	m	N/A	N	BSL
	7440-41-7	Beryllium	ND	ND	mg/l	ND	0 / 6	0.0014	0.0035	3.50E-03	N/A	4.00E-01	m	N/A	N	BSL
	7440-43-9	Cadmium	ND	ND	mg/l	ND	0 / 6	0.0016	0.004	4.00E-03	N/A	5.00E-01	m	N/A	N	BSL
	7440-47-3	Chromium	ND	ND	mg/l	ND	0 / 6	0.002	0.005	5.00E-03	N/A	1.00E+01	m	N/A	N	BSL
	7440-48-4	Cobalt	0.00239 J	0.0373	mg/l	MWGW16-022614	5 / 6	0.0016	0.004	3.73E-02	N/A	2.20E+00	n	N/A	N	BSL
	7440-50-8	Copper	ND	ND	mg/l	ND	0 / 6	0.002	0.005	5.00E-03	N/A	1.30E+02	a	N/A	N	BSL
	7439-92-1	Lead	ND	ND	mg/l	ND	0 / 6	0.0014	0.0035	3.50E-03	N/A	1.50E+00	a	N/A	N	BSL
	7439-96-5	Manganese	0.135	2.03	mg/l	MWGW16-022614	6 / 6	0.005	0.012	2.03E+00	N/A	1.00E+03	n	N/A	N	BSL
	7440-02-0	Nickel	0.00285 J	0.0161 J	mg/l	MWGW16-022614	3 / 6	0.002	0.005	1.61E-02	N/A	1.50E+02	n	N/A	N	BSL
	7782-49-2	Selenium	0.00571 J	0.0126 J	mg/l	MWGW16-022614	2 / 6	0.002	0.005	1.26E-02	N/A	5.00E+00	m	N/A	N	BSL
	7440-22-4	Silver	ND	ND	mg/l	ND	0 / 6	0.0016	0.004	4.00E-03	N/A	3.70E+01	n	N/A	N	BSL
	7440-28-0	Thallium	ND	ND	mg/l	ND	0 / 6	0.002	0.005	5.00E-03	N/A	2.00E-01	m	N/A	N	BSL
	7440-62-2	Vanadium	0.00522 J	0.0372	mg/l	MWGW15-022614	4 / 6	0.0018	0.0045	3.72E-02	N/A	1.30E+01	n	N/A	N	BSL
	7440-66-6	Zinc	0.0067 J	0.0134	mg/l	MWGW14-022614	2 / 6	0.004	0.01	1.34E-02	N/A	2.20E+03	n	N/A	N	BSL
	7439-97-6	Mercury	ND	ND	mg/l	ND	0 / 6	0 00004	0 00004	4.00E-05	N/A	2.00E-01	m	N/A	N	BSL
	72-54-8	4,4 -DDD	ND	ND	mg/l	ND	0 / 6	0.0000025	0 00012	1.20E-04	N/A	8.50E-02	c	N/A	N	BSL
	72-55-9	4,4 -DDE	ND	ND	mg/l	ND	0 / 6	0.0000025	0 00012	1.20E-04	N/A	6.00E-02	c	N/A	N	BSL
	50-29-3	4,4 -DDT	0.000021	0 000028	mg/l	MWGW06-022614	3 / 6	0.0000025	0 00012	2.80E-05	N/A	6.00E-02	c	N/A	N	BSL
	309-00-2	Aldrin	ND	ND	mg/l	ND	0 / 6	0.0000012	0.000062	6.20E-05	N/A	1.20E-03	c	N/A	N	BSL
	319-84-6	alpha-BHC	ND	ND	mg/l	ND	0 / 6	0.0000012	0.000062	6.20E-05	N/A	3.20E-03	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	0.000017	0 000022	mg/l	MWGW06-022614	2 / 6	0.0000025	0 00012	2.20E-05	N/A	5.80E-02	c	N/A	N	BSL
	319-85-7	beta-BHC	0.000016	0 000016	mg/l	MWGW15-022614	1 / 6	0.0000012	0.000062	1.60E-05	N/A	1.10E-02	c	N/A	N	BSL
	319-86-8	delta-BHC	0.000005	0 000026	mg/l	MWGW14-022614	4 / 6	0.0000012	0.000062	2.60E-05	N/A	1.10E-02	c	N/A	N	BSL
	60-57-1	Dieldrin	ND	ND	mg/l	ND	0 / 6	0.0000025	0 00012	1.20E-04	N/A	1.30E-03	c	N/A	N	BSL
	959-98-8	Endosulfan I	0.0000029	0.0000063	mg/l	MWGW06-022614	2 / 6	0.0000012	0.000062	6.30E-06	N/A	1.50E+01	n	N/A	N	BSL
	33213-65-9	Endosulfan II	ND	ND	mg/l	ND	0 / 6	0.0000025	0 00012	1.20E-04	N/A	4.40E+01	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	0.000023	0 000023	mg/l	MWGW15-022614	1 / 6	0.0000025	0 00012	2.30E-05	N/A	4.40E+01	n	N/A	N	BSL
	72-20-8	Endrin	ND	ND	mg/l	ND	0 / 6	0.0000025	0 00012	1.20E-04	N/A	2.00E-01	m	N/A	N	BSL
	7421-93-4	Endrin aldehyde	ND	ND	mg/l	ND	0 / 6	0.0000025	0 00012	1.20E-04	N/A	2.20E+00	n	N/A	N	BSL
	53494-70-5	Endrin ketone	ND	ND	mg/l	ND	0 / 6	0.0000025	0 00012	1.20E-04	N/A	2.20E+00	n	N/A	N	BSL
	58-89-9	gamma-BHC	ND	ND	mg/l	ND	0 / 6	0.0000012	0.000062	6.20E-05	N/A	2.00E-02	m	N/A	N	BSL
	5103-74-2	gamma-Chlordane	0.000045	0 000067	mg/l	MWGW15-022614	2 / 6	0.0000025	0 00012	6.70E-05	N/A	5.80E-02	c	N/A	N	BSL
	76-44-8	Heptachlor	0.000016	0 000031	mg/l	MWGW15-022614	2 / 6	0.0000012	0.000062	3.10E-05	N/A	4.00E-02	m	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	0.000019	0 000029	mg/l	MWGW15-022614	2 / 6	0.0000012	0.000062	2.90E-05	N/A	2.00E-02	m	N/A	N	BSL
	72-43-5	Methoxychlor	ND	ND	mg/l	ND	0 / 6	0.000012	0 00062	6.20E-04	N/A	4.00E+00	m	N/A	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/l	ND	0 / 6	0.000025	0.0012	1.20E-03	N/A	3.00E-01	m	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/l	ND	0 / 6	0.0001	0.005	5.00E-03	N/A	5.00E-02	m	N/A	N	BSL
	11104-28-2	Aroclor 1221	ND	ND	mg/l	ND	0 / 6	0.0005	0.025	2.50E-02	N/A	5.00E-02	m	N/A	N	BSL
	11141-16-5	Aroclor 1232	ND	ND	mg/l	ND	0 / 6	0.0005	0.025	2.50E-02	N/A	5.00E-02	m	N/A	N	BSL
	53469-21-9	Aroclor 1242	ND	ND	mg/l	ND	0 / 6	0.0005	0.025	2.50E-02	N/A	5.00E-02	m	N/A	N	BSL
	12672-29-6	Aroclor 1248	ND	ND	mg/l	ND	0 / 6	0.0005	0.025	2.50E-02	N/A	5.00E-02	m	N/A	N	BSL
	11097-69-1	Aroclor 1254	ND	ND	mg/l	ND	0 / 6	0.0005	0.025	2.50E-02	N/A	5.00E-02	m	N/A	N	BSL
	11096-82-5	Aroclor 1260	ND	ND	mg/l	ND	0 / 6	0.0001	0.005	5.00E-03	N/A	5.00E-02	m	N/A	N	BSL
	TPCB	Total PCBs	ND	ND	mg/l	ND	0 / 6	0.0001	0.025	2.50E-02	N/A	5.00E-02	m	N/A	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 6	0.0003	0.0003	3.00E-04	N/A	7.90E-01	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	2.00E+01	m	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 6	0.0005	0.0005	5.00E-04	N/A	1.00E-01	c	N/A	N	BSL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/l	ND	0 / 6	0.001	0.001	1.00E-03	N/A	1.70E+03	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/l	ND	0 / 6	0.0003	0.0003	3.00E-04	N/A	5.00E-01	m	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	1.50E+03	n	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	7.00E-01	m	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/l	ND	0 / 6	0.0005	0.0005	5.00E-04	N/A	7.00E+00	m	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	ND	ND	mg/l	ND	0 / 6	0.0003	0.0003	3.00E-04	N/A	3.40E+01	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	5.00E-03	m	N/A	N	BSL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/l	ND	0 / 6	0.0005	0.0005	5.00E-04	N/A	6.00E+01	m	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	5.00E-01	m	N/A	N	BSL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/l	ND	0 / 6	0.0005	0.0005	5.00E-04	N/A	5.00E-01	m	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	ND	ND	mg/l	ND	0 / 6	0.0003	0.0003	3.00E-04	N/A	2.30E+01	n	N/A	N	BSL
	541-73-1	1 3-Dichlorobenzene	ND	ND	mg/l	ND	0 / 6	0.0004	0.0004	4.00E-04	N/A	3.40E+01	n	N/A	N	BSL

TABLE 2.14
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Upper Transmissive Unit - North Pit Exposure Area
Groundwater Class 3 and Migration of Volatile Compounds to Ambient Air
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
On-Site Groundwater Upper Transmissive Unit North Pit Exposure Area	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/l	ND	0 / 6	0.0004	0.0004	4.00E-04	N/A	7.50E+00	m	N/A	N	BSL
	78-93-3	2-Butanone	ND	ND	mg/l	ND	0 / 6	0.0005	0.0005	5.00E-04	N/A	4.40E+03	n	N/A	N	BSL
	591-78-6	2-Hexanone	ND	ND	mg/l	ND	0 / 6	0.001	0.001	1.00E-03	N/A	3.70E+01	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/l	ND	0 / 6	0.0007	0.0007	7.00E-04	N/A	5.80E+02	n	N/A	N	BSL
	67-64-1	Acetone	ND	ND	mg/l	ND	0 / 6	0.002	0.002	2.00E-03	N/A	6.60E+03	n	N/A	N	BSL
	71-43-2	Benzene	0.00035 J	0.0026	mg/l	MWGW06-022614	2 / 6	0.0002	0.0002	2.60E-03	N/A	5.00E-01	m	N/A	N	BSL
	75-27-4	Bromodichloromethane	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	3.30E-01	c	N/A	N	BSL
	75-25-2	Bromoform	ND	ND	mg/l	ND	0 / 6	0.0004	0.0004	4.00E-04	N/A	2.60E+00	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/l	ND	0 / 6	0.0004	0.0004	4.00E-04	N/A	8.30E+00	n	N/A	N	BSL
	75-15-0	Carbon disulfide	ND	ND	mg/l	ND	0 / 6	0.0006	0.0006	6.00E-04	N/A	7.30E+02	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/l	ND	0 / 6	0.0005	0.0005	5.00E-04	N/A	4.30E-01	c	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/l	ND	0 / 6	0.0003	0.0003	3.00E-04	N/A	1.00E+01	m	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/l	ND	0 / 6	0.0003	0.0003	3.00E-04	N/A	2.90E+03	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	4.30E-01	c	N/A	N	BSL
	74-87-3	Chloromethane	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	7.90E-01	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	7.00E+00	m	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	mg/l	ND	0 / 6	0.0001	0.0001	1.00E-04	N/A	3.80E-02	c	N/A	N	BSL
	110-82-7	Cyclohexane	0.0019	0.0032	mg/l	MWGW06-022614	2 / 6	0.0003	0.0003	3.20E-03	N/A	1.10E+03	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/l	ND	0 / 6	0.0003	0.0003	3.00E-04	N/A	2.40E-01	c	N/A	N	BSL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/l	ND	0 / 6	0.0003	0.0003	3.00E-04	N/A	1.10E+01	n	N/A	N	BSL
	100-41-4	Ethylbenzene	0.00083 J	0.028	mg/l	MWGW06-022614	2 / 6	0.0003	0.0003	2.80E-02	N/A	7.00E+01	m	N/A	N	BSL
	98-82-8	Isopropylbenzene	0.00045 J	0.027	mg/l	MWGW13-022614	3 / 6	0.0003	0.0003	2.70E-02	N/A	7.30E+02	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/l	ND	0 / 6	0.001	0.001	1.00E-03	N/A	7.30E+03	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	7.30E+01	n	N/A	N	BSL
	108-87-2	Methylcyclohexane	0 002	0.0034	mg/l	MWGW06-022614	2 / 6	0.0003	0.0003	3.40E-03	N/A	2.60E+02	n	N/A	N	BSL
	75-09-2	Methylene chloride	ND	ND	mg/l	ND	0 / 6	0.0004	0.0004	4.00E-04	N/A	5.00E-01	m	N/A	N	BSL
	91-20-3	Naphthalene	0.0043	0.0043	mg/l	MWGW06-022614	1 / 6	0.0003	0.0003	4.30E-03	N/A	5.70E+01	n	N/A	N	BSL
	104-51-8	n-Butylbenzene	0.00091 J	0.00091 J	mg/l	MWGW13-022614	1 / 6	0.0004	0.0004	9.10E-04	N/A	3.70E+02	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	0.0083	0.024	mg/l	MWGW13-022614	2 / 6	0.0003	0.0003	2.40E-02	N/A	2.90E+02	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	0 002	0.0043	mg/l	MWGW13-022614	2 / 6	0.0003	0.0003	4.30E-03	N/A	2.90E+02	n	N/A	N	BSL
	100-42-5	Styrene	ND	ND	mg/l	ND	0 / 6	0.0003	0.0003	3.00E-04	N/A	1.00E+01	m	N/A	N	BSL
	98-06-6	tert-Butylbenzene	0.0004 J	0.008	mg/l	MWGW13-022614	3 / 6	0.0003	0.0003	8.00E-03	N/A	2.90E+02	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/l	ND	0 / 6	0.0003	0.0003	3.00E-04	N/A	5.00E-01	m	N/A	N	BSL
	108-88-3	Toluene	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	1.00E+02	m	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	1.00E+01	m	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	2.00E-01	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	5.00E-01	m	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/l	ND	0 / 6	0.0003	0.0003	3.00E-04	N/A	2.20E+03	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/l	ND	0 / 6	0.0002	0.0002	2.00E-04	N/A	8.30E-02	c	N/A	N	BSL
	1330-20-7	Xylenes, Total	ND	ND	mg/l	ND	0 / 6	0.0005	0.0005	5.00E-04	N/A	1.00E+03	m	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	ND	ND	mg/l	ND	0 / 6	0.000032	0.000032	3.20E-05	N/A	3.70E+02	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	0.0001 J	0.00012 J	mg/l	MWGW06-022614	2 / 6	0 00003	0 00003	1.20E-04	N/A	7.00E-01	c	N/A	N	BSL
	95-95-4	2,4,5-Trichlorophenol	0.000051 J	0.00019 J	mg/l	MWGW15-022614	2 / 6	0 00004	0 00004	1.90E-04	N/A	7.30E+02	n	N/A	N	BSL
	88-06-2	2,4,6-Trichlorophenol	0 001	0.001	mg/l	MWGW15-022614	1 / 6	0 00006	0 00006	1.00E-03	N/A	7.30E+00	n	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	0.00014 J	0.00029	mg/l	MWGW15-022614	2 / 6	0.000065	0.000065	2.90E-04	N/A	2.20E+01	n	N/A	N	BSL
	105-67-9	2,4-Dimethylphenol	0.00047	0.00061	mg/l	MWGW15-022614	2 / 6	0.000033	0.000033	6.10E-04	N/A	1.50E+02	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/l	ND	0 / 6	0 00005	0 00005	5.00E-05	N/A	1.50E+01	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/l	ND	0 / 6	0 00003	0 00003	3.00E-05	N/A	3.00E-02	c	N/A	N	BSL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/l	ND	0 / 6	0 00005	0 00005	5.00E-05	N/A	3.00E-02	c	N/A	N	BSL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/l	ND	0 / 6	0 00004	0 00004	4.00E-05	N/A	5.80E+02	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/l	ND	0 / 6	0 00004	0 00004	4.00E-05	N/A	3.70E+01	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	ND	ND	mg/l	ND	0 / 6	0.000034	0.000034	3.40E-05	N/A	2.90E+01	n	N/A	N	BSL
	95-48-7	2-Methylphenol	0.00014 J	0.00019 J	mg/l	MWGW15-022614	2 / 6	0.000033	0.000033	1.90E-04	N/A	3.70E+02	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/l	ND	0 / 6	0.000038	0.000038	3.80E-05	N/A	2.20E+00	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/l	ND	0 / 6	0.000024	0.000024	2.40E-05	N/A	1.50E+01	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol	0.00025	0.00067	mg/l	MWGW15-022614	2 / 6	0 00003	0 00003	6.70E-04	N/A	3.70E+01	n	N/A	N	BSL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/l	ND	0 / 6	0.000024	0.000024	2.40E-05	N/A	4.50E-02	c	N/A	N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/l	ND	0 / 6	0.000056	0.000056	5.60E-05	N/A	2.20E+00	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/l	ND	0 / 6	0.000073	0.000073	7.30E-05	N/A	7.30E-01	n	N/A	N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/l	ND	0 / 6	0.000047	0.000047	4.70E-05	N/A	1.40E-03	c	N/A	N	BSL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/l	ND	0 / 6	0.000022	0.000022	2.20E-05	N/A	3.70E+01	n	N/A	N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/l	ND	0 / 6	0.000021	0.000021	2.10E-05	N/A	1.00E-01	c	N/A	N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/l	ND	0 / 6	0.000043	0.000043	4.30E-05	N/A	1.40E-03	c	N/A	N	BSL
	100-01-6	4-Nitroaniline	ND	ND	mg/l	ND	0 / 6	0 00004	0 00004	4.00E-05	N/A	1.00E+00	c	N/A	N	BSL

TABLE 2.14
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Upper Transmissive Unit - North Pit Exposure Area
Groundwater Class 3 and Migration of Volatile Compounds to Ambient Air
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
On-Site Groundwater Upper Transmissive Unit North Pit Exposure Area	100-02-7	4-Nitrophenol	ND	ND	mg/l	ND	0 / 6	0 00006	0 00006	6.00E-05	N/A	1.50E+01	n	N/A	N	BSL
	83-32-9	Acenaphthene	0.00013 J	0.00013 J	mg/l	MWGW13-022614	1 / 6	0 00003	0 00003	1.30E-04	N/A	4.40E+02	n	N/A	N	BSL
	208-96-8	Acenaphthylene	0.00011 J	0.00011 J	mg/l	MWGW13-022614	1 / 6	0.000021	0.000021	1.10E-04	N/A	4.40E+02	n	N/A	N	BSL
	98-86-2	Acetophenone	0.0048	0.0085	mg/l	MWGW15-022614	6 / 6	0 00003	0 00003	8.50E-03	N/A	7.30E+02	n	N/A	N	BSL
	120-12-7	Anthracene	ND	ND	mg/l	ND	0 / 6	0 00002	0 00002	2.00E-05	N/A	2.20E+03	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	ND	ND	mg/l	ND	0 / 6	0.000025	0.000025	2.50E-05	N/A	2.80E-02	c	N/A	N	BSL
	100-52-7	Benzaldehyde	0.00021	0.00021	mg/l	MWGW15-022614	1 / 6	0.000046	0.000046	2.10E-04	N/A	7.30E+02	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	ND	ND	mg/l	ND	0 / 6	0 00003	0 00003	3.00E-05	N/A	2.00E-02	m	N/A	N	BSL
	205-99-2	Benzo(b)fluoranthene	ND	ND	mg/l	ND	0 / 6	0.000028	0.000028	2.80E-05	N/A	2.80E-02	c	N/A	N	BSL
	191-24-2	Benzo(g,h,i)perylene	ND	ND	mg/l	ND	0 / 6	0.000026	0.000026	2.60E-05	N/A	2.20E+02	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	ND	ND	mg/l	ND	0 / 6	0.000028	0.000028	2.80E-05	N/A	2.80E-01	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/l	ND	0 / 6	0.000022	0.000022	2.20E-05	N/A	1.90E-02	c	N/A	N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/l	ND	0 / 6	0.000029	0.000029	2.90E-05	N/A	1.90E-02	c	N/A	N	BSL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/l	ND	0 / 6	0.000064	0.000064	6.40E-05	N/A	2.90E-01	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.00013 J	0.00041	mg/l	MWGW14-022614	5 / 6	0.000033	0.000033	4.10E-04	N/A	6.00E-01	m	N/A	N	BSL
	85-68-7	Butyl benzyl phthalate	ND	ND	mg/l	ND	0 / 6	0.000021	0.000021	2.10E-05	N/A	1.10E+01	c	N/A	N	BSL
	105-60-2	Caprolactam	ND	ND	mg/l	ND	0 / 6	0.000059	0.000059	5.90E-05	N/A	3.70E+03	n	N/A	N	BSL
	86-74-8	Carbazole	ND	ND	mg/l	ND	0 / 6	0.000025	0.000025	2.50E-05	N/A	1.00E+00	c	N/A	N	BSL
	218-01-9	Chrysene	ND	ND	mg/l	ND	0 / 6	0.000046	0.000046	4.60E-05	N/A	2.80E+00	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	ND	ND	mg/l	ND	0 / 6	0.000026	0.000026	2.60E-05	N/A	2.80E-03	c	N/A	N	BSL
	132-64-9	Dibenzofuran	0.000083 J	0.00041	mg/l	MWGW13-022614	2 / 6	0.000025	0.000025	4.10E-04	N/A	2.90E+01	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	ND	ND	mg/l	ND	0 / 6	0.000021	0.000021	2.10E-05	N/A	5.80E+03	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	ND	ND	mg/l	ND	0 / 6	0 00003	0 00003	3.00E-05	N/A	5.80E+03	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	0.00006 J	0.00006 J	mg/l	MWGW06-022614	1 / 6	0 00003	0 00003	6.00E-05	N/A	7.30E+02	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	0.000097 J	0.00014 J	mg/l	MWGW06-022614	2 / 6	0.000023	0.000023	1.40E-04	N/A	2.90E+02	n	N/A	N	BSL
	206-44-0	Fluoranthene	ND	ND	mg/l	ND	0 / 6	0 00002	0 00002	2.00E-05	N/A	2.90E+02	n	N/A	N	BSL
	86-73-7	Fluorene	0.00021	0.00021	mg/l	MWGW13-022614	1 / 6	0.000021	0.000021	2.10E-04	N/A	2.90E+02	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/l	ND	0 / 6	0 00007	0 00007	7.00E-05	N/A	1.00E-01	m	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/l	ND	0 / 6	0 00005	0 00005	5.00E-05	N/A	1.90E-01	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/l	ND	0 / 6	0.000054	0.000054	5.40E-05	N/A	9.80E-01	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/l	ND	0 / 6	0.000034	0.000034	3.40E-05	N/A	5.10E+00	n	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	ND	ND	mg/l	ND	0 / 6	0.000051	0.000051	5.10E-05	N/A	2.80E-02	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/l	ND	0 / 6	0 00003	0 00003	3.00E-05	N/A	2.20E+01	c	N/A	N	BSL
	91-20-3	Naphthalene	0.000086 J	0.00016 J	mg/l	MWGW15-022614	3 / 6	0 00005	0 00005	1.60E-04	N/A	5.70E+01	n	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/l	ND	0 / 6	0 00005	0 00005	5.00E-05	N/A	1.50E+01	n	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/l	ND	0 / 6	0 00004	0 00004	4.00E-05	N/A	2.90E-03	c	N/A	N	BSL
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/l	ND	0 / 6	0.000029	0.000029	2.90E-05	N/A	4.20E+00	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	ND	ND	mg/l	ND	0 / 6	0.000046	0.000046	4.60E-05	N/A	1.00E-01	m	N/A	N	BSL
	85-01-8	Phenanthrene	ND	ND	mg/l	ND	0 / 6	0 00002	0 00002	2.00E-05	N/A	2.20E+02	n	N/A	N	BSL
	108-95-2	Phenol	0.00015 J	0.00021	mg/l	MWGW06-022614	2 / 6	0.000032	0.000032	2.10E-04	N/A	2.20E+03	n	N/A	N	BSL
	129-00-0	Pyrene	0.00014 J	0.00014 J	mg/l	MWGW15-022614	1 / 6	0.000022	0.000022	1.40E-04	N/A	2.20E+02	n	N/A	N	BSL
	57-12-5	Cyanide	ND	ND	mg/l	ND	0 / 6	0.005	0.005	5.00E-03	N/A	2.00E+01	m	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value
= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.
(2) A background study was not completed.
(3) For Upper Transmissive Unit, screening values are TRRP 30-Acre Commercial/Industrial PCLs (TCEQ, 2012a) for Class 3 Groundwater adjusted for carcinogens to a 10^{-6} risk.
(4) Rationale for Selection or Deletion:
ASL = Above Screening Level
BSL = Below Screening Level
(5) Screening value for m-cresol assumed (the lower of screening values for m&p-cresol)

Definitions:

a= Action level
ARAR = Applicable or relevant and appropriate requirements
CAS No. = Chemical Abstract Registry Number
c = Carcinogen
m = primary MCL-based
mg/l = milligram/liter
n = Noncarcinogen
N/A = Not applicable or available
ND = Not Detected
PCLs = Protective Concentration Levels
TBC = To be considered values
TRRP = Texas Risk Reduction Program

TABLE 2.15
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Second Transmissive Unit -North Pit Exposure Area
Ingestion of Groundwater
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3] [4] [5]	Screening Value Type	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection of Detection [6]
On-Site Groundwater Second Transmissive Unit North Pit Exposure Area	7429-90-5	Aluminum	0.00936 J	0.00936 J	mg/l	MWGW202-022514	1 / 1	0.004	0.004	9.36E-03	N/A	1.60E+01	n	0.2	SDWS	N	BSL
	7440-36-0	Antimony	ND	ND	mg/l	ND	0 / 1	0.0008	0.0008	8.00E-04	N/A	6.00E-03	n	0.006	MCL	N	BSL
	7440-38-2	Arsenic	0.0093	0.0093	mg/l	MWGW202-022514	1 / 1	0.001	0.001	9.30E-03	N/A	4.50E-05	c	0.01	MCL	Y	ASL
	7440-39-3	Barium	0.0307	0.0307	mg/l	MWGW202-022514	1 / 1	0.0009	0.0009	3.07E-02	N/A	2.90E+00	n	2	MCL	N	BSL
	7440-41-7	Beryllium	ND	ND	mg/l	ND	0 / 1	0.0007	0.0007	7.00E-04	N/A	1.60E-02	n	0.004	MCL	N	BSL
	7440-43-9	Cadmium	ND	ND	mg/l	ND	0 / 1	0.0008	0.0008	8.00E-04	N/A	6.90E-03	n	0.005	MCL	N	BSL
	7440-47-3	Chromium	0.00163 J	0.00163 J	mg/l	MWGW202-022514	1 / 1	0.001	0.001	1.63E-03	N/A	1.00E-01	m	0.10	MCL	N	BSL
	7440-48-4	Cobalt	ND	ND	mg/l	ND	0 / 1	0.0008	0.0008	8.00E-04	N/A	4.70E-03	n	N/A		N	BSL
	7440-50-8	Copper	ND	ND	mg/l	ND	0 / 1	0.001	0.001	1.00E-03	N/A	6.20E-01	n	1.3	MCL	N	BSL
	7439-92-1	Lead	ND	ND	mg/l	ND	0 / 1	0.0007	0.0007	7.00E-04	N/A	1.50E-02	a	0.015	a	N	BSL
	7439-96-5	Manganese	0.0423	0.0423	mg/l	MWGW202-022514	1 / 1	0.0025	0.0025	4.23E-02	N/A	3.20E-01	n	0.05	SDWS	N	BSL
	7440-02-0	Nickel	0.00139 J	0.00139 J	mg/l	MWGW202-022514	1 / 1	0.001	0.001	1.39E-03	N/A	3.00E-01	n	N/A		N	BSL
	7782-49-2	Selenium	0.00343 J	0.00343 J	mg/l	MWGW202-022514	1 / 1	0.001	0.001	3.43E-03	N/A	7.80E-02	n	0.05	MCL	N	BSL
	7440-22-4	Silver	ND	ND	mg/l	ND	0 / 1	0.0008	0.0008	8.00E-04	N/A	7.10E-02	n	0.1	SDWS	N	BSL
	7440-28-0	Thallium	ND	ND	mg/l	ND	0 / 1	0.001	0.001	1.00E-03	N/A	1.60E-04	n	0.002	MCL	Y	ASL
	7440-62-2	Vanadium	0.0317	0.0317	mg/l	MWGW202-022514	1 / 1	0.0009	0.0009	3.17E-02	N/A	6.30E-02	n	N/A		N	BSL
	7440-66-6	Zinc	0.00522	0.00522	mg/l	MWGW202-022514	1 / 1	0.002	0.002	5.22E-03	N/A	4.70E+00	n	5.0	SDWS	N	BSL
	7439-97-6	Mercury	0.000144 J	0.000144 J	mg/l	MWGW202-022514	1 / 1	0 00004	0 00004	1.44E-04	N/A	6.30E-04	n	0.002	MCL	N	BSL
	72-54-8	4,4 -DDD	0.0000045	0 0000045	mg/l	MWGW202-022514	1 / 1	0.0000025	0.0000025	4.50E-06	N/A	2.70E-05	c	N/A		N	BSL
	72-55-9	4 4 -DDE	ND	ND	mg/l	ND	0 / 1	0.0000025	0.0000025	2.50E-06	N/A	2.00E-04	c	N/A		N	BSL
	50-29-3	4,4 -DDT	0.000039	0.000039	mg/l	MWGW202-022514	1 / 1	0.0000025	0.0000025	3.90E-05	N/A	2.00E-04	c	N/A		N	BSL
	309-00-2	Aldrin	ND	ND	mg/l	ND	0 / 1	0.0000012	0.0000012	1.20E-06	N/A	4.00E-06	c	N/A		N	BSL
	319-84-6	alpha-BHC	0.0000067	0 0000067	mg/l	MWGW202-022514	1 / 1	0.0000012	0.0000012	6.70E-06	N/A	6.20E-06	c	N/A		Y	ASL
	5103-71-9	alpha-Chlordane	ND	ND	mg/l	ND	0 / 1	0.0000025	0.0000025	2.50E-06	N/A	2.60E-04	c	0.002	MCL	N	BSL
	319-85-7	beta-BHC	0.0000035	0 0000035	mg/l	MWGW202-022514	1 / 1	0.0000012	0.0000012	3.50E-06	N/A	2.20E-05	c	N/A		N	BSL
	319-86-8	delta-BHC	0.0000062	0 0000062	mg/l	MWGW202-022514	1 / 1	0.0000012	0.0000012	6.20E-06	N/A	5.10E-05	c	N/A		N	BSL
	60-57-1	Dieldrin	ND	ND	mg/l	ND	0 / 1	0.0000025	0.0000025	2.50E-06	N/A	1.50E-06	c	N/A		Y	ASL
	959-98-8	Endosulfan I	0.0000017	0 0000017	mg/l	MWGW202-022514	1 / 1	0.0000012	0.0000012	1.70E-06	N/A	4.90E-02	n	N/A		N	BSL
	33213-65-9	Endosulfan II	ND	ND	mg/l	ND	0 / 1	0.0000025	0.0000025	2.50E-06	N/A	1.50E-01	n	N/A		N	BSL
	1031-07-8	Endosulfan sulfate	0.0000033	0 0000033	mg/l	MWGW202-022514	1 / 1	0.0000025	0.0000025	3.30E-06	N/A	1.50E-01	n	N/A		N	BSL
	72-20-8	Endrin	ND	ND	mg/l	ND	0 / 1	0.0000025	0.0000025	2.50E-06	N/A	1.70E-03	n	0.002	MCL	N	BSL
	7421-93-4	Endrin aldehyde	ND	ND	mg/l	ND	0 / 1	0.0000025	0.0000025	2.50E-06	N/A	7.30E-03	n	N/A		N	BSL
	53494-70-5	Endrin ketone	ND	ND	mg/l	ND	0 / 1	0.0000025	0.0000025	2.50E-06	N/A	7.30E-03	n	N/A		N	BSL
	58-89-9	gamma-BHC	0.000008	0.000008	mg/l	MWGW202-022514	1 / 1	0.0000012	0.0000012	8.00E-06	N/A	3.60E-05	c	0.0002	MCL	N	BSL
	5103-74-2	gamma-Chlordane	0.000013	0.000013	mg/l	MWGW202-022514	1 / 1	0.0000025	0.0000025	1.30E-05	N/A	2.60E-04	c	0.002	MCL	N	BSL
	76-44-8	Heptachlor	0.0000019	0 0000019	mg/l	MWGW202-022514	1 / 1	0.0000012	0.0000012	1.90E-06	N/A	1.80E-06	c	0.0004	MCL	Y	ASL
	1024-57-3	Heptachlor epoxide	ND	ND	mg/l	ND	0 / 1	0.0000012	0.0000012	1.20E-06	N/A	3.30E-06	c	0.0002	MCL	N	BSL
	72-43-5	Methoxychlor	ND	ND	mg/l	ND	0 / 1	0.000012	0.000012	1.20E-05	N/A	2.70E-02	n	0.040	MCL	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/l	ND	0 / 1	0.000025	0.000025	2.50E-05	N/A	1.30E-05	c	0.003	MCL	Y	ASL
	12674-11-2	Aroclor 1016	ND	ND	mg/l	ND	0 / 1	0.0001	0.0001	1.00E-04	N/A	9.60E-04	c	N/A		N	BSL
	11104-28-2	Aroclor 1221	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	4.00E-06	c	N/A		Y	ASL
	11141-16-5	Aroclor 1232	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	4.00E-06	c	N/A		Y	ASL
	53469-21-9	Aroclor 1242	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	3.40E-05	c	N/A		Y	ASL
	12672-29-6	Aroclor 1248	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	3.40E-05	c	N/A		Y	ASL
	11097-69-1	Aroclor 1254	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	3.40E-05	c	N/A		Y	ASL
	11096-82-5	Aroclor 1260	ND	ND	mg/l	ND	0 / 1	0.0001	0.0001	1.00E-04	N/A	3.40E-05	c	N/A		Y	ASL
	TPCB	Total PCBs	ND	ND	mg/l	ND	0 / 1	0.0001	0.0005	5.00E-04	N/A	5.00E-04	m	0.0005	MCL	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	5.00E-04	c	N/A		N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	7.50E+00	n	0.2	MCL	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	6.60E-05	c	N/A		Y	ASL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/l	ND	0 / 1	0.001	0.001	1.00E-03	N/A	5.30E+01	n	N/A		N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	2.40E-04	c	0.005	MCL	Y	ASL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	2.40E-03	c	N/A		N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	2.60E-01	n	0.007	MCL	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	9.90E-04	c	0.07	MCL	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	1.50E-02	n	N/A		N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	6.50E-06	c	0.00005	MCL	Y	ASL
	95-50-1	1 2-Dichlorobenzene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2.80E-01	n	0.6	MCL	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	1.50E-04	c	0.005	MCL	Y	ASL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	3.80E-04	c	0.005	MCL	Y	ASL
	108-67-8	1,3,5-Trimethylbenzene	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	8.70E-02	n	N/A		N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/l	ND	0 / 1	0.0004	0.0004	4.00E-04	N/A	7.30E-01	n	N/A		N	BSL

TABLE 2.15
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Second Transmissive Unit -North Pit Exposure Area
Ingestion of Groundwater
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3] [4] [5]	Screening Value Type	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection of Detection [6]
On-Site Groundwater Second Transmissive Unit North Pit Exposure Area	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/l	ND	0 / 1	0.0004	0.0004	4.00E-04	N/A	4.20E-04	c	0.075	MCL	N	BSL
	78-93-3	2-Butanone	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	4.90E+00	n	N/A		N	BSL
	591-78-6	2-Hexanone	ND	ND	mg/l	ND	0 / 1	0.001	0.001	1.00E-03	N/A	3.40E-02	n	N/A		N	BSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/l	ND	0 / 1	0.0007	0.0007	7.00E-04	N/A	1.00E+00	n	N/A		N	BSL
	67-64-1	Acetone	ND	ND	mg/l	ND	0 / 1	0.002	0.002	2.00E-03	N/A	1.20E+01	n	N/A		N	BSL
	71-43-2	Benzene	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	3.90E-04	c	0.005	MCL	N	BSL
	75-27-4	Bromodichloromethane	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	1.20E-04	c	0.08	MCL	Y	ASL
	75-25-2	Bromoform	ND	ND	mg/l	ND	0 / 1	0.0004	0.0004	4.00E-04	N/A	7.90E-03	c	0.08	MCL	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/l	ND	0 / 1	0.0004	0.0004	4.00E-04	N/A	7.00E-03	n	N/A		N	BSL
	75-15-0	Carbon disulfide	ND	ND	mg/l	ND	0 / 1	0.0006	0.0006	6.00E-04	N/A	7.20E-01	n	N/A		N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	3.90E-04	c	0.005	MCL	Y	ASL
	108-90-7	Chlorobenzene	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	7.20E-02	n	0.10	MCL	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	2.10E+01	n	N/A		N	BSL
	67-66-3	Chloroform	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	1.90E-04	c	0.08	MCL	Y	ASL
	74-87-3	Chloromethane	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	1.90E-01	n	N/A		N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	2.80E-02	n	0.07	MCL	N	BSL
	10061-01-5	cis-1 3-Dichloropropene	ND	ND	mg/l	ND	0 / 1	0.0001	0.0001	1.00E-04	N/A	1.70E-04	c	N/A		N	BSL
	110-82-7	Cyclohexane	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	1.30E+01	n	N/A		N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	1.50E-04	c	0.08	MCL	Y	ASL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	1.90E-01	n	N/A		N	BSL
	100-41-4	Ethylbenzene	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	1.30E-03	c	0.7	MCL	N	BSL
	98-82-8	Isopropylbenzene	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	3.90E-01	n	N/A		N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/l	ND	0 / 1	0.001	0.001	1.00E-03	N/A	1.60E+01	n	N/A		N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	1.20E-02	c	N/A		N	BSL
	108-87-2	Methylcyclohexane	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	1.20E+02	n	N/A		N	BSL
	75-09-2	Methylene chloride	ND	ND	mg/l	ND	0 / 1	0.0004	0.0004	4.00E-04	N/A	9.90E-03	c	0.005	MCL	N	BSL
	91-20-3	Naphthalene	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	1.40E-04	c	N/A		Y	ASL
	104-51-8	n-Butylbenzene	ND	ND	mg/l	ND	0 / 1	0.0004	0.0004	4.00E-04	N/A	7.80E-01	n	N/A		N	BSL
	103-65-1	n-Propylbenzene	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	5.30E-01	n	N/A		N	BSL
	135-98-8	sec-Butylbenzene	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	1.60E+00	n	N/A		N	BSL
	100-42-5	Styrene	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	1.10E+00	n	0.1	MCL	N	BSL
	98-06-6	tert-Butylbenzene	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	5.10E-01	n	N/A		N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	9.70E-03	c	0.005	MCL	N	BSL
	108-88-3	Toluene	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	8.60E-01	n	1.0	MCL	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	8.60E-02	n	0.1	MCL	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	9.10E-04	c	N/A		N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	4.40E-04	c	0.005	MCL	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/l	ND	0 / 1	0.0003	0.0003	3.00E-04	N/A	1.10E+00	n	N/A		N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	1.50E-05	c	0.002	MCL	Y	ASL
	1330-20-7	Xylenes, Total	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	1.90E-01	n	10.0	MCL	N	BSL
	92-52-4	1,1 -Biphenyl	ND	ND	mg/l	ND	0 / 1	0.000032	0.000032	3.20E-05	N/A	8.30E-04	n	N/A		N	BSL
	90-12-0	1-Methylnaphthalene	ND	ND	mg/l	ND	0 / 1	0 00003	0 00003	3.00E-05	N/A	9.70E-04	c	N/A		N	BSL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/l	ND	0 / 1	0 00004	0 00004	4.00E-05	N/A	8.90E-01	n	N/A		N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/l	ND	0 / 1	0 00006	0 00006	6.00E-05	N/A	3.50E-03	c	N/A		N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/l	ND	0 / 1	0.000065	0.000065	6.50E-05	N/A	3.50E-02	n	N/A		N	BSL
	105-67-9	2,4-Dimethylphenol	ND	ND	mg/l	ND	0 / 1	0.000033	0.000033	3.30E-05	N/A	2.70E-01	n	N/A		N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/l	ND	0 / 1	0 00005	0 00005	5.00E-05	N/A	3.00E-02	n	N/A		N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/l	ND	0 / 1	0 00003	0 00003	3.00E-05	N/A	2.00E-04	c	N/A		N	BSL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/l	ND	0 / 1	0 00005	0 00005	5.00E-05	N/A	4.20E-05	c	N/A		Y	ASL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/l	ND	0 / 1	0 00004	0 00004	4.00E-05	N/A	5.50E-01	n	N/A		N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/l	ND	0 / 1	0 00004	0 00004	4.00E-05	N/A	7.10E-02	n	N/A		N	BSL
	91-57-6	2-Methylnaphthalene	ND	ND	mg/l	ND	0 / 1	0.000034	0.000034	3.40E-05	N/A	2.70E-02	n	N/A		N	BSL
	95-48-7	2-Methylphenol	ND	ND	mg/l	ND	0 / 1	0.000033	0.000033	3.30E-05	N/A	7.20E-01	n	N/A		N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/l	ND	0 / 1	0.000038	0.000038	3.80E-05	N/A	1.50E-01	n	N/A		N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/l	ND	0 / 1	0.000024	0.000024	2.40E-05	N/A	4.90E-02	n	N/A		N	BSL
	106-44-5	3&4-Methylphenol	ND	ND	mg/l	ND	0 / 1	0 00003	0 00003	3.00E-05	N/A	1.40E+00	n	N/A		N	BSL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/l	ND	0 / 1	0.000024	0.000024	2.40E-05	N/A	1.10E-04	c	N/A		N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/l	ND	0 / 1	0.000056	0.000056	5.60E-05	N/A	7.30E-03	n	N/A		N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/l	ND	0 / 1	0.000073	0.000073	7.30E-05	N/A	1.20E-03	n	N/A		N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/l	ND	0 / 1	0.000047	0.000047	4.70E-05	N/A	6.10E-06	c	N/A		Y	ASL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/l	ND	0 / 1	0.000022	0.000022	2.20E-05	N/A	1.10E+00	n	N/A		N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/l	ND	0 / 1	0.000021	0.000021	2.10E-05	N/A	3.20E-04	c	N/A		N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/l	ND	0 / 1	0.000043	0.000043	4.30E-05	N/A	6.10E-06	c	N/A		Y	ASL
	100-01-6	4-Nitroaniline	ND	ND	mg/l	ND	0 / 1	0 00004	0 00004	4.00E-05	N/A	3.30E-03	c	N/A		N	BSL

TABLE 2.15
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Second Transmissive Unit -North Pit Exposure Area
Ingestion of Groundwater
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (4) (5)	Screening Value Type	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection of Detection (6)
On-Site Groundwater Second Transmissive Unit North Pit Exposure Area	100-02-7	4-Nitrophenol	ND	ND	mg/l	ND	0 / 1	0 00006	0 00006	6.00E-05	N/A	4.90E-02	n	N/A		N	BSL
	83-32-9	Acenaphthene	ND	ND	mg/l	ND	0 / 1	0 00003	0 00003	3.00E-05	N/A	4.00E-01	n	N/A		N	BSL
	208-96-8	Acenaphthylene	ND	ND	mg/l	ND	0 / 1	0.000021	0.000021	2.10E-05	N/A	1.50E+00	n	N/A		N	BSL
	98-86-2	Acetophenone	0.0068	0.0068	mg/l	MWGW202-022514	1 / 1	0 00003	0 00003	6.80E-03	N/A	1.50E+00	n	N/A		N	BSL
	120-12-7	Anthracene	ND	ND	mg/l	ND	0 / 1	0 00002	0 00002	2.00E-05	N/A	1.30E+00	n	N/A		N	BSL
	56-55-3	Benz(a)anthracene	ND	ND	mg/l	ND	0 / 1	0.000025	0.000025	2.50E-05	N/A	2.90E-05	c	N/A		N	BSL
	100-52-7	Benzaldehyde	ND	ND	mg/l	ND	0 / 1	0.000046	0.000046	4.60E-05	N/A	1.50E+00	n	N/A		N	BSL
	50-32-8	Benzo(a)pyrene	ND	ND	mg/l	ND	0 / 1	0 00003	0 00003	3.00E-05	N/A	2.90E-06	c	0.0002	MCL	Y	ASL
	205-99-2	Benzo(b)fluoranthene	ND	ND	mg/l	ND	0 / 1	0.000028	0.000028	2.80E-05	N/A	2.90E-05	c	N/A		N	BSL
	191-24-2	Benzo(g,h,i)perylene	ND	ND	mg/l	ND	0 / 1	0.000026	0.000026	2.60E-05	N/A	7.30E-01	n	N/A		N	BSL
	207-08-9	Benzo(k)fluoranthene	ND	ND	mg/l	ND	0 / 1	0.000028	0.000028	2.80E-05	N/A	2.90E-04	c	N/A		N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/l	ND	0 / 1	0.000022	0.000022	2.20E-05	N/A	4.60E-02	n	N/A		N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/l	ND	0 / 1	0.000029	0.000029	2.90E-05	N/A	1.20E-05	c	N/A		Y	ASL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/l	ND	0 / 1	0.000064	0.000064	6.40E-05	N/A	3.10E-04	c	N/A		N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.00021	0.00021	mg/l	MWGW202-022514	1 / 1	0.000033	0.000033	2.10E-04	N/A	4.80E-03	c	0.006	MCL	N	BSL
	85-68-7	Butyl benzyl phthalate	ND	ND	mg/l	ND	0 / 1	0.000021	0.000021	2.10E-05	N/A	1.40E-02	c	N/A		N	BSL
	105-60-2	Caprolactam	ND	ND	mg/l	ND	0 / 1	0.000059	0.000059	5.90E-05	N/A	7.70E+00	n	N/A		N	BSL
	86-74-8	Carbazole	ND	ND	mg/l	ND	0 / 1	0.000025	0.000025	2.50E-05	N/A	4.60E-03	c	N/A		N	BSL
	218-01-9	Chrysene	ND	ND	mg/l	ND	0 / 1	0.000046	0.000046	4.60E-05	N/A	2.90E-03	c	N/A		N	BSL
	53-70-3	Dibenz(a,h)anthracene	ND	ND	mg/l	ND	0 / 1	0.000026	0.000026	2.60E-05	N/A	2.90E-06	c	N/A		Y	ASL
	132-64-9	Dibenzofuran	ND	ND	mg/l	ND	0 / 1	0.000025	0.000025	2.50E-05	N/A	5.80E-03	n	N/A		N	BSL
	84-66-2	Diethyl phthalate	ND	ND	mg/l	ND	0 / 1	0.000021	0.000021	2.10E-05	N/A	1.10E+01	n	N/A		N	BSL
	131-11-3	Dimethyl phthalate	ND	ND	mg/l	ND	0 / 1	0 00003	0 00003	3.00E-05	N/A	2.00E+01	n	N/A		N	BSL
	84-74-2	Di-n-butyl phthalate	ND	ND	mg/l	ND	0 / 1	0 00003	0 00003	3.00E-05	N/A	6.70E-01	n	N/A		N	BSL
	117-84-0	Di-n-octyl phthalate	ND	ND	mg/l	ND	0 / 1	0.000023	0.000023	2.30E-05	N/A	1.60E-01	n	N/A		N	BSL
	206-44-0	Fluoranthene	ND	ND	mg/l	ND	0 / 1	0 00002	0 00002	2.00E-05	N/A	6.30E-01	n	N/A		N	BSL
	86-73-7	Fluorene	ND	ND	mg/l	ND	0 / 1	0.000021	0.000021	2.10E-05	N/A	2.20E-01	n	N/A		N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/l	ND	0 / 1	0 00007	0 00007	7.00E-05	N/A	4.20E-05	c	0.001	MCL	Y	ASL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/l	ND	0 / 1	0 00005	0 00005	5.00E-05	N/A	2.60E-04	c	N/A		N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/l	ND	0 / 1	0.000054	0.000054	5.40E-05	N/A	2.20E-02	n	0.05	MCL	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/l	ND	0 / 1	0.000034	0.000034	3.40E-05	N/A	7.90E-04	c	N/A		N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	ND	ND	mg/l	ND	0 / 1	0.000051	0.000051	5.10E-05	N/A	2.90E-05	c	N/A		Y	ASL
	78-59-1	Isophorone	ND	ND	mg/l	ND	0 / 1	0 00003	0 00003	3.00E-05	N/A	6.70E-02	c	N/A		N	BSL
	91-20-3	Naphthalene	ND	ND	mg/l	ND	0 / 1	0 00005	0 00005	5.00E-05	N/A	1.40E-04	c	N/A		N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/l	ND	0 / 1	0 00005	0 00005	5.00E-05	N/A	1.20E-04	c	N/A		N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/l	ND	0 / 1	0 00004	0 00004	4.00E-05	N/A	9.30E-06	c	N/A		Y	ASL
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/l	ND	0 / 1	0.000029	0.000029	2.90E-05	N/A	1.00E-02	c	N/A		N	BSL
	87-86-5	Pentachlorophenol	ND	ND	mg/l	ND	0 / 1	0.000046	0.000046	4.60E-05	N/A	3.50E-05	c	0.001	MCL	Y	ASL
	85-01-8	Phenanthrene	ND	ND	mg/l	ND	0 / 1	0 00002	0 00002	2.00E-05	N/A	7.30E-01	n	N/A		N	BSL
	108-95-2	Phenol	ND	ND	mg/l	ND	0 / 1	0.000032	0.000032	3.20E-05	N/A	4.50E+00	n	N/A		N	BSL
	129-00-0	Pyrene	ND	ND	mg/l	ND	0 / 1	0.000022	0.000022	2.20E-05	N/A	8.70E-02	n	N/A		N	BSL
	57-12-5	Cyanide	ND	ND	mg/l	ND	0 / 1	0.005	0.005	5.00E-03	N/A	1.40E-03	n	0.2	MCL	Y	ASL

Notes

= Maximum detection limit exceeds screening value
= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.
(2) A background study was not completed.
(3) Screening values are the USEPA Tap Water RSLs (USEPA, 2013). If an RSL was not available, the TRRP 30-acre Residential PCLs (TCEQ, 2012a) for Class 1 and 2 Groundwater were used; TRRP PCLs for carcinogens were adjusted a 10-6 risk.
(4) Screening value for m-cresol assumed for m&p-cresol (he lower of screening values for m-cresol and p-cresol)
(5) Screening values were not available for chromium, lead, and total PCBs. The MCL was used as the screening value.
(6) Ra ionale for Selection or Deletion:
ASL = Above Screening Level
BSL = Below Screening Level

Definitions:
a= Action level
ARAR = Applicable or relevant and appropriate requirements
CAS No. = Chemical Abstract Registry Number
c = Carcinogen
MCL = Maximum Contaminant Level
m = primary MCL-based
mg/l = milligram/liter
n = Noncarcinogen
N/A = Not applicable or available
ND = Not Detected
PCLs = Protective Concentration Levels
RSLs = Regional Screening Levels
SDWS = Secondary Drinking Water Standard
TBC = To be considered values
TRRP = Texas Risk Reduction Program
USEPA = United States Environmental Protection Agency

TABLE 2.16
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Upper Transmissive Unit - Off-Site Exposure Area
Groundwater Class 3 and Migration of Volatile Compounds to Ambient Air
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
Off-Site Groundwater Upper Transmissive Unit Off-Site Exposure Area	7429-90-5	Aluminum	0.762	0.762	mg/l	MWGW18-030812	1 / 1	0.04	0.04	7.62E-01	N/A	7 30E+03	n	N/A	N	BSL
	7440-36-0	Antimony	0.00765 J	0 00765 J	mg/l	MWGW18-030812	1 / 1	0.0016	0.0016	7.65E-03	N/A	6.00E-01	m	N/A	N	BSL
	7440-38-2	Arsenic	0.369	0 369	mg/l	MWGW18-030812	1 / 1	0.013	0.013	3.69E-01	N/A	1 00E+00	m	N/A	N	BSL
	7440-39-3	Barium	0.359	0 359	mg/l	MWGW18-030812	1 / 1	0.009	0.009	3.59E-01	N/A	2 00E+02	m	N/A	N	BSL
	7440-41-7	Beryllium	ND	ND	mg/l	ND	0 / 1	0.0014	0.0014	1.40E-03	N/A	4.00E-01	m	N/A	N	BSL
	7440-43-9	Cadmium	ND	ND	mg/l	ND	0 / 1	0.0016	0.0016	1.60E-03	N/A	5.00E-01	m	N/A	N	BSL
	7440-47-3	Chromium	0.42	0.42	mg/l	MWGW18-030812	1 / 1	0.012	0.012	4.20E-01	N/A	1 00E+01	m	N/A	N	BSL
	7440-48-4	Cobalt	0.0122	0.0122	mg/l	MWGW18-030812	1 / 1	0.0016	0.0016	1.22E-02	N/A	2 20E+00	n	N/A	N	BSL
	7440-50-8	Copper	0.0105	0.0105	mg/l	MWGW18-030812	1 / 1	0.003	0.003	1.05E-02	N/A	1 30E+02	a	N/A	N	BSL
	7439-92-1	Lead	0.00215 J	0 00215 J	mg/l	MWGW18-030812	1 / 1	0.0014	0.0014	2.15E-03	N/A	1 50E+00	a	N/A	N	BSL
	7439-96-5	Manganese	0.971	0 971	mg/l	MWGW18-030812	1 / 1	0.025	0.025	9.71E-01	N/A	1 00E+03	n	N/A	N	BSL
	7440-02-0	Nickel	0.427	0.427	mg/l	MWGW18-030812	1 / 1	0.012	0.012	4.27E-01	N/A	1 50E+02	n	N/A	N	BSL
	7782-49-2	Selenium	0.00384 J	0 00384 J	mg/l	MWGW18-030812	1 / 1	0.002	0.002	3.84E-03	N/A	5 00E+00	m	N/A	N	BSL
	7440-22-4	Silver	ND	ND	mg/l	ND	0 / 1	0.0016	0.0016	1.60E-03	N/A	3.70E+01	n	N/A	N	BSL
	7440-28-0	Thallium	ND	ND	mg/l	ND	0 / 1	0.002	0.002	2.00E-03	N/A	2.00E-01	m	N/A	N	BSL
	7440-62-2	Vanadium	0.054	0 054	mg/l	MWGW18-030812	1 / 1	0.0018	0.0018	5.40E-02	N/A	1 30E+01	n	N/A	N	BSL
	7440-66-6	Zinc	0.0175	0.0175	mg/l	MWGW18-030812	1 / 1	0.005	0.005	1.75E-02	N/A	2 20E+03	n	N/A	N	BSL
	7439-97-6	Mercury	ND	ND	mg/l	ND	0 / 1	0.000042	0.000042	4.20E-05	N/A	2.00E-01	m	N/A	N	BSL
	72-54-8	4,4 -DDD	ND	ND	mg/l	ND	0 / 1	0.00012	0 00012	1.20E-04	N/A	8.50E-02	c	N/A	N	BSL
	72-55-9	4 4 -DDE	0.0019	0.0019	mg/l	MWGW18-030812	1 / 1	0.00012	0 00012	1.90E-03	N/A	6.00E-02	c	N/A	N	BSL
	50-29-3	4,4 -DDT	0.0012 J	0.0012 J	mg/l	MWGW18-030812	1 / 1	0.00012	0 00012	1.20E-03	N/A	6.00E-02	c	N/A	N	BSL
	309-00-2	Aldrin	0.00064 J	0 00064 J	mg/l	MWGW18-030812	1 / 1	0.000062	0.000062	6.40E-04	N/A	1.20E-03	c	N/A	N	BSL
	319-84-6	alpha-BHC	ND	ND	mg/l	ND	0 / 1	0.000062	0.000062	6.20E-05	N/A	3.20E-03	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	ND	ND	mg/l	ND	0 / 1	0.00012	0 00012	1.20E-04	N/A	5.80E-02	c	N/A	N	BSL
	319-85-7	beta-BHC	0.000082 J	0.000082 J	mg/l	MWGW18-030812	1 / 1	0.000062	0.000062	8.20E-05	N/A	1.10E-02	c	N/A	N	BSL
	319-86-8	delta-BHC	ND	ND	mg/l	ND	0 / 1	0.000062	0.000062	6.20E-05	N/A	1.10E-02	c	N/A	N	BSL
	60-57-1	Dieldrin	0.0012 J	0.0012 J	mg/l	MWGW18-120412	1 / 1	0.00012	0 00025	1.20E-03	N/A	1.30E-03	c	N/A	N	BSL
	959-98-8	Endosulfan I	ND	ND	mg/l	ND	0 / 1	0.000062	0.000062	6.20E-05	N/A	1 50E+01	n	N/A	N	BSL
	33213-65-9	Endosulfan II	0.00052 J	0 00052 J	mg/l	MWGW18-030812	1 / 1	0.00012	0 00012	5.20E-04	N/A	4.40E+01	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	0.0022 J	0.0022 J	mg/l	MWGW18-030812	1 / 1	0.00012	0 00012	2.20E-03	N/A	4.40E+01	n	N/A	N	BSL
	72-20-8	Endrin	0.00091 J	0 00091 J	mg/l	MWGW18-030812	1 / 1	0.00012	0 00012	9.10E-04	N/A	2.00E-01	m	N/A	N	BSL
	7421-93-4	Endrin aldehyde	0.0031	0.0031	mg/l	MWGW18-030812	1 / 1	0.00012	0 00012	3.10E-03	N/A	2 20E+00	n	N/A	N	BSL
	53494-70-5	Endrin ketone	0.00052 J	0 00052 J	mg/l	MWGW18-030812	1 / 1	0.00012	0 00012	5.20E-04	N/A	2 20E+00	n	N/A	N	BSL
	58-89-9	gamma-BHC	0.00021 J	0 00021 J	mg/l	MWGW18-030812	1 / 1	0.000062	0.000062	2.10E-04	N/A	2.00E-02	m	N/A	N	BSL
	5103-74-2	gamma-Chlordane	0.0022	0.0022	mg/l	MWGW18-030812	1 / 1	0.00012	0 00012	2.20E-03	N/A	5.80E-02	c	N/A	N	BSL
	76-44-8	Heptachlor	ND	ND	mg/l	ND	0 / 1	0.000062	0.000062	6.20E-05	N/A	4.00E-02	m	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	ND	ND	mg/l	ND	0 / 1	0.000062	0.000062	6.20E-05	N/A	2.00E-02	m	N/A	N	BSL
	72-43-5	Methoxychlor	ND	ND	mg/l	ND	0 / 1	0.00062	0 00062	6.20E-04	N/A	4 00E+00	m	N/A	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/l	ND	0 / 1	0.0012	0.0012	1.20E-03	N/A	3.00E-01	m	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	5.00E-02	m	N/A	N	BSL
	11104-28-2	Aroclor 1221	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	5.00E-02	m	N/A	N	BSL
	11141-16-5	Aroclor 1232	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	5.00E-02	m	N/A	N	BSL
	53469-21-9	Aroclor 1242	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	5.00E-02	m	N/A	N	BSL
	12672-29-6	Aroclor 1248	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	5.00E-02	m	N/A	N	BSL
	11097-69-1	Aroclor 1254	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	5.00E-02	m	N/A	N	BSL
	11096-82-5	Aroclor 1260	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	5.00E-02	m	N/A	N	BSL
	TPCB	Total PCBs	ND	ND	mg/l	ND	0 / 1	0.0002	0.0002	2.00E-04	N/A	5.00E-02	m	N/A	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 6	0.000209	0.001	1.00E-03	N/A	7.90E-01	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/l	ND	0 / 6	0.0003	0.002	2.00E-03	N/A	2 00E+01	m	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 6	0.00019	0.001	1.00E-03	N/A	1.00E-01	c	N/A	N	BSL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/l	ND	0 / 6	0.000278	0.002	2.00E-03	N/A	1.70E+03	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/l	ND	0 / 6	0.000173	0.001	1.00E-03	N/A	5.00E-01	m	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/l	ND	0 / 6	0.000168	0.002	2.00E-03	N/A	1 50E+03	n	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/l	ND	0 / 6	0.0003	0.002	2.00E-03	N/A	7.00E-01	m	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/l	ND	0 / 6	0.000168	0.001	1.00E-03	N/A	7 00E+00	m	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	0.067	0 067	mg/l	MWGW18-030812	1 / 6	0.0002	0.001	6.70E-02	N/A	3.40E+01	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/l	ND	0 / 6	0.00015	0.001	1.00E-03	N/A	5.00E-03	m	N/A	N	BSL
	95-50-1	1 2-Dichlorobenzene	ND	ND	mg/l	ND	0 / 6	0.000117	0.001	1.00E-03	N/A	6 00E+01	m	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/l	ND	0 / 6	0.00016	0.001	1.00E-03	N/A	5.00E-01	m	N/A	N	BSL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/l	ND	0 / 6	0.000173	0.005	5.00E-03	N/A	5.00E-01	m	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	0.021	0 021	mg/l	MWGW18-030812	1 / 6	0.0002	0.001	2.10E-02	N/A	2 30E+01	n	N/A	N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/l	ND	0 / 6	0.000128	0.001	1.00E-03	N/A	3.40E+01	n	N/A	N	BSL

TABLE 2.16
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Upper Transmissive Unit - Off-Site Exposure Area
Groundwater Class 3 and Migration of Volatile Compounds to Ambient Air
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
Off-Site Groundwater Upper Transmissive Unit Off-Site Exposure Area	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/l	ND	0 / 6	0.0002	0.002	2.00E-03	N/A	7 50E+00	m	N/A	N	BSL
	78-93-3	2-Butanone	ND	ND	mg/l	ND	0 / 6	0.001	0.004	4.00E-03	N/A	4.40E+03	n	N/A	N	BSL
	591-78-6	2-Hexanone	ND	ND	mg/l	ND	0 / 6	0.0002	0.003	3.00E-03	N/A	3.70E+01	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	0.042	0 042	mg/l	MWGW18-030812	1 / 6	0.000116	0.003	4.20E-02	N/A	5 80E+02	n	N/A	N	BSL
	67-64-1	Acetone	0.00612 J	0 045 J	mg/l	TWGWEF90-02	1 / 6	0.005	0.01	4.50E-02	N/A	6 60E+03	n	N/A	N	BSL
	71-43-2	Benzene	0.00247	3 5	mg/l	MWGW18-120412	4 / 6	0.00014	0.015	3.50E+00	N/A	5.00E-01	m	N/A	Y	ASL
	75-27-4	Bromodichloromethane	ND	ND	mg/l	ND	0 / 6	0.000175	0.001	1.00E-03	N/A	3.30E-01	c	N/A	N	BSL
	75-25-2	Bromoform	ND	ND	mg/l	ND	0 / 6	0.0005	0.002	2.00E-03	N/A	2 60E+00	c	N/A	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/l	ND	0 / 6	0.000392	0.005	5.00E-03	N/A	8 30E+00	n	N/A	N	BSL
	75-15-0	Carbon disulfide	ND	ND	mg/l	ND	0 / 6	0.0005	0.003	3.00E-03	N/A	7 30E+02	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/l	ND	0 / 6	0.000251	0.002	2.00E-03	N/A	4.30E-01	c	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/l	ND	0 / 6	0.000136	0.001	1.00E-03	N/A	1 00E+01	m	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/l	ND	0 / 6	0.0004	0.005	5.00E-03	N/A	2 90E+03	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/l	ND	0 / 6	0.000173	0.001	1.00E-03	N/A	4.30E-01	c	N/A	N	BSL
	74-87-3	Chloromethane	ND	ND	mg/l	ND	0 / 6	0.00039	0.002	2.00E-03	N/A	7.90E-01	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 6	0.000121	0.001	1.00E-03	N/A	7 00E+00	m	N/A	N	BSL
	10061-01-5	cis-1 3-Dichloropropene	ND	ND	mg/l	ND	0 / 6	0.000146	0.002	2.00E-03	N/A	3.80E-02	c	N/A	N	BSL
	110-82-7	Cyclohexane	ND	ND	mg/l	ND	0 / 6	0.001	0.003	3.00E-03	N/A	1.10E+03	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/l	ND	0 / 6	0.000223	0.002	2.00E-03	N/A	2.40E-01	c	N/A	N	BSL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/l	ND	0 / 6	0.000429	0.004	4.00E-03	N/A	1.10E+01	n	N/A	N	BSL
	100-41-4	Ethylbenzene	0.21	0.21	mg/l	MWGW18-030812	1 / 6	0.0002	0.001	2.10E-01	N/A	7 00E+01	m	N/A	N	BSL
	98-82-8	Isopropylbenzene	0.029	0 029	mg/l	MWGW18-030812	1 / 6	0.0002	0.001	2.90E-02	N/A	7 30E+02	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/l	ND	0 / 1	0.004	0.004	4.00E-03	N/A	7 30E+03	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	0.01	0.01	mg/l	MWGW18-030812	1 / 6	0.0002	0.001	1.00E-02	N/A	7 30E+01	n	N/A	N	BSL
	108-87-2	Methylcyclohexane	0.0038 J	0.0038 J	mg/l	MWGW18-030812	1 / 1	0.002	0.002	3.80E-03	N/A	2 60E+02	n	N/A	N	BSL
	75-09-2	Methylene chloride	ND	ND	mg/l	ND	0 / 6	0.002	0.002	2.00E-03	N/A	5.00E-01	m	N/A	N	BSL
	91-20-3	Naphthalene	0.091	0 091	mg/l	MWGW18-030812	1 / 6	0.0002	0.001	9.10E-02	N/A	5.70E+01	n	N/A	N	BSL
	104-51-8	n-Butylbenzene	ND	ND	mg/l	ND	0 / 6	0.0002	0.001	1.00E-03	N/A	3.70E+02	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	0.0089 J	0.0089 J	mg/l	MWGW18-030812	1 / 6	0.000106	0.001	8.90E-03	N/A	2 90E+02	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	ND	ND	mg/l	ND	0 / 6	0.0003	0.001	1.00E-03	N/A	2 90E+02	n	N/A	N	BSL
	100-42-5	Styrene	0.037	0 037	mg/l	MWGW18-030812	1 / 6	0.0002	0.001	3.70E-02	N/A	1 00E+01	m	N/A	N	BSL
	98-06-6	tert-Butylbenzene	0.01	0.01	mg/l	MWGW18-030812	1 / 6	0.0002	0.001	1.00E-02	N/A	2 90E+02	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/l	ND	0 / 6	0.000189	0.002	2.00E-03	N/A	5.00E-01	m	N/A	N	BSL
	108-88-3	Toluene	0.000992 J	0.48	mg/l	MWGW18-030812	4 / 6	0.0003	0.001	4.80E-01	N/A	1 00E+02	m	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 6	0.0002	0.002	2.00E-03	N/A	1 00E+01	m	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/l	ND	0 / 6	0.0002	0.002	2.00E-03	N/A	2.00E-01	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/l	ND	0 / 6	0.000317	0.002	2.00E-03	N/A	5.00E-01	m	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/l	ND	0 / 6	0.000244	0.002	2.00E-03	N/A	2 20E+03	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/l	ND	0 / 6	0.0003	0.003	3.00E-03	N/A	8.30E-02	c	N/A	N	BSL
	1330-20-7	Xylenes, Total	0.000797 J	0.58	mg/l	MWGW18-030812	2 / 6	0.000226	0.003	5.80E-01	N/A	1 00E+03	m	N/A	N	BSL
	92-52-4	1,1 -Biphenyl	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	3.70E+02	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	0.0085	0.0085	mg/l	MWGW18-030812	1 / 1	0.0005	0.0005	8.50E-03	N/A	7.00E-01	c	N/A	N	BSL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	7 30E+02	n	N/A	N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	7 30E+00	n	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2 20E+01	n	N/A	N	BSL
	105-67-9	2,4-Dimethylphenol	4.7	4.7	mg/l	MWGW18-030812	1 / 1	0.05	0.05	4.70E+00	N/A	1 50E+02	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/l	ND	0 / 1	0.0008	0.0008	8.00E-04	N/A	1 50E+01	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	3.00E-02	c	N/A	N	BSL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/l	ND	0 / 1	0.0006	0.0006	6.00E-04	N/A	3.00E-02	c	N/A	N	BSL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	5 80E+02	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/l	ND	0 / 1	0.0006	0.0006	6.00E-04	N/A	3.70E+01	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	0.0044	0.0044	mg/l	MWGW18-030812	1 / 1	0.0005	0.0005	4.40E-03	N/A	2 90E+01	n	N/A	N	BSL
	95-48-7	2-Methylphenol	4.4	4.4	mg/l	MWGW18-030812	1 / 1	0.05	0.05	4.40E+00	N/A	3.70E+02	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2 20E+00	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	1 50E+01	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol	0.85	0.85	mg/l	MWGW18-030812	1 / 1	0.05	0.05	8.50E-01	N/A	3.70E+01	n	N/A	N	BSL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	4.50E-02	c	N/A	N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2 20E+00	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	mg/l	ND	0 / 1	0.0008	0.0008	8.00E-04	N/A	7.30E-01	n	N/A	N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	1.40E-03	c	N/A	N	BSL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	3.70E+01	n	N/A	N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	1.00E-01	c	N/A	N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	1.40E-03	c	N/A	N	BSL
	100-01-6	4-Nitroaniline	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	1 00E+00	c	N/A	N	BSL

TABLE 2.16
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Upper Transmissive Unit - Off-Site Exposure Area
Groundwater Class 3 and Migration of Volatile Compounds to Ambient Air
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
Off-Site Groundwater Upper Transmissive Unit Off-Site Exposure Area	100-02-7	4-Nitrophenol	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	1 50E+01	n	N/A	N	BSL
	83-32-9	Acenaphthene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	4.40E+02	n	N/A	N	BSL
	208-96-8	Acenaphthylene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	4.40E+02	n	N/A	N	BSL
	98-86-2	Acetophenone	ND	ND	mg/l	ND	0 / 1	0.001	0.001	1.00E-03	N/A	7 30E+02	n	N/A	N	BSL
	120-12-7	Anthracene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2 20E+03	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2.80E-02	c	N/A	N	BSL
	100-52-7	Benzaldehyde	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	7 30E+02	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2.00E-02	m	N/A	N	BSL
	205-99-2	Benzo(b)fluoranthene	ND	ND	mg/l	ND	0 / 1	0.0006	0.0006	6.00E-04	N/A	2.80E-02	c	N/A	N	BSL
	191-24-2	Benzo(g,h,i)perylene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2 20E+02	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2.80E-01	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	1.90E-02	c	N/A	N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	1.90E-02	c	N/A	N	BSL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2.90E-01	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.0089	0.0089	mg/l	MWGW18-030812	1 / 1	0.001	0.001	8.90E-03	N/A	6.00E-01	m	N/A	N	BSL
	85-68-7	Butyl benzyl phthalate	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	1.10E+01	c	N/A	N	BSL
	105-60-2	Caprolactam	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	3.70E+03	n	N/A	N	BSL
	86-74-8	Carbazole	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	1 00E+00	c	N/A	N	BSL
	218-01-9	Chrysene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2 80E+00	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2.80E-03	c	N/A	N	BSL
	132-64-9	Dibenzofuran	0.005	0 005	mg/l	MWGW18-030812	1 / 1	0.0005	0.0005	5.00E-03	N/A	2 90E+01	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	5 80E+03	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	5 80E+03	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	7 30E+02	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2 90E+02	n	N/A	N	BSL
	206-44-0	Fluoranthene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2 90E+02	n	N/A	N	BSL
	86-73-7	Fluorene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2 90E+02	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/l	ND	0 / 1	0.0006	0.0006	6.00E-04	N/A	1.00E-01	m	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/l	ND	0 / 1	0.0006	0.0006	6.00E-04	N/A	1.90E-01	c	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/l	ND	0 / 1	0.0006	0.0006	6.00E-04	N/A	9.80E-01	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	5.10E+00	n	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2.80E-02	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2 20E+01	c	N/A	N	BSL
	91-20-3	Naphthalene	0.023	0 023	mg/l	MWGW18-030812	1 / 1	0.0005	0.0005	2.30E-02	N/A	5.70E+01	n	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	1 50E+01	n	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/l	ND	0 / 1	0.0008	0.0008	8.00E-04	N/A	2.90E-03	c	N/A	N	BSL
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	4 20E+00	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	0.0076	0.0076	mg/l	MWGW18-030812	1 / 1	0.0005	0.0005	7.60E-03	N/A	1.00E-01	m	N/A	N	BSL
	85-01-8	Phenanthrene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2 20E+02	n	N/A	N	BSL
	108-95-2	Phenol	0.005	0 005	mg/l	MWGW18-030812	1 / 1	0.0005	0.0005	5.00E-03	N/A	2 20E+03	n	N/A	N	BSL
	129-00-0	Pyrene	ND	ND	mg/l	ND	0 / 1	0.0005	0.0005	5.00E-04	N/A	2 20E+02	n	N/A	N	BSL
	57-12-5	Cyanide	0.034	0 034	mg/l	MWGW18-030812	1 / 1	0.004	0.004	3.40E-02	N/A	2 00E+01	m	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value
= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.
(2) A background study was not completed.
(3) For Upper Transmissive Unit, screening values are TRRP 30-Acre Commercial/Industrial PCLs for Class 3 Groundwater adjusted for carcinogens to a 10^{-6} risk.
(4) Rationale for Selection or Deletion:
ASL = Above Screening Level
BSL = Below Screening Level
(5) Screening value for m-cresol assumed (the lower of screening values for m&p-cresol)

Definitions:
a= Action level
ARAR = Applicable or relevant and appropriate requirements
CAS No. = Chemical Abstract Registry Number
c = Carcinogen
m = primary MCL-based
mg/l = milligram/liter
n = Noncarcinogen
N/A = Not applicable or available
ND = Not Detected
PCLs = Protective Concentration Levels
TBC = To be considered values
TRRP = Texas Risk Reduction Program

TABLE 2.17
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Second Transmissive Unit - Off-Site Exposure Area
Ingestion of Groundwater
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]	Screening Toxicity Value [3] [4] [5]	Screening Value Type	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection of Detection [6]
Off-Site Groundwater Second Transmissive Unit Off-Site Exposure Area	7429-90-5	Aluminum	0.0635	10.8	mg/l	MWGW19-030812	3 / 3	0.004	0.4	1 08E+01	N/A	1.60E+01	n	0 2	SDWS	N	BSL
	7440-36-0	Antimony	ND	ND	mg/l	ND	0 / 3	0.0008	0.0008	8 00E-04	N/A	6 00E-03	n	0.006	MCL	N	BSL
	7440-38-2	Arsenic	0 00561	0.106	mg/l	MWGW19-120412	3 / 3	0.001	0.0013	1 06E-01	N/A	4 50E-05	c	0 01	MCL	Y	ASL
	7440-39-3	Barium	0.111	0.201	mg/l	MWGW19-030812	3 / 3	0.0009	0.0009	2 01E-01	N/A	2.90E+00	n	2 0	MCL	N	BSL
	7440-41-7	Beryllium	ND	ND	mg/l	ND	0 / 3	0.0007	0.0014	1.40E-03	N/A	1 60E-02	n	0.004	MCL	N	BSL
	7440-43-9	Cadmium	ND	ND	mg/l	ND	0 / 3	0.0008	0.0008	8 00E-04	N/A	6 90E-03	n	0.005	MCL	N	BSL
	7440-47-3	Chromium	0 00798	0.00798	mg/l	MWGW19-030812	1 / 3	0.001	0.0012	7 98E-03	N/A	1 00E-01	m	0.1	MCL	N	BSL
	7440-48-4	Cobalt	0 00546	0.00604	mg/l	MWGW19-030812	3 / 3	0.0008	0.0008	6 04E-03	N/A	4.70E-03	n	N/A		Y	ASL
	7440-50-8	Copper	0.0052	0.0052	mg/l	MWGW19-030812	1 / 3	0.001	0.0015	5 20E-03	N/A	6 20E-01	n	1 3	MCL	N	BSL
	7439-92-1	Lead	0 00651	0.00651	mg/l	MWGW19-030812	1 / 3	0.0007	0.0007	6 51E-03	N/A	1 50E-02	m	0.015	a	N	BSL
	7439-96-5	Manganese	0.405	3.55	mg/l	MWGW204-022514	3 / 3	0.0025	0 25	3 55E+00	N/A	3 20E-01	n	0.05	SDWS	Y	ASL
	7440-02-0	Nickel	0 00263 J	0.0122	mg/l	MWGW204-022514	3 / 3	0.001	0.0012	1 22E-02	N/A	3 00E-01	n	N/A		N	BSL
	7782-49-2	Selenium	0 00122 J	0.00286 J	mg/l	MWGW19-030812	3 / 3	0.001	0.001	2 86E-03	N/A	7 80E-02	n	0.05	MCL	N	BSL
	7440-22-4	Silver	ND	ND	mg/l	ND	0 / 3	0.0008	0.0008	8 00E-04	N/A	7.10E-02	n	0.1	SDWS	N	BSL
	7440-28-0	Thallium	ND	ND	mg/l	ND	0 / 3	0.001	0.001	1 00E-03	N/A	1 60E-04	n	0.002	MCL	Y	ASL
	7440-62-2	Vanadium	0.0215	0.0233	mg/l	MWGW19-030812	3 / 3	0.0009	0.0009	2 33E-02	N/A	6 30E-02	n	N/A		N	BSL
	7440-66-6	Zinc	0 00493 J	0.0239	mg/l	MWGW19-030812	2 / 3	0.002	0.0025	2 39E-02	N/A	4.70E+00	n	5 0	SDWS	N	BSL
	7439-97-6	Mercury	ND	ND	mg/l	ND	0 / 3	0.00004	0 000042	4 20E-05	N/A	6 30E-04	n	0.002	MCL	N	BSL
	72-54-8	4,4 -DDD	0 0000086 J	0.0000086 J	mg/l	MWGW17-030812	1 / 3	0.0000025	0.00005	8 60E-06	N/A	2.70E-05	c	N/A		N	BSL
	72-55-9	4 4 -DDE	0 00029	0.00029	mg/l	MWGW19-030812	1 / 3	0.0000025	0.00005	2 90E-04	N/A	2 00E-04	c	N/A		Y	ASL
	50-29-3	4,4 -DDT	0.000025	0.000025	mg/l	MWGW204-022514	1 / 3	0.0000025	0.00005	2 50E-05	N/A	2 00E-04	c	N/A		N	BSL
	309-00-2	Aldrin	ND	ND	mg/l	ND	0 / 3	0.0000012	0 000025	2 50E-05	N/A	4 00E-06	c	N/A		Y	ASL
	319-84-6	alpha-BHC	0 0000043	0.0000045	mg/l	MWGW17-030812	2 / 3	0.0000012	0 000025	4 50E-06	N/A	6 20E-06	c	N/A		N	BSL
	5103-71-9	alpha-Chlordane	ND	ND	mg/l	ND	0 / 3	0.0000025	0.00005	5 00E-05	N/A	2 60E-04	c	0.002	MCL	N	BSL
	319-85-7	beta-BHC	0.000076	0.000076	mg/l	MWGW19-030812	1 / 3	0.0000012	0 000025	7 60E-05	N/A	2 20E-05	c	N/A		Y	ASL
	319-86-8	delta-BHC	ND	ND	mg/l	ND	0 / 3	0.0000012	0 000025	2 50E-05	N/A	5.10E-05	c	N/A		N	BSL
	60-57-1	Dieldrin	0 0000049	0.0000049	mg/l	MWGW204-022514	1 / 3	0.0000025	0.00005	4 90E-06	N/A	1 50E-06	c	N/A		Y	ASL
	959-98-8	Endosulfan I	0 0000055	0.000012 J	mg/l	MWGW17-030812	2 / 3	0.0000012	0 000025	1 20E-05	N/A	4 90E-02	n	N/A		N	BSL
	33213-65-9	Endosulfan II	0 0000041	0.0000041	mg/l	MWGW204-022514	1 / 3	0.0000025	0.00005	4.10E-06	N/A	1 50E-01	n	N/A		N	BSL
	1031-07-8	Endosulfan sulfate	ND	ND	mg/l	ND	0 / 3	0.0000025	0.00005	5 00E-05	N/A	1 50E-01	n	N/A		N	BSL
	72-20-8	Endrin	0 0000042	0.00016 J	mg/l	MWGW19-030812	2 / 3	0.0000025	0.00005	1 60E-04	N/A	1.70E-03	n	0.002	MCL	N	BSL
	7421-93-4	Endrin aldehyde	0.0013	0.0013	mg/l	MWGW19-030812	1 / 3	0.0000025	0.00005	1 30E-03	N/A	7 30E-03	n	N/A		N	BSL
	53494-70-5	Endrin ketone	ND	ND	mg/l	ND	0 / 3	0.0000025	0.00005	5 00E-05	N/A	7 30E-03	n	N/A		N	BSL
	58-89-9	gamma-BHC	0 0000065	0.000042 J	mg/l	MWGW19-030812	3 / 3	0.0000012	0 000025	4 20E-05	N/A	3 60E-05	c	0.0002	MCL	Y	ASL
	5103-74-2	gamma-Chlordane	0.000004	0.000023	mg/l	MWGW204-022514	1 / 3	0.0000025	0.00005	2 30E-05	N/A	2 60E-04	c	0.002	MCL	N	BSL
	76-44-8	Heptachlor	0 0000092 J	0.0000092 J	mg/l	MWGW17-030812	1 / 3	0.0000012	0 000025	9 20E-06	N/A	1 80E-06	c	0.0004	MCL	Y	ASL
	1024-57-3	Heptachlor epoxide	0 0000022	0.00019	mg/l	MWGW19-030812	2 / 3	0.0000012	0 000025	1 90E-04	N/A	3 30E-06	c	0.0002	MCL	Y	ASL
	72-43-5	Methoxychlor	ND	ND	mg/l	ND	0 / 3	0 000012	0.00025	2 50E-04	N/A	2.70E-02	n	0.04	MCL	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/l	ND	0 / 3	0 000025	0.0005	5 00E-04	N/A	1 30E-05	c	0.003	MCL	Y	ASL
	12674-11-2	Aroclor 1016	ND	ND	mg/l	ND	0 / 3	0.0001	0.0002	2 00E-04	N/A	9 60E-04	c	N/A		N	BSL
	11104-28-2	Aroclor 1221	ND	ND	mg/l	ND	0 / 3	0.0002	0.0005	5 00E-04	N/A	4 00E-06	c	N/A		Y	ASL
	11141-16-5	Aroclor 1232	ND	ND	mg/l	ND	0 / 3	0.0002	0.0005	5 00E-04	N/A	4 00E-06	c	N/A		Y	ASL
	53469-21-9	Aroclor 1242	ND	ND	mg/l	ND	0 / 3	0.0002	0.0005	5 00E-04	N/A	3.40E-05	c	N/A		Y	ASL
	12672-29-6	Aroclor 1248	ND	ND	mg/l	ND	0 / 3	0.0002	0.0005	5 00E-04	N/A	3.40E-05	c	N/A		Y	ASL
	11097-69-1	Aroclor 1254	ND	ND	mg/l	ND	0 / 3	0.0002	0.0005	5 00E-04	N/A	3.40E-05	c	N/A		Y	ASL
	11096-82-5	Aroclor 1260	ND	ND	mg/l	ND	0 / 3	0.0001	0.0002	2 00E-04	N/A	3.40E-05	c	N/A		Y	ASL
	TPCB	Total PCBs	ND	ND	mg/l	ND	0 / 3	0.0001	0.0005	5 00E-04	N/A	5 00E-04	m	0.0005	MCL	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 3	0.0001	0.0003	3 00E-04	N/A	5 00E-04	c	N/A		N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/l	ND	0 / 3	0.0002	0.0002	2 00E-04	N/A	7.50E+00	n	0 2	MCL	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 3	0.0001	0.0005	5 00E-04	N/A	6 60E-05	c	N/A		Y	ASL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/l	ND	0 / 3	0.0002	0.001	1 00E-03	N/A	5.30E+01	n	N/A		N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/l	ND	0 / 3	0.0001	0.0003	3 00E-04	N/A	2.40E-04	c	0.005	MCL	Y	ASL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/l	ND	0 / 3	0.0002	0.0002	2 00E-04	N/A	2.40E-03	c	N/A		N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/l	ND	0 / 3	0.0002	0.0002	2 00E-04	N/A	2 60E-01	n	0.007	MCL	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/l	ND	0 / 3	0.0001	0.0005	5 00E-04	N/A	9 90E-04	c	0.07	MCL	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	0 022	0.022	mg/l	MWGW19-030812	1 / 3	0.0001	0.0003	2 20E-02	N/A	1 50E-02	n	N/A		Y	ASL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/l	ND	0 / 3	0.0001	0.0002	2 00E-04	N/A	6 50E-06	c	0 00005	MCL	Y	ASL
	95-50-1	1 2-Dichlorobenzene	ND	ND	mg/l	ND	0 / 3	0.0001	0.0005	5 00E-04	N/A	2 80E-01	n	0 6	MCL	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/l	ND	0 / 3	0.0001	0.0002	2 00E-04	N/A	1 50E-04	c	0.005	MCL	Y	ASL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/l	ND	0 / 3	0.0005	0.0005	5 00E-04	N/A	3 80E-04	c	0.005	MCL	Y	ASL
	108-67-8	1,3,5-Trimethylbenzene	0.01	0.01	mg/l	MWGW19-030812	1 / 3	0.0001	0.0003	1 00E-02	N/A	8.70E-02	n	N/A		N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/l	ND	0 / 3	0.0001	0.0004	4 00E-04	N/A	7 30E-01	n	N/A		N	BSL

TABLE 2.17
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Second Transmissive Unit - Off-Site Exposure Area
Ingestion of Groundwater
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (4) (5)	Screening Value Type	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection of Detection (6)
Off-Site Groundwater Second Transmissive Unit Off-Site Exposure Area	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/l	ND	0 / 3	0.0002	0.0004	4 00E-04	N/A	4 20E-04	c	0.075	MCL	N	BSL
	78-93-3	2-Butanone	ND	ND	mg/l	ND	0 / 3	0.0004	0.0005	5 00E-04	N/A	4.90E+00	n	N/A		N	BSL
	591-78-6	2-Hexanone	ND	ND	mg/l	ND	0 / 3	0.0003	0.001	1 00E-03	N/A	3.40E-02	n	N/A		N	BSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/l	ND	0 / 3	0.0003	0.0007	7 00E-04	N/A	1.00E+00	n	N/A		N	BSL
	67-64-1	Acetone	ND	ND	mg/l	ND	0 / 3	0.001	0.002	2 00E-03	N/A	1.20E+01	n	N/A		N	BSL
	71-43-2	Benzene	0 019	0.019	mg/l	MWGW19-120412	1 / 3	0.0002	0.0003	1 90E-02	N/A	3 90E-04	c	0.005	MCL	Y	ASL
	75-27-4	Bromodichloromethane	ND	ND	mg/l	ND	0 / 3	0.0001	0.0002	2 00E-04	N/A	1 20E-04	c	0.08	MCL	Y	ASL
	75-25-2	Bromoform	ND	ND	mg/l	ND	0 / 3	0.0002	0.0004	4 00E-04	N/A	7 90E-03	c	0.08	MCL	N	BSL
	74-83-9	Bromomethane	ND	ND	mg/l	ND	0 / 3	0.0004	0.0005	5 00E-04	N/A	7 00E-03	n	N/A		N	BSL
	75-15-0	Carbon disulfide	ND	ND	mg/l	ND	0 / 3	0.0003	0.0006	6 00E-04	N/A	7 20E-01	n	N/A		N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/l	ND	0 / 3	0.0002	0.0005	5 00E-04	N/A	3 90E-04	c	0.005	MCL	Y	ASL
	108-90-7	Chlorobenzene	ND	ND	mg/l	ND	0 / 3	0.0001	0.0003	3 00E-04	N/A	7 20E-02	n	0.1	MCL	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/l	ND	0 / 3	0.0003	0.0005	5 00E-04	N/A	2.10E+01	n	N/A		N	BSL
	67-66-3	Chloroform	ND	ND	mg/l	ND	0 / 3	0.0001	0.0002	2 00E-04	N/A	1 90E-04	c	0.08	MCL	Y	ASL
	74-87-3	Chloromethane	ND	ND	mg/l	ND	0 / 3	0.0002	0.0002	2 00E-04	N/A	1 90E-01	n	N/A		N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 3	0.0001	0.0002	2 00E-04	N/A	2 80E-02	n	0.07	MCL	N	BSL
	10061-01-5	cis-1 3-Dichloropropene	ND	ND	mg/l	ND	0 / 3	0.0001	0.0002	2 00E-04	N/A	1.70E-04	c	N/A		Y	ASL
	110-82-7	Cyclohexane	ND	ND	mg/l	ND	0 / 3	0.0003	0.0003	3 00E-04	N/A	1.30E+01	n	N/A		N	BSL
	124-48-1	Dibromochloromethane	0 00038 J	0.00038 J	mg/l	MWGW17-030812	1 / 3	0.0002	0.0003	3 80E-04	N/A	1 50E-04	c	0.08	MCL	Y	ASL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/l	ND	0 / 3	0.0003	0.0004	4 00E-04	N/A	1 90E-01	n	N/A		N	BSL
	100-41-4	Ethylbenzene	0 058	0.058	mg/l	MWGW19-030812	1 / 3	0.0001	0.0003	5 80E-02	N/A	1 30E-03	c	0.7	MCL	Y	ASL
	98-82-8	Isopropylbenzene	0.0055	0.0055	mg/l	MWGW19-030812	1 / 3	0.0001	0.0003	5 50E-03	N/A	3 90E-01	n	N/A		N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/l	ND	0 / 3	0.0004	0.001	1 00E-03	N/A	1.60E+01	n	N/A		N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/l	ND	0 / 3	0.0001	0.0002	2 00E-04	N/A	1 20E-02	c	N/A		N	BSL
	108-87-2	Methylcyclohexane	0 00074 J	0.00074 J	mg/l	MWGW19-030812	1 / 3	0.0002	0.0003	7.40E-04	N/A	1.20E+02	n	N/A		N	BSL
	75-09-2	Methylene chloride	ND	ND	mg/l	ND	0 / 3	0.0002	0.0004	4 00E-04	N/A	9 90E-03	c	0.005	MCL	N	BSL
	91-20-3	Naphthalene	0.02	0.02	mg/l	MWGW19-030812	1 / 3	0.0001	0.0003	2 00E-02	N/A	1.40E-04	c	N/A		Y	ASL
	104-51-8	n-Butylbenzene	0.0017	0.0017	mg/l	MWGW19-030812	1 / 3	0.0001	0.0004	1.70E-03	N/A	7 80E-01	n	N/A		N	BSL
	103-65-1	n-Propylbenzene	0.0073	0.0073	mg/l	MWGW19-030812	1 / 3	0.0001	0.0003	7 30E-03	N/A	5 30E-01	n	N/A		N	BSL
	135-98-8	sec-Butylbenzene	0 002	0.002	mg/l	MWGW19-030812	1 / 3	0.0001	0.0003	2 00E-03	N/A	1.60E+00	n	N/A		N	BSL
	100-42-5	Styrene	0 00028 J	0.00028 J	mg/l	MWGW19-030812	1 / 3	0.0001	0.0003	2 80E-04	N/A	1.10E+00	n	0.1	MCL	N	BSL
	98-06-6	tert-Butylbenzene	0 00014 J	0.00014 J	mg/l	MWGW19-030812	1 / 3	0.0001	0.0003	1.40E-04	N/A	5.10E-01	n	N/A		N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/l	ND	0 / 3	0.0002	0.0003	3 00E-04	N/A	9.70E-03	c	0.005	MCL	N	BSL
	108-88-3	Toluene	0 002	0.002	mg/l	MWGW19-030812	1 / 3	0.0001	0.0002	2 00E-03	N/A	8 60E-01	n	1 0	MCL	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 3	0.0002	0.0002	2 00E-04	N/A	8 60E-02	n	0.1	MCL	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/l	ND	0 / 3	0.0002	0.0002	2 00E-04	N/A	9.10E-04	c	N/A		N	BSL
	79-01-6	Trichloroethene	ND	ND	mg/l	ND	0 / 3	0.0002	0.0002	2 00E-04	N/A	4.40E-04	c	0.005	MCL	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/l	ND	0 / 3	0.0002	0.0003	3 00E-04	N/A	1.10E+00	n	N/A		N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/l	ND	0 / 3	0.0002	0.0003	3 00E-04	N/A	1 50E-05	c	0.002	MCL	Y	ASL
	1330-20-7	Xylenes, Total	0 032	0.032	mg/l	MWGW19-030812	1 / 3	0.0003	0.0005	3 20E-02	N/A	1 90E-01	n	10 0	MCL	N	BSL
	92-52-4	1,1 -Biphenyl	0 00013 J	0.00013 J	mg/l	MWGW19-030812	1 / 3	0 000032	0.00005	1 30E-04	N/A	8 30E-04	n	N/A		N	BSL
	90-12-0	1-Methylnaphthalene	0.0057	0.0057	mg/l	MWGW19-030812	1 / 3	0.00003	0.00005	5.70E-03	N/A	9.70E-04	c	N/A		Y	ASL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/l	ND	0 / 3	0.00004	0.00005	5 00E-05	N/A	8 90E-01	n	N/A		N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/l	ND	0 / 3	0.00005	0.00006	6 00E-05	N/A	3 50E-03	c	N/A		N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/l	ND	0 / 3	0.00005	0 000065	6 50E-05	N/A	3 50E-02	n	N/A		N	BSL
	105-67-9	2,4-Dimethylphenol	0.46	0.46	mg/l	MWGW19-030812	1 / 3	0 000033	0.0025	4 60E-01	N/A	2.70E-01	n	N/A		Y	ASL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/l	ND	0 / 3	0.00005	0.00008	8 00E-05	N/A	3 00E-02	n	N/A		N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/l	ND	0 / 3	0.00003	0.00005	5 00E-05	N/A	2 00E-04	c	N/A		N	BSL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/l	ND	0 / 3	0.00005	0.00006	6 00E-05	N/A	4 20E-05	c	N/A		Y	ASL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/l	ND	0 / 3	0.00004	0.00005	5 00E-05	N/A	5 50E-01	n	N/A		N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/l	ND	0 / 3	0.00004	0.00006	6 00E-05	N/A	7.10E-02	n	N/A		N	BSL
	91-57-6	2-Methylnaphthalene	0.0009	0.0009	mg/l	MWGW19-030812	1 / 3	0 000034	0.00005	9 00E-04	N/A	2.70E-02	n	N/A		N	BSL
	95-48-7	2-Methylphenol	0.0005	0.0005	mg/l	MWGW19-030812	1 / 3	0 000033	0.00005	5 00E-04	N/A	7 20E-01	n	N/A		N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/l	ND	0 / 3	0 000038	0.00005	5 00E-05	N/A	1 50E-01	n	N/A		N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/l	ND	0 / 3	0 000024	0.00005	5 00E-05	N/A	4 90E-02	n	N/A		N	BSL
	106-44-5	3&4-Methylphenol	0 00074	0.00074	mg/l	MWGW19-030812	1 / 3	0.00003	0.00005	7.40E-04	N/A	1.40E+00	n	N/A		N	BSL
	91-94-1	3,3 -Dichlorobenzidine	ND	ND	mg/l	ND	0 / 3	0 000024	0.00005	5 00E-05	N/A	1.10E-04	c	N/A		N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/l	ND	0 / 3	0.00005	0 000056	5 60E-05	N/A	7 30E-03	n	N/A		N	BSL
	534-52-1	4,6-Dinitro-2-methylphenol	0.0019	0.0019	mg/l	MWGW19-030812	1 / 3	0 000073	0.00008	1 90E-03	N/A	1 20E-03	n	N/A		Y	ASL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/l	ND	0 / 3	0 000047	0.00005	5 00E-05	N/A	6.10E-06	c	N/A		Y	ASL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/l	ND	0 / 3	0 000022	0.00005	5 00E-05	N/A	1.10E+00	n	N/A		N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/l	ND	0 / 3	0 000021	0.00005	5 00E-05	N/A	3 20E-04	c	N/A		N	BSL
	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/l	ND	0 / 3	0 000043	0.00005	5 00E-05	N/A	6.10E-06	c	N/A		Y	ASL
	100-01-6	4-Nitroaniline	ND	ND	mg/l	ND	0 / 3	0.00004	0.00005	5 00E-05	N/A	3 30E-03	c	N/A		N	BSL

TABLE 2.17
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Second Transmissive Unit - Off-Site Exposure Area
Ingestion of Groundwater
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater (Ingestion)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (4) (5)	Screening Value Type	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection of Detection (6)
Off-Site Groundwater Second Transmissive Unit Off-Site Exposure Area	100-02-7	4-Nitrophenol	ND	ND	mg/l	ND	0 / 3	0.00005	0.00006	6 00E-05	N/A	4 90E-02	n	N/A		N	BSL
	83-32-9	Acenaphthene	0.000091 J	0.00041	mg/l	MWGW19-030812	2 / 3	0.00003	0.00005	4.10E-04	N/A	4 00E-01	n	N/A		N	BSL
	208-96-8	Acenaphthylene	0 00017 J	0.00017 J	mg/l	MWGW19-030812	1 / 3	0 000021	0.00005	1.70E-04	N/A	1.50E+00	n	N/A		N	BSL
	98-86-2	Acetophenone	0.0026	0.0026	mg/l	MWGW204-022514	1 / 3	0.00003	0.0001	2 60E-03	N/A	1.50E+00	n	N/A		N	BSL
	120-12-7	Anthracene	0 00011 J	0.00011 J	mg/l	MWGW19-030812	1 / 3	0.00002	0.00005	1.10E-04	N/A	1.30E+00	n	N/A		N	BSL
	56-55-3	Benz(a)anthracene	0.000055 J	0.000055 J	mg/l	MWGW17-030812	1 / 3	0 000025	0.00005	5 50E-05	N/A	2 90E-05	c	N/A		Y	ASL
	100-52-7	Benzaldehyde	0.000081 J	0.000081 J	mg/l	MWGW17-030812	1 / 3	0 000046	0.00005	8.10E-05	N/A	1.50E+00	n	N/A		N	BSL
	50-32-8	Benzo(a)pyrene	ND	ND	mg/l	ND	0 / 3	0.00003	0.00005	5 00E-05	N/A	2 90E-06	c	0.0002	MCL	Y	ASL
	205-99-2	Benzo(b)fluoranthene	ND	ND	mg/l	ND	0 / 3	0 000028	0.00006	6 00E-05	N/A	2 90E-05	c	N/A		Y	ASL
	191-24-2	Benzo(g,h,i)perylene	ND	ND	mg/l	ND	0 / 3	0 000026	0.00005	5 00E-05	N/A	7 30E-01	n	N/A		N	BSL
	207-08-9	Benzo(k)fluoranthene	ND	ND	mg/l	ND	0 / 3	0 000028	0.00005	5 00E-05	N/A	2 90E-04	c	N/A		N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/l	ND	0 / 3	0 000022	0.00005	5 00E-05	N/A	4 60E-02	n	N/A		N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/l	ND	0 / 3	0 000029	0.00005	5 00E-05	N/A	1 20E-05	c	N/A		Y	ASL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/l	ND	0 / 3	0.00005	0 000064	6.40E-05	N/A	3.10E-04	c	N/A		N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.0001	0.00041	mg/l	ND	0 / 3	0 000033	0.0001	4.10E-04	N/A	4 80E-03	c	0.006	MCL	N	BSL
	85-68-7	Butyl benzyl phthalate	ND	ND	mg/l	ND	0 / 3	0 000021	0.00005	5 00E-05	N/A	1.40E-02	c	N/A		N	BSL
	105-60-2	Caprolactam	ND	ND	mg/l	ND	0 / 3	0.00005	0 000059	5 90E-05	N/A	7.70E+00	n	N/A		N	BSL
	86-74-8	Carbazole	0.0001 J	0.0004	mg/l	MWGW19-030812	2 / 3	0 000025	0.00005	4 00E-04	N/A	4 60E-03	c	N/A		N	BSL
	218-01-9	Chrysene	0 00012 J	0.00012 J	mg/l	MWGW17-030812	1 / 3	0 000046	0.00005	1 20E-04	N/A	2 90E-03	c	N/A		N	BSL
	53-70-3	Dibenz(a,h)anthracene	ND	ND	mg/l	ND	0 / 3	0 000026	0.00005	5 00E-05	N/A	2 90E-06	c	N/A		Y	ASL
	132-64-9	Dibenzofuran	0 00024	0.00024	mg/l	MWGW19-030812	1 / 3	0 000025	0.00005	2.40E-04	N/A	5 80E-03	n	N/A		N	BSL
	84-66-2	Diethyl phthalate	0.000061	0.000061	mg/l	ND	0 / 3	0 000021	0.00005	6.10E-05	N/A	1.10E+01	n	N/A		N	BSL
	131-11-3	Dimethyl phthalate	0.000086 J	0.000086 J	mg/l	MWGW17-030812	1 / 3	0.00003	0.00005	8 60E-05	N/A	2.00E+01	n	N/A		N	BSL
	84-74-2	Di-n-butyl phthalate	0.0001	0.00086	mg/l	MWGW204-022514	1 / 3	0.00003	0.00005	8 60E-04	N/A	6.70E-01	n	N/A		N	BSL
	117-84-0	Di-n-octyl phthalate	0.000063 J	0.000063 J	mg/l	MWGW19-030812	1 / 3	0 000023	0.00005	6 30E-05	N/A	1 60E-01	n	N/A		N	BSL
	206-44-0	Fluoranthene	0 00017 J	0.001	mg/l	MWGW17-030812	2 / 3	0.00002	0.00005	1 00E-03	N/A	6 30E-01	n	N/A		N	BSL
	86-73-7	Fluorene	0 00038	0.00038	mg/l	MWGW19-030812	1 / 3	0 000021	0.00005	3 80E-04	N/A	2 20E-01	n	N/A		N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/l	ND	0 / 3	0.00006	0.00007	7 00E-05	N/A	4 20E-05	c	0.001	MCL	Y	ASL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/l	ND	0 / 3	0.00005	0.00006	6 00E-05	N/A	2 60E-04	c	N/A		N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/l	ND	0 / 3	0 000054	0.00006	6 00E-05	N/A	2 20E-02	n	0.05	MCL	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/l	ND	0 / 3	0 000034	0.00005	5 00E-05	N/A	7 90E-04	c	N/A		N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	ND	ND	mg/l	ND	0 / 3	0.00005	0 000051	5.10E-05	N/A	2 90E-05	c	N/A		Y	ASL
	78-59-1	Isophorone	0 00015 J	0.00015 J	mg/l	MWGW17-030812	1 / 3	0.00003	0.00005	1 50E-04	N/A	6.70E-02	c	N/A		N	BSL
	91-20-3	Naphthalene	0.0045	0.0045	mg/l	MWGW19-030812	1 / 3	0.00005	0.00005	4 50E-03	N/A	1.40E-04	c	N/A		Y	ASL
	98-95-3	Nitrobenzene	ND	ND	mg/l	ND	0 / 3	0.00005	0.00005	5 00E-05	N/A	1 20E-04	c	N/A		N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/l	ND	0 / 3	0.00004	0.00008	8 00E-05	N/A	9 30E-06	c	N/A		Y	ASL
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/l	ND	0 / 3	0 000029	0.00005	5 00E-05	N/A	1 00E-02	c	N/A		N	BSL
	87-86-5	Pentachlorophenol	0.000064 J	0.00047	mg/l	MWGW19-030812	2 / 3	0 000046	0.00005	4.70E-04	N/A	3 50E-05	c	0.001	MCL	Y	ASL
	85-01-8	Phenanthrene	0 00056	0.00056	mg/l	MWGW19-030812	1 / 3	0.00002	0.00005	5 60E-04	N/A	7 30E-01	n	N/A		N	BSL
	108-95-2	Phenol	0.000064 J	0.000064 J	mg/l	MWGW17-030812	1 / 3	0 000032	0.00005	6.40E-05	N/A	4.50E+00	n	N/A		N	BSL
	129-00-0	Pyrene	0 00011 J	0.00066	mg/l	MWGW17-030812	2 / 3	0 000022	0.00005	6 60E-04	N/A	8.70E-02	n	N/A		N	BSL
	57-12-5	Cyanide	ND	ND	mg/l	ND	0 / 3	0.004	0.005	5 00E-03	N/A	1.40E-03	n	0 2	MCL	Y	ASL

Notes

= Maximum detection limit exceeds screening value
= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.
(2) A background study was not completed.
(3) Screening values are the USEPA Tap Water RSLs (USEPA, 2013). If an RSL was not available, the TRRP 30-acre Residential PCLs (TCEQ, 2012a) for Class 1 and 2 Groundwater were used; TRRP PCLs for carcinogens were adjusted a 10-6 risk.
(4) Screening value for m-cresol assumed for m&p-cresol (the lower of screening values for m-cresol and p-cresol)
(5) Screening values were not available for chromium, lead, and total PCBs. The MCL was used as the screening value.
(6) Rationale for Selection or Deletion:
ASL = Above Screening Level
BSL = Below Screening Level

Definitions:
a= Action level
ARAR = Applicable or relevant and appropriate requirements
CAS No. = Chemical Abstract Registry Number
c = Carcinogen
m = primary MCL-based
mg/l = milligram/liter
n = Noncarcinogen
N/A = Not applicable or available
ND = Not Detected
PCLs = Protec ive Concentration Levels
RSLs = Regional Screening Levels
TBC = To be considered values
TRRP = Texas Risk Reduction Program
USEPA = United States Environmental Protection Agency

TABLE 2.18
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
East Ditch Sediment
Direct Contact with Sediment
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment (Ingestion and Dermal Contact)

Exposure Point	CAS No.	Chemical	Minimum Concentra ion		Maximum Concentra ion		Units	Location of Maximum Concentration	Detec ion Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value (East Ditch)[2]		Background Value (Up River Road)[2]		Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
East Ditch Sediment	7429-90-5	Aluminum	3170		14200		mg/kg	EDSSD01-000-111810	31 / 31	19	40	1.42E+04	1.59E+04	P	1.02E+04	M	1.50E+05	n	N/A	N	BSL
	7440-36-0	Antimony	ND		ND		mg/kg	ND	0 / 31	0.24	0.5	5.00E-01	3.60E-01	D	4 20E-01	M	8.30E+01	n	N/A	N	BSL
	7440-38-2	Arsenic	2.26		37.8		mg/kg	EDDSD02-000-111610	31 / 31	0.057	0.19	3.78E+01	4.12E+00	P	2.47E+01	M	1.10E+02	n	N/A	N	BSL
	7440-39-3	Barium	206		4730		mg/kg	EDDSD02-000-111610	31 / 31	7.6	16	4.73E+03	5.47E+02	P	8.34E+02	M	2.30E+04	n	N/A	N	BSL
	7440-41-7	Beryllium	0.17	J	0.614	J	mg/kg	EDSSD06-000-111810	31 / 31	0.047	0.1	6.14E-01	9.20E-01	P	3 99E-01	M	2.70E+01	n	N/A	N	BSL
	7440-43-9	Cadmium	0.0966	J	3.76		mg/kg	EDDSD04-000-111610	31 / 31	0.038	0.097	3.76E+00	5.10E-01	P	9 07E-01	M	1.10E+03	n	N/A	N	BSL
	7440-47-3	Chromium	3.14		12.2		mg/kg	EDSD07-000-013112	31 / 31	0.047	0.17	1.22E+01	1.16E+01	P	1.02E+02	M	3.60E+04	n	N/A	N	BSL
	7440-48-4	Cobalt	1.97		14.5		mg/kg	EDDSD08-000-111610	31 / 31	0.028	0.14	1.45E+01	8.32E+00	P	1.27E+01	M	3.20E+04	n	N/A	N	BSL
	7440-50-8	Copper	3.28		91.5		mg/kg	EDSD09-000-013112	31 / 31	0.13	0 28	9.15E+01	1.69E+01	P	3.49E+01	M	2.10E+04	n	N/A	N	BSL
	7439-92-1	Lead	6.41		225		mg/kg	EDNSS01-000-111710	31 / 31	0.056	4.7	2.25E+02	2.76E+01	P	6.80E+01	M	5.00E+02	---	N/A	N	BSL
	7439-96-5	Manganese	130		2590		mg/kg	EDSD09-000-013112	31 / 31	0.066	19	2.59E+03	5.82E+02	P	6.54E+03	M	1.40E+04	n	N/A	N	BSL
	7440-02-0	Nickel	2.98		9.75		mg/kg	EDDSD09-000-111610	31 / 31	0.057	0.17	9.75E+00	1.24E+01	P	2.66E+01	M	1.40E+03	n	N/A	N	BSL
	7782-49-2	Selenium	0 371	J	1.39		mg/kg	EDNSD08-000-111710	29 / 31	0.24	0.5	1.39E+00	7.50E-01	P	9 50E-01	M	2.70E+03	n	N/A	N	BSL
	7440-22-4	Silver	0.0406	J	0.337	J	mg/kg	EDNSD02-000-111710	16 / 31	0.038	0.16	3.37E-01	8.51E-02	M	2 37E-01	M	3.50E+02	n	N/A	N	BSL
	7440-28-0	Thallium	0.0825	J	0.297	J	mg/kg	EDDSD08-000-111610	18 / 31	0.066	0.14	2.97E-01	3.66E-01	P	1.60E-01	D	4.30E+01	n	N/A	N	BSL
	7440-62-2	Vanadium	8.15		17.7		mg/kg	EDSSD01-000-111810	31 / 31	0.066	0.45	1.77E+01	1.51E+01	P	2.52E+01	M	3.30E+02	n	N/A	N	BSL
	7440-66-6	Zinc	15.6		408		mg/kg	EDNSD02-000-111710	31 / 31	0.24	40	4.08E+02	6.94E+01	P	1.62E+02	M	7.60E+04	n	N/A	N	BSL
	7439-97-6	Mercury	0.0056		0.533		mg/kg	EDNSD08-000-111710	31 / 31	0.00022	0.00061	5.33E-01	1.10E-01	P	1.16E-01	M	3.40E+01	n	N/A	N	BSL
	72-54-8	4,4´-DDD	0 012		0.012		mg/kg	EDNSD08-000-111710	1 / 31	0.00085	0.011	1.20E-02	7.60E-04	D	2.60E-02	D	1.20E+01	c	N/A	N	BSL
	72-55-9	4,4´-DDE	ND		ND		mg/kg	ND	0 / 31	0.00085	0.011	1.10E-02	7.60E-04	D	2.60E-02	D	8.70E+00	c	N/A	N	BSL
	50-29-3	4,4´-DDT	0 024	JH	0.024	JH	mg/kg	EDSSD04-000-111810	1 / 31	0.00085	0.011	2.40E-02	7.60E-04	D	2.60E-02	D	8.70E+00	c	N/A	N	BSL
	309-00-2	Aldrin	ND		ND		mg/kg	ND	0 / 31	0.00051	0.0068	6.80E-03	4.60E-04	D	1.60E-02	D	8.40E-02	c	N/A	N	BSL
	319-84-6	alpha-BHC	0 027	J	0.027	J	mg/kg	EDDSD08-000-111610	1 / 31	0.00051	0.0068	2.70E-02	4.60E-04	D	2 20E-02	M	4.10E-01	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	0 011	J	0.011	J	mg/kg	EDNSD06-000-111710	1 / 31	0.00034	0.0045	1.10E-02	3.00E-04	D	1.10E-02	D	4.10E+00	c	N/A	N	BSL
	319-85-7	beta-BHC	0 015	J	0.04	JH	mg/kg	EDSSD04-000-111810	2 / 31	0.00051	0.0068	4.00E-02	4.60E-04	D	1.60E-02	D	1.40E+00	c	N/A	N	BSL
	319-86-8	delta-BHC	0 029	J	0.029	J	mg/kg	EDDSD08-000-111610	1 / 31	0.00034	0.0045	2.90E-02	3.00E-04	D	1.10E-02	D	1.40E+00	c	N/A	N	BSL
	60-57-1	Dieldrin	ND		ND		mg/kg	ND	0 / 31	0.00085	0.011	1.10E-02	7.60E-04	D	2.60E-02	D	8.90E-02	c	N/A	N	BSL
	959-98-8	Endosulfan I	ND		ND		mg/kg	ND	0 / 31	0.00051	0.0068	6.80E-03	4.60E-04	D	1.60E-02	D	3.10E+02	n	N/A	N	BSL
	33213-65-9	Endosulfan II	ND		ND		mg/kg	ND	0 / 31	0.001	0.014	1.40E-02	9.10E-04	D	3 20E-02	D	9.20E+02	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	0.0038	J	0.023	J	mg/kg	EDSD09-000-013112	2 / 31	0.001	0.014	2.30E-02	9.10E-04	D	2 80E-02	M	9.20E+02	n	N/A	N	BSL
	72-20-8	Endrin	0 011	J	0.011	J	mg/kg	EDDSD03-000-111610	1 / 31	0.001	0.014	1.10E-02	9.10E-04	D	3 20E-02	D	4.60E+01	n	N/A	N	BSL
	7421-93-4	Endrin aldehyde	ND		ND		mg/kg	ND	0 / 31	0.001	0.014	1.40E-02	9.10E-04	D	3 20E-02	D	4.60E+01	n	N/A	N	BSL
	53494-70-5	Endrin ketone	0.0067		0.0067		mg/kg	EDDSD03-000-111610	1 / 31	0.001	0.014	6.70E-03	2.80E-03	M	3 20E-02	D	4.60E+01	n	N/A	N	BSL
	58-89-9	gamma-BHC	0 017	J	0.017	J	mg/kg	EDDSD07-000-111610	1 / 31	0.00034	0.0045	1.70E-02	3.00E-04	D	1.10E-02	D	2.00E+00	c	N/A	N	BSL
	5103-74-2	gamma-Chlordane	0 014	J	0.028		mg/kg	EDSSD04-000-111810	2 / 31	0.00034	0.0045	2.80E-02	3.00E-04	D	1.10E-02	D	4.10E+00	c	N/A	N	BSL
	76-44-8	Heptachlor	0 011	J	0.023	J	mg/kg	EDDSD08-000-111610	2 / 31	0.00051	0.0068	2.30E-02	4.60E-04	D	1.60E-02	D	3.20E-01	c	N/A	N	BSL
	1024-57-3	Heptachlor epoxide	ND		ND		mg/kg	ND	0 / 31	0.00051	0.0068	6.80E-03	4.60E-04	D	1.60E-02	D	1.60E-01	c	N/A	N	BSL
	72-43-5	Methoxychlor	ND		ND		mg/kg	ND	0 / 31	0.0058	0.077	7.70E-02	5.20E-03	D	1 80E-01	D	7.70E+02	n	N/A	N	BSL
	8001-35-2	Toxaphene	ND		ND		mg/kg	ND	0 / 31	0.0065	0.1	1.00E-01	5.80E-03	D	2 50E-01	D	1.30E+00	c	N/A	N	BSL
	12674-11-2	Aroclor 1016	ND		ND		mg/kg	ND	0 / 31	0.0025	0 05	5.00E-02	3.60E-03	D	6 30E-02	D	2.30E+00	n	N/A	N	BSL
	11104-28-2	Aroclor 1221	ND		ND		mg/kg	ND	0 / 31	0.0025	0 05	5.00E-02	3.60E-03	D	6 30E-02	D	2.30E+00	n	N/A	N	BSL
	11141-16-5	Aroclor 1232	ND		ND		mg/kg	ND	0 / 31	0.0025	0 05	5.00E-02	3.60E-03	D	6 30E-02	D	2.30E+00	n	N/A	N	BSL
	53469-21-9	Aroclor 1242	ND		ND		mg/kg	ND	0 / 31	0.0025	0 05	5.00E-02	3.60E-03	D	6 30E-02	D	2.30E+00	n	N/A	N	BSL
	12672-29-6	Aroclor 1248	ND		ND		mg/kg	ND	0 / 31	0.0025	0 05	5.00E-02	3.60E-03	D	6 30E-02	D	2.30E+00	n	N/A	N	BSL
	11097-69-1	Aroclor 1254	ND		ND		mg/kg	ND	0 / 31	0.0025	0 05	5.00E-02	3.60E-03	D	6 30E-02	D	2.30E+00	n	N/A	N	BSL
	11096-82-5	Aroclor 1260	0 011	J	0.011	J	mg/kg	EDNSS01-000-111710	1 / 31	0.0019	0.037	1.10E-02	2.70E-03	D	4.70E-02	D	2.30E+00	n	N/A	N	BSL
	TPCB	Total PCBs	0.0185		0.0185		mg/kg	EDNSS01-000-111710	1 / 31	0.01015	0.1685	1.85E-02	1.22E-02	D	2.13E-01	D	2.30E+00	n	N/A	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		2.10E+02	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		1.50E+05	n	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		2.70E+01	c	N/A	N	BSL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroe hane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		1.00E+06	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		9.60E+01	c	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		7.30E+04	n	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		3.70E+04	n	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND		ND		mg/kg	ND	0 / 29	0.00061	0.0014	1.40E-03	9.10E-04	D	N/A		1.50E+03	n	N/A	N	BSL
	95-63-6	1,2,4-Trime hylbenzene	0.0048	J	0.0048	J	mg/kg	EDSSD08-000-111810	1 / 29	0.00051	0.0011	4.80E-03	7.60E-04	D	N/A		3.70E+04	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		2.70E+00	c	N/A	N	BSL
	95-50-1	1,2-Dichlorobenzene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		6.60E+04	n	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		6.00E+01	c	N/A	N	BSL
	78-87-5	1,2-Dichloropropane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		8.00E+01	c	N/A	N	BSL
	108-67-8	1,3,5-Trime hylbenzene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		3.70E+04	n	N/A	N	BSL
	541-73-1	1,3-Dichlorobenzene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		2.20E+04	n	N/A	N	BSL

TABLE 2.18
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
East Ditch Sediment
Direct Contact with Sediment
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment (Ingestion and Dermal Contact)

Exposure Point	CAS No.	Chemical	Minimum Concentra ion		Maximum Concentra ion		Units	Location of Maximum Concentration	Detec ion Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value (East Ditch)[2]		Background Value (Up River Road)[2]		Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
East Ditch Sediment	106-46-7	1,4-Dichlorobenzene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		2.30E+02	c	N/A	N	BSL
	78-93-3	2-Butanone	ND		ND		mg/kg	ND	0 / 29	0.0014	0.0032	3.20E-03	6.10E-03	M	N/A		4.40E+05	n	N/A	N	BSL
	591-78-6	2-Hexanone	ND		ND		mg/kg	ND	0 / 29	0.001	0.0023	2.30E-03	1.50E-03	D	N/A		4.40E+04	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	ND		ND		mg/kg	ND	0 / 29	0.001	0.0023	2.30E-03	1.50E-03	D	N/A		5.90E+04	n	N/A	N	BSL
	67-64-1	Acetone	ND		ND		mg/kg	ND	0 / 29	0.002	0.0046	4.60E-03	2.70E-02	M	N/A		6.60E+05	n	N/A	N	BSL
	71-43-2	Benzene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		9.90E+01	c	N/A	N	BSL
	75-27-4	Bromodichlorome hane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		8.80E+01	c	N/A	N	BSL
	75-25-2	Bromoform	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		6.90E+02	c	N/A	N	BSL
	74-83-9	Bromomethane	ND		ND		mg/kg	ND	0 / 29	0.001	0.0023	2.30E-03	1.50E-03	D	N/A		1.00E+03	n	N/A	N	BSL
	75-15-0	Carbon disulfide	0.0025	J	0.013	J	mg/kg	EDDSD05-000-FD-111610	5 / 29	0.001	0.0023	1.30E-02	1.50E-03	D	N/A		7.30E+04	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		4.20E+01	c	N/A	N	BSL
	108-90-7	Chlorobenzene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		1.50E+04	n	N/A	N	BSL
	75-00-3	Chloroethane	ND		ND		mg/kg	ND	0 / 29	0.001	0.0023	2.30E-03	1.50E-03	D	N/A		2.90E+05	n	N/A	N	BSL
	67-66-3	Chloroform	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		7.30E+03	n	N/A	N	BSL
	74-87-3	Chloromethane	ND		ND		mg/kg	ND	0 / 29	0.001	0.0023	2.30E-03	1.50E-03	D	N/A		4.20E+03	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		7.30E+03	n	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		7.30E+01	n	N/A	N	BSL
	110-82-7	Cyclohexane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		1.00E+06	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		6.50E+01	c	N/A	N	BSL
	75-71-8	Dichlorodifluoromethane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		1.50E+05	n	N/A	N	BSL
	100-41-4	Ethylbenzene	0.0036	J	0.0038	J	mg/kg	EDSSD08-000-111810	2 / 29	0.00051	0.0011	3.80E-03	7.60E-04	D	N/A		7.30E+04	n	N/A	N	BSL
	98-82-8	Isopropylbenzene	0 004	J	0.0052	J	mg/kg	EDNSD07-000-111710	2 / 29	0.00051	0.0011	5.20E-03	7.60E-04	D	N/A		7.30E+04	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		7.30E+05	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		7.30E+03	n	N/A	N	BSL
	108-87-2	Methylcyclohexane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		1.00E+06	n	N/A	N	BSL
	75-09-2	Methylene chloride	ND		ND		mg/kg	ND	0 / 29	0.001	0.0023	2.30E-03	2.00E-03	M	N/A		7.30E+02	c	N/A	N	BSL
	91-20-3	Naph halene	0.0019	J	0.0019	J	mg/kg	EDNSS01-000-111710	1 / 29	0.00051	0.0011	1.90E-03	7.60E-04	D	N/A		2.50E+03	n	N/A	N	BSL
	104-51-8	n-Butylbenzene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		6.10E+03	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	0.0036	J	0.0036	J	mg/kg	EDSSD08-000-111810	1 / 29	0.00051	0.0011	3.60E-03	7.60E-04	D	N/A		2.90E+04	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		2.90E+04	n	N/A	N	BSL
	100-42-5	Styrene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		1.50E+05	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		2.90E+04	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND		ND		mg/kg	ND	0 / 29	0.00061	0.0014	1.40E-03	9.10E-04	D	N/A		1.00E+02	c	N/A	N	BSL
	108-88-3	Toluene	0.0049	J	0.0049	J	mg/kg	EDSSD04-000-111810	1 / 29	0.00051	0.0011	4.90E-03	7.70E-03	M	N/A		5.90E+04	n	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		1.50E+04	n	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		5.40E+01	c	N/A	N	BSL
	79-01-6	Trichloroethene	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		4.40E+03	n	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		2.20E+05	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND		ND		mg/kg	ND	0 / 29	0.00051	0.0011	1.10E-03	7.60E-04	D	N/A		3.60E+00	c	N/A	N	BSL
	1330-20-7	Xylenes, Total	0 012	J	0.012	J	mg/kg	EDSSD08-000-111810	1 / 29	0.0015	0.0034	1.20E-02	2.30E-03	D	N/A		1.50E+05	n	N/A	N	BSL
	92-52-4	1,1´-Biphenyl	ND		ND		mg/kg	ND	0 / 31	0.0037	0.066	6.60E-02	4.40E-03	D	1 30E-01	M	7.70E+02	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	0.0043	J	0.0043	J	mg/kg	EDDSD10-000-11160	1 / 31	0.0029	0.052	4.30E-03	3.50E-03	D	3.70E-01	M	8.70E+03	n	N/A	N	BSL
	95-95-4	2,4,5-Trichlorophenol	ND		ND		mg/kg	ND	0 / 31	0.0035	0.064	6.40E-02	4.30E-03	D	4 80E-02	D	1.50E+04	n	N/A	N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND		ND		mg/kg	ND	0 / 31	0.0042	0.075	7.50E-02	5.00E-03	D	4 80E-02	D	1.30E+02	c	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	ND		ND		mg/kg	ND	0 / 31	0.0028	0 05	5.00E-02	3.30E-03	D	4 80E-02	D	4.60E+02	n	N/A	N	BSL
	105-67-9	2,4-Dime hylphenol	ND		ND		mg/kg	ND	0 / 31	0.0042	0.075	7.50E-02	5.00E-03	D	4 80E-02	D	3.10E+03	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND		ND		mg/kg	ND	0 / 31	0.0042	0.075	7.50E-02	5.00E-03	D	9 80E-02	D	3.10E+02	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND		ND		mg/kg	ND	0 / 31	0.0042	0.075	7.50E-02	5.00E-03	D	2 00E-02	M	2.10E+00	c	N/A	N	BSL
	606-20-2	2,6-Dinitrotoluene	ND		ND		mg/kg	ND	0 / 31	0.004	0.073	7.30E-02	4.90E-03	D	2 50E-02	M	2.10E+00	c	N/A	N	BSL
	91-58-7	2-Chloronaphthalene	ND		ND		mg/kg	ND	0 / 31	0.0052	0.093	9.30E-02	6.20E-03	D	4 80E-02	D	9.90E+03	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND		ND		mg/kg	ND	0 / 31	0.004	0.073	7.30E-02	4.90E-03	D	4 80E-02	D	3.70E+03	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	0.0055	JL	0.031	J	mg/kg	EDSD07-000-013112	4 / 31	0.0034	0.061	3.10E-02	4.10E-03	D	6 50E-01	M	4.90E+02	n	N/A	N	BSL
	95-48-7	2-Methylphenol	ND		ND		mg/kg	ND	0 / 31	0.0037	0.066	6.60E-02	8.30E-03	M	4 80E-02	D	7.70E+03	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND		ND		mg/kg	ND	0 / 31	0.0042	0.075	7.50E-02	5.00E-03	D	6 50E-02	M	4.60E+01	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND		ND		mg/kg	ND	0 / 31	0.0058	0.1	1.00E-01	7.00E-03	D	4 80E-02	D	3.10E+02	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol	0.0087	J	0.14	JL	mg/kg	EDSSD03-000-111810	7 / 31	0.0035	0.064	1.40E-01	7.60E-02	M	6.40E-02	M	7.70E+02	n	N/A	N	BSL
	91-94-1	3,3´-Dichlorobenzidine	ND		ND		mg/kg	ND	0 / 31	0.0039	0 07	7.00E-02	4.70E-03	D	2 30E-02	M	3.20E+00	c	N/A	N	BSL
	99-09-2	3-Nitroaniline	ND		ND		mg/kg	ND	0 / 31	0.0033	0.059	5.90E-02	4.00E-03	D	4 80E-02	D	4.60E+01	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-me hylphenol	ND		ND		mg/kg	ND	0 / 31	0.0042	0.075	7.50E-02	5.00E-03	D	7.40E-02	M	3.10E+02	n	N/A	N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND		ND		mg/kg	ND	0 / 31	0.0042	0.075	7.50E-02	5.00E-03	D	4 80E-02	D	9.50E-02	c	N/A	N	BSL
	59-50-7	4-Chloro-3-methylphenol	ND		ND		mg/kg	ND	0 / 31	0.0042	0.075	7.50E-02	5.00E-03	D	4 80E-02	D	7.70E+02	n	N/A	N	BSL
	106-47-8	4-Chloroaniline	ND		ND		mg/kg	ND	0 / 31	0.0028	0 05	5.00E-02	3.30E-03	D	4 80E-02	D	6.10E+02	n	N/A	N	BSL

TABLE 2.18
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
East Ditch Sediment
Direct Contact with Sediment
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment (Ingestion and Dermal Contact)

Exposure Point	CAS No.	Chemical	Minimum Concentra ion		Maximum Concentra ion		Units	Location of Maximum Concentration	Detec ion Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (East Ditch)2		Background Value (Up River Road)2		Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
East Ditch Sediment	7005-72-3	4-Chlorophenyl phenyl ether	ND		ND		mg/kg	ND	0 / 31	0.0028	0 05	5.00E-02	3.30E-03	D	4 80E-02	D	9.50E-02	c	N/A	N	BSL
	100-01-6	4-Nitroaniline	ND		ND		mg/kg	ND	0 / 31	0.0042	0.075	7.50E-02	5.00E-03	D	4 80E-02	D	3.70E+01	c	N/A	N	BSL
	100-02-7	4-Nitrophenol	ND		ND		mg/kg	ND	0 / 31	0.0048	0.086	8.60E-02	5.80E-03	D	8 80E-02	M	3.10E+02	n	N/A	N	BSL
	83-32-9	Acenaphthene	0.0047	JL	0.3	JL	mg/kg	EDDSD09-000-111610	4 / 31	0.0028	0 05	3.00E-01	2.60E-02	M	3.10E+00	M	7.40E+03	n	N/A	N	BSL
	208-96-8	Acenaphthylene	0.0055	JL	0.043	JL	mg/kg	EDDSD09-000-111610	4 / 31	0.0028	0 05	4.30E-02	3.30E-03	D	4 80E-02	D	7.40E+03	n	N/A	N	BSL
	98-86-2	Acetophenone	0.0094		0.39		mg/kg	EDNSD02-000-111710	4 / 31	0.003	0.054	3.90E-01	3.70E-03	D	4 90E-02	M	1.50E+04	n	N/A	N	BSL
	120-12-7	Anthracene	0.0045	JL	0.6	JL	mg/kg	EDDSD09-000-111610	17 / 31	0.0028	0 05	6.00E-01	7.20E-02	M	6.10E+00	M	3.70E+04	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	0.0058	JL	5.8		mg/kg	EDDSD09-000-111610	26 / 31	0.0035	0.43	5.80E+00	4.00E-01	M	1.70E+01	M	1.60E+00	c	N/A	Y	ASL
	100-52-7	Benzaldehyde	0.0083	J	0.14	JL	mg/kg	EDNSD02-000-111710	6 / 31	0.0058	0.1	1.40E-01	7.00E-03	D	5.40E-02	M	7.30E+04	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	0.0068	JL	5	JL	mg/kg	EDDSD09-000-111610	22 / 31	0.0029	0.052	5.00E+00	3.70E-01	M	1.50E+01	M	1.60E-01	c	N/A	Y	ASL
	205-99-2	Benzo(b)fluoranthene	0 008	JL	4.6	JL	mg/kg	EDDSD09-000-111610	25 / 31	0.0042	0.075	4.60E+00	6.00E-01	M	2.20E+01	M	1.60E+00	c	N/A	Y	ASL
	191-24-2	Benzo(g,h,i)perylene	0 006	JL	3.1	JL	mg/kg	EDDSD09-000-111610	23 / 31	0.0037	0.066	3.10E+00	2.20E-01	M	7.80E+00	M	3.70E+02	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	0.0085	JL	4		mg/kg	EDDSD09-000-111610	24 / 31	0.0042	0 51	4.00E+00	2.00E-01	M	6.40E+00	M	1.60E+01	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND		ND		mg/kg	ND	0 / 31	0.003	0.054	5.40E-02	3.70E-03	D	4 80E-02	D	1.30E+00	c	N/A	N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND		ND		mg/kg	ND	0 / 31	0.0035	0.064	6.40E-02	4.30E-03	D	4 80E-02	D	5.00E+00	c	N/A	N	BSL
	108-60-1	Bis(2-chloroisopropyl)ether	ND		ND		mg/kg	ND	0 / 31	0.0034	0.061	6.10E-02	4.10E-03	D	2 00E-02	M	2.00E+01	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0 012	JL	1.6		mg/kg	EDSD07-000-013112	21 / 31	0.0083	0.15	1.60E+00	2.10E-02	M	3.70E-01	M	2.40E+01	c	N/A	N	BSL
	85-68-7	Butyl benzyl ph halate	0.0052	JL	0.013		mg/kg	EDNSD08-000-111710	3 / 31	0.0032	0.057	1.30E-02	3.80E-03	D	3.70E-02	M	3.10E+04	n	N/A	N	BSL
	105-60-2	Caprolactam	0 027	JL	0.027	JL	mg/kg	EDNSD05-000-111710	1 / 31	0.003	0.054	2.70E-02	1.40E-02	M	2 50E-02	M	7.70E+04	n	N/A	N	BSL
	86-74-8	Carbazole	0.0033	JL	0.77	JL	mg/kg	EDDSD09-000-111610	14 / 31	0.0028	0 05	7.70E-01	7.20E-02	M	4.50E+00	M	7.10E+01	c	N/A	N	BSL
	218-01-9	Chrysene	0 008	JL	7.1		mg/kg	EDDSD09-000-111610	26 / 31	0.0037	0.44	7.10E+00	4.50E-01	M	1.90E+01	M	1.60E+02	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	0.0072	JL	1.1	JL	mg/kg	EDDSD09-000-111610	10 / 31	0.0028	0 05	1.10E+00	6.20E-02	M	2.30E+00	M	1.60E-01	c	N/A	Y	ASL
	132-64-9	Dibenzofuran	0.0054	J	0.11	JL	mg/kg	EDDSD09-000-111610	3 / 31	0.0028	0 05	1.10E-01	1.10E-02	M	1.60E+00	M	6.10E+02	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	0.0083	J	0.009	J	mg/kg	EDDSD10-000-11160	2 / 31	0.0042	0.075	9.00E-03	6.50E-03	M	4 80E-02	D	1.20E+05	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	ND		ND		mg/kg	ND	0 / 31	0.003	0.054	5.40E-02	3.70E-03	D	5 90E-02	D	1.20E+05	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	0.0052	J	0.097	J	mg/kg	EDSD07-000-013112	3 / 31	0.0032	0.057	9.70E-02	7.10E-03	M	2.10E-02	M	1.50E+04	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	0 085		0.085		mg/kg	EDDSD03-000-111610	1 / 31	0.0037	0.066	8.50E-02	4.40E-03	D	1.60E-01	M	3.10E+03	n	N/A	N	BSL
	206-44-0	Fluoranthene	0.0048	JL	12		mg/kg	EDDSD09-000-111610	30 / 31	0.0028	0 34	1.20E+01	8.40E-01	M	3.30E+01	M	4.90E+03	n	N/A	N	BSL
	86-73-7	Fluorene	0.0057	JL	0.27	JL	mg/kg	EDDSD09-000-111610	4 / 31	0.0028	0 05	2.70E-01	2.00E-02	M	2.40E+00	M	4.90E+03	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND		ND		mg/kg	ND	0 / 31	0.0033	0.059	5.90E-02	4.00E-03	D	4 80E-02	D	8.90E-01	c	N/A	N	BSL
	87-68-3	Hexachlorobutadiene	ND		ND		mg/kg	ND	0 / 31	0.0056	0.1	1.00E-01	6.70E-03	D	4 80E-02	D	3.10E+01	n	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND		ND		mg/kg	ND	0 / 29	0.0045	0.082	8.20E-02	5.50E-03	D	4 80E-02	D	9.20E+02	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND		ND		mg/kg	ND	0 / 31	0.0049	0.089	8.90E-02	5.90E-03	D	4 80E-02	D	1.50E+02	n	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	0.0055	JL	3.5	JL	mg/kg	EDDSD09-000-111610	21 / 31	0.0044	0.079	3.50E+00	2.60E-01	M	9.70E+00	M	1.60E+00	c	N/A	Y	ASL
	78-59-1	Isophorone	ND		ND		mg/kg	ND	0 / 31	0.0038	0.068	6.80E-02	4.60E-03	D	4 80E-02	D	1.50E+03	c	N/A	N	BSL
	91-20-3	Naph halene	0 027	J	0.027	J	mg/kg	EDSD07-000-013112	1 / 31	0.0042	0.075	2.70E-02	6.70E-03	M	2.40E+00	M	2.50E+03	n	N/A	N	BSL
	98-95-3	Nitrobenzene	ND		ND		mg/kg	ND	0 / 31	0.0042	0.075	7.50E-02	5.00E-03	D	4 80E-02	D	7.70E+01	n	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND		ND		mg/kg	ND	0 / 31	0.0051	0.091	9.10E-02	6.10E-03	D	9.40E-02	M	6.30E-02	c	N/A	Y	ASL
	86-30-6	N-Nitrosodiphenylamine	ND		ND		mg/kg	ND	0 / 31	0.0028	0 05	5.00E-02	3.30E-03	D	5 90E-02	D	9.00E+01	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	ND		ND		mg/kg	ND	0 / 31	0.0035	0.064	6.40E-02	4.30E-03	D	5.40E-02	D	5.60E+00	c	N/A	N	BSL
	85-01-8	Phenan hrene	0.0053	JL	4.3	JL	mg/kg	EDDSD09-000-111610	23 / 31	0.0038	0.068	4.30E+00	3.60E-01	M	2.40E+01	M	3.70E+03	n	N/A	N	BSL
	108-95-2	Phenol	ND		ND		mg/kg	ND	0 / 31	0.0042	0.075	7.50E-02	6.80E-03	M	5 90E-02	D	4.60E+04	n	N/A	N	BSL
	129-00-0	Pyrene	0.0037	JL	9.1		mg/kg	EDDSD09-000-111610	29 / 31	0.0028	0 34	9.10E+00	6.10E-01	M	2.40E+01	M	3.70E+03	n	N/A	N	BSL
	57-12-5	Cyanide	0.673	J	3.03	J	mg/kg	EDDSD05-000-FD-111610	5 / 29	0.62	1.3	3.03E+00	8.90E-01	D	N/A		1.10E+04	n	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value

= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was for screening.

(2) East Ditch Background Sediment Locations or Up River Road Sediment Locations

M - Maximum concentration; A - Average Concentration; D - Maximum Sample Detection Limit; P - 95% UPL

(3) Screening values are TRRP Human Health Sediment Direct Contact (ingestion and dermal combined)

PCLs (TCEQ, 2006b) for recreational scenarios, adjusted for carcinogens to a 10^{6} risk.

(4) Rationale for Selection or Deletion:

ASL = Above Screening Level

BSL = Below Screening Level

(5) Screening value for m-cresol assumed (the lower of screening values for m&p-cresol)

Definitions:

ARAR = Applicable or relevant and appropriate requirements

CAS No. = Chemical Abstract Registry Number

c = Carcinogen

J = Estimated value

L = Estimated concentration is biased low

mg/kg = milligram/kilogram

n = Noncarcinogen

N/A = Not applicable or available

PCLs = Protective Concentration Levels

TBC = To be considered values

TRRP = Texas Risk Reduction Program

TABLE 2.19
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
East Ditch Surface Water
Direct Contact with Surface Water
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water (Ingestion and Dermal Contact)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detec ion Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value (East Ditch)[2]		Background Value (Up River Road)[2]		Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detec ion [4]
East Ditch Surface Water	7429-90-5	Aluminum	0.0617	6.95	mg/l	EDSW03-111810	13 / 13	0.0037	0 37	6.95E+00	5 98E-01	A	2 80E-01	A	4.03E+02	n	N/A	N	BSL
	7440-36-0	Antimony	0.000607 J	0.000874 J	mg/l	EDSW03-111810	7 / 13	0.0005	0.0025	8.74E-04	1.12E-03	M	2 05E-03	M	1.99E-01	n	N/A	N	BSL
	7440-38-2	Arsenic	0.00505	0 0156 J	mg/l	EDSW09-111610	13 / 13	0.0009	0.0045	1 56E-02	1 97E-02	A	1.13E-02	A	2.85E-03	c	N/A	Y	ASL
	7440-39-3	Barium	0.0966	0.639	mg/l	EDSW04-111710	13 / 13	0.0007	0.0035	6 39E-01	2.15E-01	A	1 31E-01	A	6.49E+01	n	N/A	N	BSL
	7440-41-7	Beryllium	0.000317 J	0.000507 J	mg/l	EDSW01-FD-111810	2 / 13	0.0003	0.0015	5 07E-04	3 00E-04	D	7 00E-04	D	9.43E-02	n	N/A	N	BSL
	7440-43-9	Cadmium	ND	ND	mg/l	ND	0 / 13	0.0006	0 003	3 00E-03	6 00E-04	D	8 00E-04	D	1.49E-01	n	N/A	N	BSL
	7440-47-3	Chromium	0.000602 J	0.00452 J	mg/l	EDSW03-111810	9 / 13	0.0006	0 003	4 52E-03	1 36E-03	A	2 90E-03	M	1.26E+02	n	N/A	N	BSL
	7440-48-4	Cobalt	0.000672 J	0.00662	mg/l	EDSW11-013112	10 / 13	0.0005	0.0025	6.62E-03	2 86E-03	M	1.40E-03	M	5.33E+01	n	N/A	N	BSL
	7440-50-8	Copper	0.000502 J	0.00552	mg/l	EDSW03-111810	11 / 13	0.0005	0.0025	5 52E-03	2.74E-03	A	5.73E-03	A	3.31E+01	n	N/A	N	BSL
	7439-92-1	Lead	0.00161 J	0.00967	mg/l	EDSW04-111710	8 / 13	0.0004	0 002	9.67E-03	1.16E-03	A	1 82E-03	M	1.50E-02	a	N/A	N	BSL
	7439-96-5	Manganese	0.0507	2.7	mg/l	EDSW11-013112	13 / 13	0.0008	0 005	2.70E+00	1 96E-01	A	6 06E-01	A	4.09E+01	n	N/A	N	BSL
	7440-02-0	Nickel	0.00249 J	0.00684	mg/l	EDSW05-111710	12 / 13	0.0012	0 007	6 84E-03	4.40E-03	A	2 55E-03	A	1.13E+01	n	N/A	N	BSL
	7782-49-2	Selenium	0.00121 J	0.00476 J	mg/l	EDSW06-111710	6 / 13	0.001	0 012	4.76E-03	2 50E-03	D	1 25E-03	M	4.13E+00	n	N/A	N	BSL
	7440-22-4	Silver	ND	ND	mg/l	ND	0 / 13	0.0007	0.0035	3 50E-03	7 00E-04	D	8 00E-04	D	1.57E+00	n	N/A	N	BSL
	7440-28-0	Thallium	ND	ND	mg/l	ND	0 / 13	0.0008	0 004	4 00E-03	8 25E-04	M	1 00E-03	D	6.61E-02	n	N/A	N	BSL
	7440-62-2	Vanadium	0.00164 J	0 0103	mg/l	EDSW03-111810	11 / 13	0.0007	0.0035	1 03E-02	7 84E-03	A	8.65E-03	A	1.08E+00	n	N/A	N	BSL
	7440-66-6	Zinc	0.00789	0 0584	mg/l	EDSW05-111710	12 / 13	0.0025	0 012	5 84E-02	9 21E-03	M	1 84E-02	M	2.01E+02	n	N/A	N	BSL
	7439-97-6	Mercury	0.000042 J	0.000074 J	mg/l	EDSW06-111710	6 / 13	0.000042	0.000042	7.40E-05	4 20E-05	D	4 20E-05	D	9.73E-02	n	N/A	N	BSL
	72-54-8	4,4´-DDD	0 0000027	0.0000056 JL	mg/l	EDSW06-111710	3 / 13	0 0000025	0.000025	5.60E-06	1 30E-05	M	4.70E-06	M	8.50E-04	c	N/A	N	BSL
	72-55-9	4,4´-DDE	0 0000034	0.00001 JL	mg/l	EDSW06-111710	5 / 13	0 0000025	0.000025	1 00E-05	2 80E-06	M	2 50E-06	D	6.00E-04	c	N/A	N	BSL
	50-29-3	4,4´-DDT	0 0000028 J	0.000048 J	mg/l	EDSW05-111710	5 / 13	0 0000025	0.000025	4 80E-05	5.40E-05	M	9.40E-06	M	6.00E-04	c	N/A	N	BSL
	309-00-2	Aldrin	0 0000021 J	0.000029	mg/l	EDSW05-111710	5 / 13	0 0000012	0.000012	2 90E-05	1 20E-05	D	2 50E-06	M	1.20E-05	c	N/A	Y	ASL
	319-84-6	alpha-BHC	0 0000038	0.0000038	mg/l	EDSW08-111610	1 / 13	0 0000012	0.000012	3 80E-06	1 20E-05	D	4.70E-06	A	4.42E-05	c	N/A	N	BSL
	5103-71-9	alpha-Chlordane	0 0000075 JL	0.0000075 JL	mg/l	EDSW06-111710	1 / 13	0 0000025	0.000025	7 50E-06	3.60E-05	M	2 50E-06	D	5.80E-04	c	N/A	N	BSL
	319-85-7	beta-BHC	0.000002 J	0.000061 J	mg/l	EDSW05-111710	6 / 13	0 0000012	0.000012	6.10E-05	1.10E-05	M	7.40E-06	M	1.55E-04	c	N/A	N	BSL
	319-86-8	delta-BHC	0 0000015 J	0.000016 J	mg/l	EDSW05-111710	4 / 13	0 0000012	0.000012	1.60E-05	8 30E-06	M	4 30E-06	M	2.23E-04	c	N/A	N	BSL
	60-57-1	Dieldrin	ND	ND	mg/l	ND	0 / 13	0 0000025	0.000025	2 50E-05	8 50E-06	M	2 50E-06	D	1.30E-05	c	N/A	Y	ASL
	959-98-8	Endosulfan I	0 0000024 J	0.0000047 J	mg/l	EDSW02-111810	4 / 13	0 0000012	0.000012	4.70E-06	3.70E-06	M	3 00E-05	M	8.42E-02	n	N/A	N	BSL
	33213-65-9	Endosulfan II	ND	ND	mg/l	ND	0 / 13	0 0000025	0.000025	2 50E-05	2 50E-05	D	2 50E-06	D	2.53E-01	n	N/A	N	BSL
	1031-07-8	Endosulfan sulfate	0 0000061 JL	0.0000061 JL	mg/l	EDSW06-111710	1 / 13	0 0000025	0.000025	6.10E-06	4.40E-06	M	2 50E-06	D	4.40E-01	n	N/A	N	BSL
	72-20-8	Endrin	ND	ND	mg/l	ND	0 / 13	0 0000025	0.000025	2 50E-05	9.60E-06	M	4.40E-06	M	7.47E-03	n	N/A	N	BSL
	7421-93-4	Endrin aldehyde	0.000014 JL	0.000014 JL	mg/l	EDSW06-111710	1 / 13	0 0000025	0.000025	1.40E-05	1 00E-05	M	2.70E-06	M	2.20E-02	n	N/A	N	BSL
	53494-70-5	Endrin ketone	0 0000047 JL	0.0000047 JL	mg/l	EDSW06-111710	1 / 13	0 0000025	0.000025	4.70E-06	1.70E-05	M	2 50E-06	D	8.89E-03	n	N/A	N	BSL
	58-89-9	gamma-BHC	0 0000018 J	0.0000062 J	mg/l	EDSW07-111610	4 / 13	0 0000012	0.000012	6 20E-06	7.70E-06	M	7 80E-06	M	2.14E-04	c	N/A	N	BSL
	5103-74-2	gamma-Chlordane	0 0000039 JL	0.0000083	mg/l	EDSW01-FD-111810	4 / 13	0 0000025	0.000025	8 30E-06	7 00E-05	M	2 50E-06	D	5.80E-04	c	N/A	N	BSL
	76-44-8	Heptachlor	0 0000016 J	0.000014 J	mg/l	EDSW04-111710	9 / 13	0 0000012	0.000012	1.40E-05	1 80E-06	M	3 20E-06	M	4.00E-04	m	m	N	BSL
	1024-57-3	Heptachlor epoxide	0 0000032 J	0.000016 J	mg/l	EDSW05-111710	4 / 13	0 0000012	0.000012	1.60E-05	2 50E-05	M	1 20E-06	D	2.20E-05	c	N/A	N	BSL
	72-43-5	Methoxychlor	0.000056 J	0.000056 J	mg/l	EDSW10-111610	1 / 13	0.000012	0.00012	5.60E-05	1 20E-04	D	1 20E-05	D	7.19E-02	n	N/A	N	BSL
	8001-35-2	Toxaphene	ND	ND	mg/l	ND	0 / 12	0.000025	0.00025	2 50E-04	2 50E-04	D	2 50E-05	D	3.00E-03	m	m	N	BSL
	12674-11-2	Aroclor 1016	ND	ND	mg/l	ND	0 / 13	0.0002	0.0002	2 00E-04	2 00E-04	D	2 00E-04	D	5.00E-04	m	m	N	BSL
	11104-28-2	Aroclor 1221	ND	ND	mg/l	ND	0 / 13	0.0002	0.0002	2 00E-04	2 00E-04	D	2 00E-04	D	5.00E-04	m	m	N	BSL
	11141-16-5	Aroclor 1232	ND	ND	mg/l	ND	0 / 13	0.0002	0.0002	2 00E-04	2 00E-04	D	2 00E-04	D	5.00E-04	m	m	N	BSL
	53469-21-9	Aroclor 1242	ND	ND	mg/l	ND	0 / 13	0.0002	0.0002	2 00E-04	2 00E-04	D	2 00E-04	D	5.00E-04	m	m	N	BSL
	12672-29-6	Aroclor 1248	ND	ND	mg/l	ND	0 / 13	0.0002	0.0002	2 00E-04	2 00E-04	D	2 00E-04	D	5.00E-04	m	m	N	BSL
	11097-69-1	Aroclor 1254	ND	ND	mg/l	ND	0 / 13	0.0002	0.0002	2 00E-04	2 00E-04	D	2 00E-04	D	5.00E-04	m	m	N	BSL
	11096-82-5	Aroclor 1260	ND	ND	mg/l	ND	0 / 13	0.0002	0.0002	2 00E-04	2 00E-04	D	2 00E-04	D	5.00E-04	m	m	N	BSL
	TPCB	Total PCBs	ND	ND	mg/l	ND	0 / 13	0.0002	0.0002	2 00E-04	2 00E-04	D	2 00E-04	D	5.00E-04	m	m	N	BSL
	630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04	D	N/A		3.12E-02	c	N/A	N	BSL
	71-55-6	1,1,1-Trichloroethane	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04	D	N/A		4.72E+01	n	N/A	N	BSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04	D	N/A		9.38E-03	c	N/A	N	BSL
	76-13-1	1,1,2-Trichlor-1,2,2-trifluoroethane	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04	D	N/A		6.04E+03	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04	D	N/A		3.25E-02	c	N/A	N	BSL
	75-34-3	1,1-Dichloroethane	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04	D	N/A		4.58E+01	n	N/A	N	BSL
	75-35-4	1,1-Dichloroethene	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04	D	N/A		1.66E+01	n	N/A	N	BSL
	120-82-1	1,2,4-Trichlorobenzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04	D	N/A		6.50E-01	n	N/A	N	BSL
	95-63-6	1,2,4-Trime hylbenzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04	D	N/A		3.26E+00	n	N/A	N	BSL
	106-93-4	1,2-Dibromoethane	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04	D	N/A		2.83E-05	c	N/A	Y	ASL
	95-50-1	1,2-Dichlorobenzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04	D	N/A		1.13E+01	n	N/A	N	BSL
	107-06-2	1,2-Dichloroethane	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04	D	N/A		1.96E-02	c	N/A	N	BSL
	78-87-5	1,2-Dichloropropane	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04	D	N/A		1.86E-02	c	N/A	N	BSL
	108-67-8	1,3,5-Trime hylbenzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04	D	N/A		3.05E+00	n	N/A	N	BSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04	D	N/A		3.78E+00	n	N/A	N	BSL

TABLE 2.19
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
East Ditch Surface Water
Direct Contact with Surface Water
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water (Ingestion and Dermal Contact)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detec ion Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value (East Ditch)[2]	Background Value (Up River Road)[2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detec ion [4]
East Ditch Surface Water	106-46-7	1,4-Dichlorobenzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	1.86E-02	c	N/A	N	BSL
	78-93-3	2-Butanone	ND	ND	mg/l	ND	0 / 11	0.0004	0.0004	4 00E-04	4 00E-04 D	N/A	4.91E+02	n	N/A	N	BSL
	591-78-6	2-Hexanone	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04 D	N/A	3.34E+01	n	N/A	N	BSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04 D	N/A	5.27E+01	n	N/A	N	BSL
	67-64-1	Acetone	0.0016 J	0 0028	mg/l	EDSW02-111810	3 / 11	0.001	0.0011	2 80E-03	7.10E-03 M	N/A	7.80E+02	n	N/A	N	BSL
	71-43-2	Benzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	2.35E-02	c	N/A	N	BSL
	75-27-4	Bromodichlorome hane	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04 D	N/A	4.77E-02	c	N/A	N	BSL
	75-25-2	Bromoform	ND	ND	mg/l	ND	0 / 11	0.0003	0.0003	3 00E-04	3 00E-04 D	N/A	4.30E-01	c	N/A	N	BSL
	74-83-9	Bromome hane	ND	ND	mg/l	ND	0 / 11	0.0003	0.0003	3 00E-04	3 00E-04 D	N/A	9.02E-01	n	N/A	N	BSL
	75-15-0	Carbon disulfide	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04 D	N/A	3.43E+01	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04 D	N/A	1.03E-02	c	N/A	N	BSL
	108-90-7	Chlorobenzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	1.58E+00	n	N/A	N	BSL
	75-00-3	Chloroethane	ND	ND	mg/l	ND	0 / 11	0.0003	0.0003	3 00E-04	3 00E-04 D	N/A	1.75E+02	n	N/A	N	BSL
	67-66-3	Chloroform	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	2.35E+00	n	N/A	N	BSL
	74-87-3	Chlorome hane	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04 D	N/A	1.95E-01	c	N/A	N	BSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04 D	N/A	4.18E+00	n	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	4.63E-03	c	N/A	N	BSL
	110-82-7	Cyclohexane	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	2.95E+02	n	N/A	N	BSL
	124-48-1	Dibromochloromethane	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	3.83E-02	c	N/A	N	BSL
	75-71-8	Dichlorodifluoromethane	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04 D	N/A	3.76E+01	n	N/A	N	BSL
	100-41-4	Ethylbenzene	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04 D	N/A	1.28E+01	n	N/A	N	BSL
	98-82-8	Isopropylbenzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	8.44E+00	n	N/A	N	BSL
	79-20-9	Methyl acetate	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	8.22E+02	n	N/A	N	BSL
	1634-04-4	Methyl tert-butyl ether	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	5.47E+00	n	N/A	N	BSL
	108-87-2	Methylcyclohexane	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04 D	N/A	1.57E+02	n	N/A	N	BSL
	75-09-2	Methylene chloride	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04 D	N/A	3.37E-01	c	N/A	N	BSL
	91-20-3	Naphthalene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	2.55E+00	n	N/A	N	BSL
	104-51-8	n-Butylbenzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	1.20E+00	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	2.35E+00	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	1.58E+00	n	N/A	N	BSL
	100-42-5	Styrene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	2.98E+01	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	1.40E+00	n	N/A	N	BSL
	127-18-4	Tetrachloroethene	ND	ND	mg/l	ND	0 / 11	0.0003	0.0003	3 00E-04	3 00E-04 D	N/A	1.48E-02	c	N/A	N	BSL
	108-88-3	Toluene	0.00023 J	0.00025 J	mg/l	EDSW01-111810/ EDSW02-111810	3 / 11	0.0001	0.0001	2 50E-04	1 00E-04 D	N/A	1.65E+01	n	N/A	N	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	mg/l	ND	0 / 11	0.0003	0.0003	3 00E-04	3 00E-04 D	N/A	6.95E+00	n	N/A	N	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	mg/l	ND	0 / 11	0.0001	0.0001	1 00E-04	1 00E-04 D	N/A	2.50E-02	c	N/A	N	BSL
	79-01-6	Trichloroethene	0.00035 J	0.00035 J	mg/l	EDSW09-111610	1 / 11	0.0001	0.0001	3 50E-04	1 00E-04 D	N/A	1.01E-01	c	N/A	N	BSL
	75-69-4	Trichlorofluoromethane	ND	ND	mg/l	ND	0 / 11	0.0002	0.0002	2 00E-04	2 00E-04 D	N/A	4.33E+01	n	N/A	N	BSL
	75-01-4	Vinyl chloride	ND	ND	mg/l	ND	0 / 11	0.0004	0.0004	4 00E-04	4 00E-04 D	N/A	1.30E-03	c	N/A	N	BSL
	1330-20-7	Xylenes, Total	ND	ND	mg/l	ND	0 / 11	0.0003	0.0003	3 00E-04	3 00E-04 D	N/A	2.40E+01	n	N/A	N	BSL
	92-52-4	1,1´-Biphenyl	ND	ND	mg/l	ND	0 / 13	0.00005	0.0001	1 00E-04	1 00E-04 D	5 00E-05 D	3.52E+00	n	N/A	N	BSL
	90-12-0	1-Methylnaphthalene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00009	9 00E-05	9 00E-05 D	5 00E-05 D	4.80E+00	n	N/A	N	BSL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	mg/l	ND	0 / 13	0.00005	0.00009	9 00E-05	9 00E-05 D	5 00E-05 D	1.40E+01	n	N/A	N	BSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	4.55E-02	c	N/A	N	BSL
	120-83-2	2,4-Dichlorophenol	ND	ND	mg/l	ND	0 / 13	0.00005	0.00008	8 00E-05	8 00E-05 D	5 00E-05 D	7.39E-01	n	N/A	N	BSL
	105-67-9	2,4-Dimethylphenol	ND	ND	mg/l	ND	0 / 13	0.00005	0.00008	8 00E-05	8 00E-05 D	3.60E-04 M	4.74E+00	n	N/A	N	BSL
	51-28-5	2,4-Dinitrophenol	ND	ND	mg/l	ND	0 / 13	0.00008	0.00008	8 00E-05	8 00E-05 D	8 00E-05 D	1.27E+00	n	N/A	N	BSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00009	9 00E-05	9 00E-05 D	5 00E-05 D	3.00E-03	c	N/A	N	BSL
	606-20-2	2,6-Dinitrotoluene	ND	ND	mg/l	ND	0 / 13	0.00006	0.00007	7 00E-05	7 00E-05 D	6 00E-05 D	3.00E-03	c	N/A	N	BSL
	91-58-7	2-Chloronaphthalene	ND	ND	mg/l	ND	0 / 13	0.00005	0.0001	1 00E-04	1 00E-04 D	5 00E-05 D	5.48E+00	n	N/A	N	BSL
	95-57-8	2-Chlorophenol	ND	ND	mg/l	ND	0 / 13	0.00006	0.00008	8 00E-05	8 00E-05 D	6 00E-05 D	1.93E+00	n	N/A	N	BSL
	91-57-6	2-Methylnaphthalene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	2.76E-01	n	N/A	N	BSL
	95-48-7	2-Methylphenol	ND	ND	mg/l	ND	0 / 13	0.00005	0.00008	8 00E-05	8 00E-05 D	9 00E-05 M	1.88E+01	n	N/A	N	BSL
	88-74-4	2-Nitroaniline	ND	ND	mg/l	ND	0 / 13	0.00005	0.0001	1 00E-04	1 00E-04 D	5 00E-05 D	1.36E-01	n	N/A	N	BSL
	88-75-5	2-Nitrophenol	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	6.86E-01	n	N/A	N	BSL
	106-44-5	3&4-Methylphenol[5]	ND	ND	mg/l	ND	0 / 13	0.00005	0.0001	1 00E-04	1 00E-04 D	9 80E-05 M	3.70E-01	n	N/A	N	BSL
	91-94-1	3,3´-Dichlorobenzidine	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	2.07E-03	c	N/A	N	BSL
	99-09-2	3-Nitroaniline	ND	ND	mg/l	ND	0 / 13	0.00005	0.00008	8 00E-05	8 00E-05 D	5 00E-05 D	1.77E-01	n	N/A	N	BSL
	534-52-1	4,6-Dinitro-2-me hylphenol	ND	ND	mg/l	ND	0 / 13	0.00008	0.00008	8 00E-05	8 00E-05 D	8 00E-05 D	1.10E+00	n	N/A	N	BSL
	101-55-3	4-Bromophenyl phenyl ether	ND	ND	mg/l	ND	0 / 13	0.00005	0.00009	9 00E-05	9 00E-05 D	5 00E-05 D	1.40E-05	c	N/A	Y	ASL
	59-50-7	4-Chloro-3-methylphenol	ND	ND	mg/l	ND	0 / 13	0.00005	0.0001	1 00E-04	1 00E-04 D	5 00E-05 D	8.70E-01	n	N/A	N	BSL
	106-47-8	4-Chloroaniline	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	2.14E+00	n	N/A	N	BSL

TABLE 2.19
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
East Ditch Surface Water
Direct Contact with Surface Water
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water (Ingestion and Dermal Contact)

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detec ion Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value (East Ditch)[2]	Background Value (Up River Road)[2]	Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detec ion [4]
East Ditch Surface Water	7005-72-3	4-Chlorophenyl phenyl ether	ND	ND	mg/l	ND	0 / 13	0.00005	0.00008	8 00E-05	8 00E-05 D	5 00E-05 D	1.40E-05	c	N/A	Y	ASL
	100-01-6	4-Nitroaniline	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	9.66E-02	c	N/A	N	BSL
	100-02-7	4-Nitrophenol	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	1.12E+00	n	N/A	N	BSL
	83-32-9	Acenaphthene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00009	9 00E-05	9 00E-05 D	5 00E-05 D	2.44E+00	n	N/A	N	BSL
	208-96-8	Acenaphthylene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	3.26E+00	n	N/A	N	BSL
	98-86-2	Acetophenone	0.0001 JL	0.00021	mg/l	EDSW02-111810	3 / 13	0.0001	0.0001	2.10E-04	1 00E-04 D	1 00E-04 M	5.36E+01	n	N/A	N	BSL
	120-12-7	Anthracene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	1.07E+01	n	N/A	N	BSL
	56-55-3	Benz(a)anthracene	0.000067 JL	0.000067 JL	mg/l	EDSW11-013112	1 / 13	0.00005	0.00007	6.70E-05	7 00E-05 D	5 00E-05 D	2.80E-04	c	N/A	N	BSL
	100-52-7	Benzaldehyde	ND	ND	mg/l	ND	0 / 13	0.00005	0.00012	1 20E-04	1 20E-04 D	5 00E-05 D	4.26E+01	n	N/A	N	BSL
	50-32-8	Benzo(a)pyrene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00008	8 00E-05	8 00E-05 D	5 00E-05 D	2.00E-04	m	m	N	BSL
	205-99-2	Benzo(b)fluoranthene	ND	ND	mg/l	ND	0 / 13	0.00006	0.00009	9 00E-05	9 00E-05 D	6 00E-05 D	2.80E-04	c	N/A	N	BSL
	191-24-2	Benzo(g,h,i)perylene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00009	9 00E-05	9 00E-05 D	5 00E-05 D	2.20E+00	n	N/A	N	BSL
	207-08-9	Benzo(k)fluoranthene	ND	ND	mg/l	ND	0 / 13	0.00005	0.0001	1 00E-04	1 00E-04 D	5 00E-05 D	2.80E-03	c	N/A	N	BSL
	111-91-1	Bis(2-chloroethoxy)methane	ND	ND	mg/l	ND	0 / 13	0.00005	0.00009	9 00E-05	9 00E-05 D	5 00E-05 D	1.23E-03	c	N/A	N	BSL
	111-44-4	Bis(2-chloroethyl)ether	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	2.58E-03	c	N/A	N	BSL
	108-60-1	Bis(2-chloroisopropyl)ether	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	1.81E-02	c	N/A	N	BSL
	117-81-7	Bis(2-ethylhexyl)phthalate	0.00027	0 0026 JL	mg/l	EDSW01-111810	7 / 13	0.0001	0.0002	2.60E-03	1.40E-03 D	4.60E-04 M	6.00E-03	m	m	N	BSL
	85-68-7	Butyl benzyl ph halate	ND	ND	mg/l	ND	0 / 13	0.00005	0.0001	1 00E-04	1 00E-04 D	5 00E-05 D	7.88E+00	n	N/A	N	BSL
	105-60-2	Caprolactam	ND	ND	mg/l	ND	0 / 13	0.00005	0.00008	8 00E-05	8 00E-05 D	5 00E-05 D	4.08E+02	n	N/A	N	BSL
	86-74-8	Carbazole	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	7.40E-05 M	2.74E-02	c	N/A	N	BSL
	218-01-9	Chrysene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	2.80E-02	c	N/A	N	BSL
	53-70-3	Dibenz(a,h)anthracene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00008	8 00E-05	8 00E-05 D	5 00E-05 D	2.80E-05	c	N/A	Y	ASL
	132-64-9	Dibenzofuran	ND	ND	mg/l	ND	0 / 13	0.00005	0.00008	8 00E-05	8 00E-05 D	5 00E-05 D	2.19E-01	n	N/A	N	BSL
	84-66-2	Diethyl phthalate	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	7.10E-05 M	3.07E+02	n	N/A	N	BSL
	131-11-3	Dimethyl phthalate	ND	ND	mg/l	ND	0 / 13	0.00005	0.0001	1 00E-04	1 00E-04 D	5 00E-05 D	5.40E+02	n	N/A	N	BSL
	84-74-2	Di-n-butyl phthalate	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	4.49E+00	n	N/A	N	BSL
	117-84-0	Di-n-octyl phthalate	ND	ND	mg/l	ND	0 / 13	0.00005	0.00009	9 00E-05	9 00E-05 D	5 00E-05 D	2.90E+00	n	N/A	N	BSL
	206-44-0	Fluoranthene	0.000056 J	0.000056 J	mg/l	EDSW10-013112	1 / 13	0.00005	0.00007	5.60E-05	7 00E-05 D	5 00E-05 D	2.90E+00	n	N/A	N	BSL
	86-73-7	Fluorene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	2.11E+00	n	N/A	N	BSL
	118-74-1	Hexachlorobenzene	ND	ND	mg/l	ND	0 / 13	0.00006	0.0001	1 00E-04	1 00E-04 D	6 00E-05 D	1.00E-03	m	m	N	BSL
	87-68-3	Hexachlorobutadiene	ND	ND	mg/l	ND	0 / 13	0.00006	0.00015	1 50E-04	1 50E-04 D	6 00E-05 D	6.90E-03	n	N/A	N	BSL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	mg/l	ND	0 / 13	0.00006	0.00008	8 00E-05	8 00E-05 D	6 00E-05 D	2.56E-01	n	N/A	N	BSL
	67-72-1	Hexachloroethane	ND	ND	mg/l	ND	0 / 13	0.00005	0.00017	1.70E-04	1.70E-04 D	5 00E-05 D	7.30E-02	n	N/A	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	ND	ND	mg/l	ND	0 / 13	0.00005	0.0001	1 00E-04	1 00E-04 D	5 00E-05 D	2.80E-04	c	N/A	N	BSL
	78-59-1	Isophorone	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	1.04E+00	c	N/A	N	BSL
	91-20-3	Naphthalene	ND	ND	mg/l	ND	0 / 11	0.00005	0.0001	1 00E-04	1 00E-04 D	5 00E-05 D	2.55E+00	n	N/A	N	BSL
	98-95-3	Nitrobenzene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00009	9 00E-05	9 00E-05 D	5 00E-05 D	2.48E-01	n	N/A	N	BSL
	621-64-7	N-Nitrosodi-n-propylamine	ND	ND	mg/l	ND	0 / 13	0.00008	0.0001	1 00E-04	1 00E-04 D	8 00E-05 D	1.98E-04	c	N/A	N	BSL
	86-30-6	N-Nitrosodiphenylamine	ND	ND	mg/l	ND	0 / 13	0.00005	0.00009	9 00E-05	9 00E-05 D	5 00E-05 D	4.21E-02	c	N/A	N	BSL
	87-86-5	Pentachlorophenol	ND	ND	mg/l	ND	0 / 13	0.00005	0.00008	8 00E-05	8 00E-05 D	5 00E-05 D	9.92E-04	c	N/A	N	BSL
	85-01-8	Phenan hrene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	1.07E+00	n	N/A	N	BSL
	108-95-2	Phenol	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	6 50E-05 M	1.60E+02	n	N/A	N	BSL
	129-00-0	Pyrene	ND	ND	mg/l	ND	0 / 13	0.00005	0.00007	7 00E-05	7 00E-05 D	5 00E-05 D	2.20E+00	n	N/A	N	BSL
	57-12-5	Cyanide	0 005 J	0.005 J	mg/l	EDSW01-111810	1 / 11	0.004	0 004	5 00E-03	2 90E-02 M	N/A	1.65E+01	n	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value
= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.
(2) East Ditch Background Surface Weater Locations or Up River Road Surface Water Locations
M - Maximum concentration; A - Average Concentration; D - Maximum Sample Detection Limit
(3) Screening values are TRRP Human Health Surface Water Direct Contact (ingestion and dermal combined) PCLs (TCEQ, 2006a) for recreational adjusted for carcinogens to a 10^{6} risk. If unavailable, values are the TRRP commercial/industrial groundwater PCLs (TCEQ, 2012a)
(4) Rationale for Selection or Deletion:
ASL = Above Screening Level
BSL = Below Screening Level
(5) Screening value for m-cresol assumed (the lower of screening values for m&p-cresol)

Definitions:
a= Action level
ARAR = Applicable or relevant and appropriate requirements
CAS No. = Chemical Abstract Registry Number
c = Carcinogen
J = Estimated value
L = Estimated concentration is biased low
m = primary MCL-based
mg/l = milligram/liter
n = Noncarcinogen
N/A = Not applicable or available
ND = Not Detected
PCLs = Protective Concentration Levels
TBC = To be considered values
TRRP = Texas Risk Reduction Program

TABLE 2.20
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Active Soil Gas Samples - South and North Pit Exposure Areas
Migration of Vapors from Soil Gas to Indoor Air (5 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Soil Gas
Exposure Medium:	Indoor Air

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening [1]	Background Value [2]		Screening Toxicity Value [3]	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection [4]
Wingfoot Tire Sample SG-49 Soil Gas (5 feet bgs) (Indoor Air Vapors) North Pit Exposure Area	71-43-2	Benzene	ND	ND	ug/m3	ND	0 / 1	32	32	3.20E+01	1 90E+01	D	1.60E+03	c	N/A	N	BSL
	100-41-4	Ethylbenzene	ND	ND	ug/m3	ND	0 / 1	43	43	4.30E+01	2 60E+01	D	4.90E+03	c	N/A	N	BSL
	91-20-3	Naphthalene	ND	ND	ug/m3	ND	0 / 1	52	52	5.20E+01	3 20E+01	D	3.60E+02	c	N/A	N	BSL
	108-88-3	Toluene	ND	ND	ug/m3	ND	0 / 1	37	37	3.70E+01	2 30E+01	D	2.20E+07	n	N/A	N	BSL
	C5C8Aliphatic	TPH (C5-C8 Aliphatics)	7500	7500	ug/m3	SG-49	1 / 1	230	230	7.50E+03	2.70E+03	M	3.30E+05	n	N/A	N	BSL
	C9C10Aromatic	TPH (C9-C10 Aromatics)	ND	ND	ug/m3	ND	0 / 1	250	250	2.50E+02	1 50E+02	D	4.40E+04	n	N/A	N	BSL
	C9C12Aliphatic	TPH (C9-C12 Aliphatics)	22000	22000	ug/m3	SG-49	1 / 1	350	350	2.20E+04	3.40E+04	M	2.20E+05	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	ug/m3	ND	0 / 1	110	110	1.10E+02	5 00E+01	D	7.70E+02	c	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	ND	ND	ug/m3	ND	0 / 1	98	98	9.80E+01	4 50E+01	D	3.10E+04	n	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	ND	ND	ug/m3	ND	0 / 1	98	98	9.80E+01	4 50E+01	D	6.00E+03	n	N/A	N	BSL
	106-46-7	1,4-Dichlorobenzene	ND	ND	ug/m3	ND	0 / 1	120	120	1.20E+02	5 50E+01	D	1.10E+03	c	N/A	N	BSL
	78-93-3	2-Butanone	ND	ND	ug/m3	ND	0 / 1	150	150	1.50E+02	6 80E+01	D	2.20E+07	n	N/A	N	BSL
	591-78-6	2-Hexanone	ND	ND	ug/m3	ND	0 / 1	200	200	2.00E+02	9.40E+01	D	1.30E+05	n	N/A	N	BSL
	67-64-1	Acetone	11000	11000	ug/m3	SG-49	1 / 1	2000	2000	1.10E+04	3 00E+03	M	1.40E+08	n	N/A	N	BSL
	75-15-0	Carbon disulfide	360	360	ug/m3	SG-49	1 / 1	160	160	3.60E+02	7.10E+01	D	3.10E+06	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	ug/m3	ND	0 / 1	130	130	1.30E+02	5 80E+01	D	2.00E+03	c	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	ug/m3	ND	0 / 1	91	91	9.10E+01	4 20E+01	D	3.10E+03	c	N/A	N	BSL
	110-82-7	Cyclohexane	ND	ND	ug/m3	ND	0 / 1	69	69	6.90E+01	3 20E+01	D	2.60E+07	n	N/A	N	BSL
	98-82-8	Isopropylbenzene	ND	ND	ug/m3	ND	0 / 1	98	98	9.80E+01	4 50E+01	D	1.80E+06	n	N/A	N	BSL
	75-09-2	Methylene chloride	ND	ND	ug/m3	ND	0 / 1	170	170	1.70E+02	8 00E+01	D	1.20E+06	c	N/A	N	BSL
	104-51-8	n-Butylbenzene	ND	ND	ug/m3	ND	0 / 1	110	110	1.10E+02	5 00E+01	D	1.40E+05	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	ND	ND	ug/m3	ND	0 / 1	98	98	9.80E+01	4 50E+01	D	4.40E+06	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	ND	ND	ug/m3	ND	0 / 1	110	110	1.10E+02	5 00E+01	D	1.40E+05	n	N/A	N	BSL
	100-42-5	Styrene	ND	ND	ug/m3	ND	0 / 1	85	85	8.50E+01	3 90E+01	D	4.40E+06	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	ND	ND	ug/m3	ND	0 / 1	110	110	1.10E+02	5 00E+01	D	1.40E+05	n	N/A	N	BSL
	1330-20-7	Xylenes, Total	ND	ND	ug/m3	ND	0 / 1	87	87	8.70E+01	4 00E+01	D	4.40E+05	n	N/A	N	BSL
Adult Video Store Sample SG-13 Soil Gas (5 feet bgs) (Indoor Air Vapors) South Pit Exposure Area	71-43-2	Benzene	910	910	ug/m3	SG-13	1 / 1	390	390	9.10E+02	1 90E+01	D	1.60E+03	c	N/A	N	BSL
	C5C8Aliphatic	TPH (C5-C8 Aliphatics)	580000	580000	ug/m3	SG-13	1 / 1	2700	2700	5.80E+05	2.70E+03	M	3.30E+05	n	N/A	Y	ASL
	C9C10Aromatic	TPH (C9-C10 Aromatics)	3100	3100	ug/m3	SG-13	1 / 1	3000	3000	3.10E+03	1 50E+02	D	4.40E+04	n	N/A	N	BSL
	C9C12Aliphatic	TPH (C9-C12 Aliphatics)	44000	44000	ug/m3	SG-13	1 / 1	4300	4300	4.40E+04	3.40E+04	M	2.20E+05	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	ug/m3	ND	0 / 1	66	66	6.60E+01	5 00E+01	D	7.70E+02	c	N/A	N	BSL
	95-63-6	1,2,4-Trimethylbenzene	ND	ND	ug/m3	ND	0 / 1	60	60	6.00E+01	4 50E+01	D	3.10E+04	n	N/A	N	BSL
	108-67-8	1 3 5-Trimethylbenzene	ND	ND	ug/m3	ND	0 / 1	60	60	6.00E+01	4 50E+01	D	6.00E+03	n	N/A	N	BSL
	106-46-7	1,4-Dichlorobenzene	ND	ND	ug/m3	ND	0 / 1	73	73	7.30E+01	5 50E+01	D	1.10E+03	c	N/A	N	BSL
	78-93-3	2-Butanone	ND	ND	ug/m3	ND	0 / 1	90	90	9.00E+01	6 80E+01	D	2.20E+07	n	N/A	N	BSL
	591-78-6	2-Hexanone	ND	ND	ug/m3	ND	0 / 1	120	120	1.20E+02	9.40E+01	D	1.30E+05	n	N/A	N	BSL
	67-64-1	Acetone	4600	4600	ug/m3	SG-13	1 / 1	720	720	4.60E+03	3 00E+03	M	1.40E+08	n	N/A	N	BSL
	75-15-0	Carbon disulfide	300	300	ug/m3	SG-13	1 / 1	95	95	3.00E+02	7.10E+01	D	3.10E+06	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	ug/m3	ND	0 / 1	76	76	7.60E+01	5 80E+01	D	2.00E+03	c	N/A	N	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	ug/m3	ND	0 / 1	55	55	5.50E+01	4 20E+01	D	3.10E+03	c	N/A	N	BSL
	110-82-7	Cyclohexane	ND	ND	ug/m3	ND	0 / 1	42	42	4.20E+01	3 20E+01	D	2.60E+07	n	N/A	N	BSL
	100-41-4	Ethylbenzene	ND	ND	ug/m3	ND	0 / 1	53	53	5.30E+01	4 00E+01	D	4.90E+03	c	N/A	N	BSL
	98-82-8	Isopropylbenzene	ND	ND	ug/m3	ND	0 / 1	60	60	6.00E+01	4 50E+01	D	1.80E+06	n	N/A	N	BSL
	75-09-2	Methylene chloride	ND	ND	ug/m3	ND	0 / 1	110	110	1.10E+02	8 00E+01	D	1.20E+06	c	N/A	N	BSL
	91-20-3	Naphthalene	ND	ND	ug/m3	ND	0 / 1	160	160	1.60E+02	1 20E+02	D	3.60E+02	c	N/A	N	BSL
	104-51-8	n-Butylbenzene	ND	ND	ug/m3	ND	0 / 1	67	67	6.70E+01	5 00E+01	D	1.40E+05	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	ND	ND	ug/m3	ND	0 / 1	60	60	6.00E+01	4 50E+01	D	4.40E+06	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	ND	ND	ug/m3	ND	0 / 1	67	67	6.70E+01	5 00E+01	D	1.40E+05	n	N/A	N	BSL
	100-42-5	Styrene	ND	ND	ug/m3	ND	0 / 1	52	52	5.20E+01	3 90E+01	D	4.40E+06	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	ND	ND	ug/m3	ND	0 / 1	67	67	6.70E+01	5 00E+01	D	1.40E+05	n	N/A	N	BSL
	108-88-3	Toluene	ND	ND	ug/m3	ND	0 / 1	46	46	4.60E+01	3 50E+01	D	2.20E+07	n	N/A	N	BSL
	1330-20-7	Xylenes Total	ND	ND	ug/m3	ND	0 / 1	53	53	5.30E+01	4 00E+01	D	4.40E+05	n	N/A	N	BSL

TABLE 2.20
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Active Soil Gas Samples - South and North Pit Exposure Areas
Migration of Vapors from Soil Gas to Indoor Air (5 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Soil Gas
Exposure Medium:	Indoor Air

Exposure Point	CAS No.	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Minimum Detection Limit	Maximum Detection Limit	Concentration Used for Screening (1)	Background Value (2)		Screening Toxicity Value (3)	Screening Value Type	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection of Detection (4)
Adult Video Store Sample SG-22 Soil Gas (5 feet bgs) (Indoor Air Vapors) South Pit Exposure Area	71-43-2	Benzene	360000	360000	ug/m3	SG-22	1 / 1	3100	3100	3.60E+05	1 90E+01	D	1.60E+03	c	N/A	Y	ASL
	100-41-4	Ethylbenzene	42000	42000	ug/m3	SG-22	1 / 1	4200	4200	4.20E+04	2 60E+01	D	4.90E+03	c	N/A	Y	ASL
	91-20-3	Naphthalene	ND	ND	ug/m3	ND	0 / 1	5100	5100	5.10E+03	3 20E+01	D	3.60E+02	c	N/A	Y	ASL
	108-88-3	Toluene	10000	10000	ug/m3	SG-22	1 / 1	3700	3700	1.00E+04	2 30E+01	D	2.20E+07	n	N/A	N	BSL
	C5C8Aliphatic	TPH (C5-C8 Aliphatics)	7200000	7200000	ug/m3	SG-22	1 / 1	45000	45000	7.20E+06	2.70E+03	M	3.30E+05	n	N/A	Y	ASL
	C9C10Aromatic	TPH (C9-C10 Aromatics)	ND	ND	ug/m3	ND	0 / 1	24000	24000	2.40E+04	1 50E+02	D	4.40E+04	n	N/A	N	BSL
	C9C12Aliphatic	TPH (C9-C12 Aliphatics)	ND	ND	ug/m3	ND	0 / 1	34000	34000	3.40E+04	3.40E+04	M	2.20E+05	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	ug/m3	ND	0 / 1	2600	2600	2.60E+03	5 00E+01	D	7.70E+02	c	N/A	Y	ASL
	95-63-6	1,2,4-Trimethylbenzene	ND	ND	ug/m3	ND	0 / 1	2400	2400	2.40E+03	4 50E+01	D	3.10E+04	n	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	ND	ND	ug/m3	ND	0 / 1	2400	2400	2.40E+03	4 50E+01	D	6.00E+03	n	N/A	N	BSL
	106-46-7	1,4-Dichlorobenzene	ND	ND	ug/m3	ND	0 / 1	2900	2900	2.90E+03	5 50E+01	D	1.10E+03	c	N/A	Y	ASL
	78-93-3	2-Butanone	ND	ND	ug/m3	ND	0 / 1	3500	3500	3.50E+03	6 80E+01	D	2.20E+07	n	N/A	N	BSL
	591-78-6	2-Hexanone	ND	ND	ug/m3	ND	0 / 1	4900	4900	4.90E+03	9.40E+01	D	1.30E+05	n	N/A	N	BSL
	67-64-1	Acetone	ND	ND	ug/m3	ND	0 / 1	29000	29000	2.90E+04	3 00E+03	M	1.40E+08	n	N/A	N	BSL
	75-15-0	Carbon disulfide	ND	ND	ug/m3	ND	0 / 1	3700	3700	3.70E+03	7.10E+01	D	3.10E+06	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	ug/m3	ND	0 / 1	3000	3000	3.00E+03	5 80E+01	D	2.00E+03	c	N/A	Y	ASL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	ug/m3	ND	0 / 1	2200	2200	2.20E+03	4 20E+01	D	3.10E+03	c	N/A	N	BSL
	110-82-7	Cyclohexane	190000	190000	ug/m3	SG-22	1 / 1	1700	1700	1.90E+05	3 20E+01	D	2.60E+07	n	N/A	N	BSL
	98-82-8	Isopropylbenzene	2700	2700	ug/m3	SG-22	1 / 1	2400	2400	2.70E+03	4 50E+01	D	1.80E+06	n	N/A	N	BSL
	75-09-2	Methylene chloride	ND	ND	ug/m3	ND	0 / 1	4200	4200	4.20E+03	8 00E+01	D	1.20E+06	c	N/A	N	BSL
	104-51-8	n-Butylbenzene	ND	ND	ug/m3	ND	0 / 1	2600	2600	2.60E+03	5 00E+01	D	1.40E+05	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	ND	ND	ug/m3	ND	0 / 1	2400	2400	2.40E+03	4 50E+01	D	4.40E+06	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	ND	ND	ug/m3	ND	0 / 1	2600	2600	2.60E+03	5 00E+01	D	1.40E+05	n	N/A	N	BSL
	100-42-5	Styrene	ND	ND	ug/m3	ND	0 / 1	2000	2000	2.00E+03	3 90E+01	D	4.40E+06	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	ND	ND	ug/m3	ND	0 / 1	2600	2600	2.60E+03	5 00E+01	D	1.40E+05	n	N/A	N	BSL
	1330-20-7	Xylenes Total	2600	2600	ug/m3	SG-22	1 / 1	2100	2100	2.60E+03	4 00E+01	D	4.40E+05	n	N/A	N	BSL
Robert's Equipment Sample SG-33 (Indoor Air Vapors) South Pit Exposure Area	71-43-2	Benzene	540000	540000	ug/m3	SG-33	1 / 1	9500	9500	5.40E+05	1 90E+01	D	1.60E+03	c	N/A	Y	ASL
	100-41-4	Ethylbenzene	32000	32000	ug/m3	SG-33	1 / 1	13000	13000	3.20E+04	2 60E+01	D	4.90E+03	c	N/A	Y	ASL
	108-88-3	Toluene	33000	33000	ug/m3	SG-33	1 / 1	11000	11000	3.30E+04	2 30E+01	D	2.20E+07	n	N/A	N	BSL
	C5C8Aliphatic	TPH (C5-C8 Aliphatics)	9700000	9700000	ug/m3	SG-33	1 / 1	68000	68000	9.70E+06	2.70E+03	M	3.30E+05	n	N/A	Y	ASL
	C9C10Aromatic	TPH (C9-C10 Aromatics)	ND	ND	ug/m3	ND	0 / 1	75000	75000	7.50E+04	1 50E+02	D	4.40E+04	n	N/A	Y	ASL
	C9C12Aliphatic	TPH (C9-C12 Aliphatics)	ND	ND	ug/m3	ND	0 / 1	110000	110000	1.10E+05	3.40E+04	M	2.20E+05	n	N/A	N	BSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	ug/m3	ND	0 / 1	4000	4000	4.00E+03	5 00E+01	D	7.70E+02	c	N/A	Y	ASL
	95-63-6	1,2,4-Trimethylbenzene	ND	ND	ug/m3	ND	0 / 1	3600	3600	3.60E+03	4 50E+01	D	3.10E+04	n	N/A	N	BSL
	108-67-8	1,3,5-Trimethylbenzene	ND	ND	ug/m3	ND	0 / 1	3600	3600	3.60E+03	4 50E+01	D	6.00E+03	n	N/A	N	BSL
	106-46-7	1,4-Dichlorobenzene	ND	ND	ug/m3	ND	0 / 1	4500	4500	4.50E+03	5 50E+01	D	1.10E+03	c	N/A	Y	ASL
	78-93-3	2-Butanone	ND	ND	ug/m3	ND	0 / 1	5500	5500	5.50E+03	6 80E+01	D	2.20E+07	n	N/A	N	BSL
	591-78-6	2-Hexanone	ND	ND	ug/m3	ND	0 / 1	7600	7600	7.60E+03	9.40E+01	D	1.30E+05	n	N/A	N	BSL
	67-64-1	Acetone	ND	ND	ug/m3	ND	0 / 1	44000	44000	4.40E+04	3 00E+03	M	1.40E+08	n	N/A	N	BSL
	75-15-0	Carbon disulfide	ND	ND	ug/m3	ND	0 / 1	5800	5800	5.80E+03	7.10E+01	D	3.10E+06	n	N/A	N	BSL
	56-23-5	Carbon tetrachloride	ND	ND	ug/m3	ND	0 / 1	4700	4700	4.70E+03	5 80E+01	D	2.00E+03	c	N/A	Y	ASL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	ug/m3	ND	0 / 1	3400	3400	3.40E+03	4 20E+01	D	3.10E+03	c	N/A	Y	ASL
	110-82-7	Cyclohexane	240000	240000	ug/m3	SG-33	1 / 1	2600	2600	2.40E+05	3 20E+01	D	2.60E+07	n	N/A	N	BSL
	98-82-8	Isopropylbenzene	ND	ND	ug/m3	ND	0 / 1	3600	3600	3.60E+03	4 50E+01	D	1.80E+06	n	N/A	N	BSL
	75-09-2	Methylene chloride	ND	ND	ug/m3	ND	0 / 1	6400	6400	6.40E+03	8 00E+01	D	1.20E+06	c	N/A	N	BSL
	91-20-3	Naphthalene	ND	ND	ug/m3	ND	0 / 1	9700	9700	9.70E+03	1 20E+02	D	3.60E+02	c	N/A	Y	ASL
	104-51-8	n-Butylbenzene	ND	ND	ug/m3	ND	0 / 1	4100	4100	4.10E+03	5 00E+01	D	1.40E+05	n	N/A	N	BSL
	103-65-1	n-Propylbenzene	ND	ND	ug/m3	ND	0 / 1	3600	3600	3.60E+03	4 50E+01	D	4.40E+06	n	N/A	N	BSL
	135-98-8	sec-Butylbenzene	ND	ND	ug/m3	ND	0 / 1	4100	4100	4.10E+03	5 00E+01	D	1.40E+05	n	N/A	N	BSL
	100-42-5	Styrene	ND	ND	ug/m3	ND	0 / 1	3200	3200	3.20E+03	3 90E+01	D	4.40E+06	n	N/A	N	BSL
	98-06-6	tert-Butylbenzene	ND	ND	ug/m3	ND	0 / 1	4100	4100	4.10E+03	5 00E+01	D	1.40E+05	n	N/A	N	BSL
	108-88-3	Toluene	19000	19000	ug/m3	SG-33	1 / 1	2800	2800	1.90E+04	3 50E+01	D	2.20E+07	n	N/A	N	BSL
	1330-20-7	Xylenes, Total	7400	7400	ug/m3	SG-33	1 / 1	3200	3200	7.40E+03	4 00E+01	D	4.40E+05	n	N/A	N	BSL

Notes

= Maximum detection limit exceeds screening value

= Maximum detected concentration exceeds screening value

(1) The maximum reported concentration was used for screening.

(2) A background evaluation was completed (Soil Gas Sample SG-4).
M - Maximum concentration; A - Average Concentration; D - Maximum Sample Detection Limit

(3) Screening values are commercial/industrial default ambient air risk-based levels, adjusted using a default attenuation factor of 0.001.

(4) Rationale for Selection or Deletion:
ASL = Above Screening Level
BSL = Below Screening Level

Definitions:
ARAR = Applicable or relevant and appropriate requirements
CAS No. = Chemical Abstract Registry Number
c = Carcinogen
n = Noncarcinogen
N/A = Not applicable or available
TBC = To be considered values
ug/m^3 = micrograms/cubic meter

TABLE 3.1
EXPOSURE POINT CONCENTRATION SUMMARY
South Area Pit Exposure Area
Direct Contact with Surface Soils (0-2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean[1]	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
South Pit Exposure Area Surface Soils 0-2 ft bgs	Arsenic	mg/kg	4.56	5.30	14.4	5.30	mg/kg	95% UCL	95% H-UCL
	Mercury	mg/kg	1.02	2.87	23	2.9	mg/kg	95% UCL	95% Chebyshev UCL
	Heptachlor epoxide[2]	mg/kg	0.065	0.045	0.33	0.33	mg/kg	Max	Max
	Total PCBs	mg/kg	0.14	0.14	0.7781 (J)	0.14	mg/kg	95% UCL	95% KM (Chebyshev) UCL
	Benz(a)anthracene	mg/kg	0.19	0.50	4.30	0.50	mg/kg	95% UCL	95% KM (Chebyshev) UCL
	Benzo(a)pyrene	mg/kg	0.23	0.53	4.40	0.53	mg/kg	95% UCL	95% KM (Chebyshev) UCL
	Benzo(b)fluoranthene	mg/kg	0.22	0.61	5.60	0.61	mg/kg	95% UCL	95% KM (Chebyshev) UCL
	Dibenz(a,h)anthracene	mg/kg	0.14	0.17	1.50	0.17	mg/kg	95% UCL	95% Gamma Approximate KM-UCL
	Indeno(1,2,3-cd)pyrene	mg/kg	0.16	0.37	3.30	0.37	mg/kg	95% UCL	95% Chebyshev UCL

Notes
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/kg = milligram/kilogram
[1]Arithmetic mean of detected analytical results.
[2] The maximum concentration is used when the frequency of the detection is less than 20 percent and/or the estimated UCL is below the arithmetic mean of the detected analytical results.

TABLE 3.2
EXPOSURE POINT CONCENTRATION SUMMARY
South Area Pit Exposure Area
Direct Contact with Surface and Subsurface Soils (0-10 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface and Subsurface Soil
Exposure Medium:	Surface and Subsurface Soil

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean[1]	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
South Pit Exposure Area Surface and Subsurface Soils 0-10 ft bgs	Arsenic	mg/kg	6.43	11.58	94.5	11.58	mg/kg	95% UCL	95% Chebyshev UCL
	Mercury	mg/kg	0.71	1.69	23.0	1.69	mg/kg	95% UCL	95% KM (Chebyshev) UCL
	Heptachlor epoxide[2]	mg/kg	0.15	0.049	0.79 J	0.79	mg/kg	Max	Max
	Total PCBs[2]	mg/kg	0.18	0.09	1.1835	1.18	mg/kg	Max	Max
	Benzene[2]	mg/kg	0.64	0.43	6.00	6.0	mg/kg	Max	Max
	Benz(a)anthracene	mg/kg	0.28	0.41	4.30	0.41	mg/kg	95% UCL	95% KM (Chebyshev) UCL
	Benzo(a)pyrene	mg/kg	0.56	0.78	7.40 J	0.78	mg/kg	95% UCL	95% KM (Chebyshev) UCL
	Benzo(b)fluoranthene	mg/kg	0.21	0.35	5.60	0.35	mg/kg	95% UCL	95% KM (Chebyshev) UCL
	Dibenz(a,h)anthracene[2]	mg/kg	0.13	0.085	1.50	1.50	mg/kg	Max	Max
	Indeno(1,2,3-cd)pyrene	mg/kg	0.16	0.20	3.30	0.20	mg/kg	95% UCL	95% KM (Chebyshev) UCL

Notes
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/kg = milligram/kilogram
[1]Arithmetic mean of detected analytical results.
[2] The maximum concentration is used when the frequency of the detection is less than 20 percent and/or the estimated UCL is below the arithmetic mean of the detected analytical results.

TABLE 3.3
EXPOSURE POINT CONCENTRATION SUMMARY
South Area Pit Exposure Area
Migration of Vapors from Subsurface Soils to Ambient Air (> 2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean[1]	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
South Pit Exposure Area Subsurface Soils > 2 ft bgs (Outdoor Air Vapors)	Mercury	mg/kg	0.299	0.703	4.20	0.70	mg/kg	95% UCL	95% KM Chebyshev UCL
	Total PCBs	mg/kg	1.06	1.26	9.86	1.26	mg/kg	95% UCL	95% Approximate Gamma KM-UCL

Notes
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/kg = milligram/kilogram
[1]Arithmetic mean of detected analytical results.

TABLE 3.4
EXPOSURE POINT CONCENTRATION SUMMARY
South Area Pit Exposure Area
Leaching from Soil to Class 3 Groundwater (All Soils)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
South Pit Exposure Area All Soils Leaching from soils to groundwater	Lead	mg/kg	---	---	359	359	mg/kg	Max	Max
	Mercury	mg/kg	---	---	23	23	mg/kg	Max	Max
	Benzene	mg/kg	---	---	6	6	mg/kg	Max	Max
	1-Methylnaphthalene	mg/kg	---	---	53	53	mg/kg	Max	Max

Notes
--- = Not determined
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/kg = milligram/kilogram
The maximum detected concentrations for all COCs were used as the EPCs for leaching from soil to groundwater.

TABLE 3.5
EXPOSURE POINT CONCENTRATION SUMMARY
North Area Pit Exposure Area
Direct Contact with Surface Soils (0-2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean[1]	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
North Pit Exposure Area Surface Soil 0-2 ft bgs	Arsenic	mg/kg	5.92	6.83	32.3	6.83	mg/kg	95% UCL	95% H-UCL
	Lead	mg/kg	48.8	287.6	1800	288	mg/kg	95% UCL	95% Chebyshev UCL
	Mercury	mg/kg	3.54	8.74	58.1	8.74	mg/kg	95% UCL	95% Chebyshev UCL
	Benzo(a)pyrene	mg/kg	0.077	0.088	0.38 (JL)	0.088	mg/kg	95% UCL	95% Approximate Gamma KM-UCL
	Bis(2-ethylhexyl)phthalate	mg/kg	6.02	9.03	84	9.03	mg/kg	95% UCL	95% KM (Chebyshev) UCL

Notes
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/kg = milligram/kilogram
[1]Arithmetic mean of detected analytical results.

TABLE 3.6
EXPOSURE POINT CONCENTRATION SUMMARY
North Area Pit Exposure Area
Direct Contact with Surface and Subsurface Soils (0-10 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface and Subsurface Soil
Exposure Medium:	Surface and Subsurface Soil

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean[1]	95% UCL (Distr bution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
North Pit Exposure Area Surface and Subsurface Soils 0-10 ft bgs	Arsenic	mg/kg	4.96	6.86	32.3	6.86	mg/kg	95% UCL	95% Chebyshev UCL
	Lead	mg/kg	79.0	178	1800	178	mg/kg	95% UCL	95% Chebyshev UCL
	Mercury	mg/kg	2.39	5.68	58.1	5.68	mg/kg	95% UCL	95% Chebyshev UCL
	Benzo(a)pyrene	mg/kg	0.071	0.057	0.38 (JL)	0.057	mg/kg	95% UCL	95% Approximate Gamma KM-UCL
	Bis(2-ethylhexyl)phthalate	mg/kg	3.93	4.89	84	4.89	mg/kg	95% UCL	95% KM (Chebyshev) UCL

Notes
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/kg = milligram/kilogram
[1]Arithmetic mean of detected analytical results.

TABLE 3.7
EXPOSURE POINT CONCENTRATION SUMMARY
North Area Pit Exposure Area
Migration of Vapors from Subsurface Soils to Ambient Air (> 2 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean[1]	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
North Pit Exposure Area Subsurface Soils > 2 ftt bgs (Outdoor Air Vapors)	Mercury	mg/kg	0.64	2.82	28.6	2.82	mg/kg	95% UCL	95% KM (Chevyshev) UCL

Notes
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/kg = milligram/kilogram
[1]Arithmetic mean of detected analytical results.

TABLE 3.8
EXPOSURE POINT CONCENTRATION SUMMARY
North Area Pit Exposure Area
Leaching from Soil to Class 3 Groundwater (All Soils)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	All Soil
Exposure Medium:	Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
North Pit Exposure Area	Lead	mg/kg	---	---	1800	1800	mg/kg	Max	Max
All Soils	Selenium	mg/kg	---	---	157	157	mg/kg	Max	Max
Leaching from soils	Mercury	mg/kg	---	---	58.1	58	mg/kg	Max	Max
to groundwater	1-Methylnaphthalene	mg/kg	---	---	41	41	mg/kg	Max	Max

Notes
--- = Not determined
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/kg = milligram/kilogram
The maximum detected concentrations for all COCs were used as the EPCs for leaching from soil to groundwater.

TABLE 3.9
EXPOSURE POINT CONCENTRATION SUMMARY
South Pit Exposure Area
Direct Contact with Waste (>2-10 feet bgs)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Waste
Exposure Medium:	Surface Soil, Vapor and Particulates

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean[1]	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
South Pit Exposure Area	Arsenic	mg/kg	3.72	6.88	12.7	6.88	mg/kg	95% UCL	95% Student's t UCL
Waste	Mercury	mg/kg	0.74	3.19	5.27	3.19	mg/kg	95% UCL	95% KM (Chebyshev) UCL
0-10 ft bgs	alpha-BHC[2]	mg/kg	---	---	0.55	0.55	mg/kg	Max	Max
	Heptachlor epoxide	mg/kg	1.23	1.42	3.8 J	1.42	mg/kg	95% UCL	95% KM (Percentile Bootstrap) UCL
	1,3,5-Trimethylbenzene	mg/kg	26.41	136.8	140	137	mg/kg	95% UCL	95% Adjusted Gamma UCL
	Benzene	mg/kg	39.51	178.9	240	179	mg/kg	95% UCL	95% Adjusted Gamma UCL
	Ethylbenzene	mg/kg	79.78	132.2	250	132	mg/kg	95% UCL	95% Student's t UCL
	Naphthalene	mg/kg	26.91	83.2	97	83	mg/kg	95% UCL	95% Approximate Gamma UCL
	1-Methylnaphthalene	mg/kg	55.14	204.1	250	204	mg/kg	95% UCL	95% Adjusted Gamma UCL
	Benz(a)anthracene	mg/kg	2.76	4.83	9.8	4.83	mg/kg	95% UCL	95% Student's t UCL
	Benzo(a)pyrene	mg/kg	2.53	4.76	11	4.76	mg/kg	95% UCL	95% Student's t UCL
	Benzo(b)fluoranthene	mg/kg	0.97	3.18	4.6	3.18	mg/kg	95% UCL	95% KM (Chebyshev) UCL
	D benz(a,h)anthracene	mg/kg	1.1	1.28	3.7	1.28	mg/kg	95% UCL	95% KM (Percentile Bootstrap) UCL

Notes
--- = Not determined
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/kg = milligram/kilogram
NA = Not available
[1]Arithmetic mean of detected analytical results.
[2] The maximum concentration is used when the frequency of the detection is less than 20 percent and/or the estimated UCL is below the arithmetic mean of the detected analytical results.

TABLE 3.10
EXPOSURE POINT CONCENTRATION SUMMARY
South Pit Exposure Area
Migration of Vapors from Waste to Ambient Air (All Waste)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Waste
Exposure Medium:	Outdoor Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean[1]	95% UCL (Distr bution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
South Pit Exposure Area All Waste (Outdoor Air Vapors)	Mercury	mg/kg	0.44	1.54	5.27	1.54	mg/kg	95% UCL	95% KM (Chebyshev) UCL
	Heptachlor epoxide	mg/kg	1.22	1.1	3.8 J	1.12	mg/kg	95% UCL	95% KM(t) UCL
	1,3,5-Trimethylbenzene	mg/kg	19.9	40.1	140	40	mg/kg	95% UCL	95% Adjusted Gamma UCL
	Benzene	mg/kg	33.32	60.4	240	60	mg/kg	95% UCL	95% Adjusted Gamma UCL

Notes
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/kg = milligram/kilogram
[1]Arithmetic mean of detected analytical results.

TABLE 3.11
EXPOSURE POINT CONCENTRATION SUMMARY
South Pit Exposure Area
Leaching from Waste to Class 3 Groundwater (All Waste)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Waste
Exposure Medium:	Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
South Pit Exposure Area All Waste Leaching from waste to groundwater	Lead	mg/kg	---	---	215	215	mg/kg	Max	Max
	Mercury	mg/kg	---	---	5.27	5.27	mg/kg	Max	Max
	alpha-BHC	mg/kg	---	---	0.55	0.55	mg/kg	Max	Max
	beta-BHC	mg/kg	---	---	0.83 (JH)	0.83	mg/kg	Max	Max
	Heptachlor epoxide	mg/kg	---	---	3.8 (J)	3.8	mg/kg	Max	Max
	Benzene	mg/kg	---	---	240	240	mg/kg	Max	Max
	Methylene chloride	mg/kg	---	---	0.74 (J)	0.74	mg/kg	Max	Max
	1-Methylnaphthalene	mg/kg	---	---	250	250	mg/kg	Max	Max
	3&4-Methylphenol	mg/kg	---	---	110	110	mg/kg	Max	Max

Notes
--- = Not determined
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/kg = milligram/kilogram
The maximum detected concentrations for all COCs were used as the EPCs for leaching from waste to groundwater.

TABLE 3.12
EXPOSURE POINT CONCENTRATION SUMMARY
Upper Transmissive Unit - South Pit Exposure Area
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
On-Site Groundwater Upper Transmissive Unit South Pit Exposure Area	Arsenic	mg/l	---	---	2.4	2.4	mg/l	Max	Max
	alpha-BHC	mg/l	---	---	0.0075	0.0075	mg/l	Max	Max
	Dieldrin	mg/l	---	---	0.0049	0.0049	mg/l	Max	Max
	Benzene	mg/l	---	---	5.8	5.8	mg/l	Max	Max
	3&4-Methylphenol	mg/l	---	---	57	57	mg/l	Max	Max

Notes
--- = Not determined
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/l = milligram/liter

TABLE 3.13
EXPOSURE POINT CONCENTRATION SUMMARY
Second Transmissive Unit - South Pit Exposure Area
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Tap Water Use

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
On-Site Groundwater Second Transmissive Unit South Pit Exposure Area	Arsenic	mg/l	---	---	0.0177	0.0177	mg/l	Max	Max
	Cobalt	mg/l	---	---	0.00785	0.00785	mg/l	Max	Max
	Manganese	mg/l	---	---	0.575	0.575	mg/l	Max	Max
	4,4´-DDD	mg/l	---	---	0.00008	0.00008	mg/l	Max	Max
	alpha-BHC	mg/l	---	---	0.000011	0.000011	mg/l	Max	Max
	beta-BHC	mg/l	---	---	0.000078	0.000078	mg/l	Max	Max
	Dieldrin	mg/l	---	---	0.0000048	0.0000048	mg/l	Max	Max
	Heptachlor	mg/l	---	---	0.0000024	0.0000024	mg/l	Max	Max
	Benzene	mg/l	---	---	0.00042 (J)	0.00042	mg/l	Max	Max

Notes
--- = Not determined
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/l = milligram/liter

TABLE 3.14
EXPOSURE POINT CONCENTRATION SUMMARY
Second Transmissive Unit - North Pit Exposure Area
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Tap Water Use

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
On-Site Groundwater Second Transmissive Unit North Pit Exposure Area	Arsenic	mg/l	---	---	0.0093	0.0093	mg/l	Max	Max
	alpha-BHC	mg/l	---	---	0.0000067	0.0000067	mg/l	Max	Max
	Heptachlor	mg/l	---	---	0.0000019	0.0000019	mg/l	Max	Max
			---	---					

Notes
--- = Not determined
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/l = milligram/liter

TABLE 3.15
EXPOSURE POINT CONCENTRATION SUMMARY
Upper Transmissive Unit - Off-Site Exposure Area
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Off-Site Exposure Area	Benzene	mg/l	---	---	3.5	3.5	mg/l	Max	Max
Upper Transmissive Unit									

Notes
--- = Not determined
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/l = milligram/liter

TABLE 3.16
EXPOSURE POINT CONCENTRATION SUMMARY
Second Transmissive Unit - Off-Site Exposure Area
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Tap Water Use

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Off-Site Exposure Area Second Transmissive Unit	Arsenic	mg/l	---	---	0.106	0.106	mg/l	Max	Max
	Cobalt	mg/l	---	---	0.00604	0.00604	mg/l	Max	Max
	Manganese	mg/l	---	---	3.55	3.55	mg/l	Max	Max
	4,4´-DDE	mg/l	---	---	0.00029	0.00029	mg/l	Max	Max
	beta-BHC	mg/l	---	---	0.000076	0.000076	mg/l	Max	Max
	Dieldrin	mg/l	---	---	0.0000049	0.0000049	mg/l	Max	Max
	gamma-BHC	mg/l	---	---	0.000042 (J)	0.000042	mg/l	Max	Max
	Heptachlor	mg/l	---	---	0.0000092 (J)	0.0000092	mg/l	Max	Max
	Heptachlor epoxide	mg/l	---	---	0.00019	0.00019	mg/l	Max	Max
	1,2,4-Trimethylbenzene	mg/l	---	---	0.022	0.022	mg/l	Max	Max
	Benzene	mg/l	---	---	0.019	0.019	mg/l	Max	Max
	Dibromochloromethane	mg/l	---	---	0.00038 (J)	0.00038	mg/l	Max	Max
	Ethylbenzene	mg/l	---	---	0.058	0.058	mg/l	Max	Max
	Naphthalene	mg/l	---	---	0.02	0.02	mg/l	Max	Max
	1-Methylnaphthalene	mg/l	---	---	0.0057	0.0057	mg/l	Max	Max
	2,4-Dimethylphenol	mg/l	---	---	0.46	0.46	mg/l	Max	Max
	4,6-Dinitro-2-methylphenol	mg/l	---	---	0.0019	0.0019	mg/l	Max	Max
	Benz(a)anthracene	mg/l	---	---	0.000055 (J)	0.000055	mg/l	Max	Max
	Pentachlorophenol	mg/l	---	---	0.00047	0.00047	mg/l	Max	Max

Notes
--- = Not determined
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/l = milligram/liter

TABLE 3.17
EXPOSURE POINT CONCENTRATION SUMMARY
East Ditch Sediment
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
East Ditch Sediment	Benz(a)anthracene	mg/kg	---	---	5.8	5.8	mg/kg	Max	Max
	Benzo(a)pyrene	mg/kg	---	---	5.0 (JL)	5.0	mg/kg	Max	Max
	Benzo(b)fluoranthene	mg/kg	---	---	4.6 (JL)	4.6	mg/kg	Max	Max
	Dibenz(a,h)anthracene	mg/kg	---	---	1.1 (JL)	1.1	mg/kg	Max	Max
	Indeno(1,2,3-cd)pyrene	mg/kg	---	---	3.5 (JL)	3.5	mg/kg	Max	Max

Notes
--- = Not determined
95% UCL = 95 percent upper confidence limit.
J = Estimated value
L = Estimated value is biased low
Max = Maximum detected concentration
mg/kg = milligram/kilogram

TABLE 3.18
EXPOSURE POINT CONCENTRATION SUMMARY
East Ditch Surface Water
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	RME Exposure Point Concentration			
						Value	Units	Statistic	Rationale
East Ditch	Arsenic	mg/l	---	---	0.0156 (J)	0.0156	mg/l	Max	Max
Surface Water	Aldrin	mg/l	---	---	0.000029	0.000029	mg/l	Max	Max

Notes
--- = Not determined
95% UCL = 95 percent upper confidence limit.
J = Estimated value
Max = Maximum detected concentration
mg/l = milligram/liter

TABLE 3.19
EXPOSURE POINT CONCENTRATION SUMMARY
South Pit Exposure Area Soil Gas - Adult Video Store and Roberts Equipment Building
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Soil Gas
Exposure Medium:	Indoor Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration[(1)]			
						Value	Units	Statistic	Rationale
Adult Video Store Building SG-22	Benzene	ug/m3	---	---	360000	360000	ug/m3	Max	Max
	Ethylbenzene	ug/m3	---	---	42000	42000	ug/m3	Max	Max
	TPH (C5-C8 Aliphatics)	ug/m3	---	---	7200000	7200000	ug/m3	Max	Max
Adult Video Store Building SG-13	TPH (C5-C8 Aliphatics)	ug/m3	---	---	580000	580000	ug/m3	Max	Max
			---	---					
Robert's Equipment Building SG-33	Benzene	ug/m3	---	---	540000	540000	ug/m3	Max	Max
	Ethylbenzene	ug/m3	---	---	32000	32000	ug/m3	Max	Max
	TPH (C5-C8 Aliphatics)	ug/m3	---	---	9700000	9700000	ug/m3	Max	Max

Note
95% UCL = 95 percent upper confidence limit.
Max = Maximum detected concentration
ug/m3 = micrograms/cubic meter
NA = Not available

(1) The soil gas EPCs are used to estimate potential indoor air concentrations as presented in Appendix I. The predicted indoor air EPCs are used in the risk calculations in presented Tables 7.2a,b and c (Appendices A and B)

RME AND CTE ON-SITE OUTDOOR WORKER

Scenario Table	Medium	Exposure Medium	Exposure Route
T-4.1a RME and CTE Ind SS Ing	Surface soil	Surface soil	Ingestion
T-4.1b RME and CTE Ind SS DC	Surface soil	Surface soil	Dermal contact
T-4.1c RME and CTE Ind SS Inh Vap&Dst	Surface soil	Outdoor air - vapors and particulates	Inhalation
T-4.1d RME and CTE Ind SBS Inh Vap	Subsurface soil	Outdoor air - vapors	Inhalation
T-4.1e RME and CTE Ind Waste Inh Vap	Waste	Outdoor air - vapors	Inhalation
T-4.1f RME and CTE Ind GW Ing	Second Transmissive Unit	Tap water	Ingestion
T-4.1g RME and CTE Ind GW Inh Vap	Upper Transmissive Unit	Outdoor air - vapors	Inhalation

TABLE 4.1a
INTAKE ASSUMPTIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE OUTDOOR WORKER SCENARIO - INGESTION OF SURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Ingestion	Outdoor Worker	Adult	On-site surface soil 0-2 feet bgs	Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.1 and 3.5 (Appendix A)	Site-Specific	Tables 3.1 and 3.5 (Appendix A)	$Intake(mg/kg-day) = \frac{C_{soil} \cdot IR_{soil} \cdot FI \cdot EF \cdot ED \cdot 10^{-6}\, kg/mg}{BW \cdot AT}$
				IRsoil	Ingestion rate of soil	mg/day	50	USEPA, 1991a and 2002a	50	USEPA, 1991a and 2002a	
				FIsoil	Fraction ingested, soil	unitless	1	Professional Judgment	1	Professional Judgment	
				EF	Exposure frequency	days/year	250	USEPA, 1991a and 2002a	250	USEPA, 1991a and 2002a	
				ED	Exposure duration	years	25	USEPA, 1991a and 2002a	9	USEPA, 2004a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A. EPA/540/1-89/002. December 1989.
				ATnc	Averaging time for non-carcinogens	days	9125	USEPA, 1989	3285	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 1991a. Risk Assessment Guidance for Superfund: Volume 1: Human Health Evaluation Manual (Part B), Development of Risk-Based Preliminary Remediation Goals. Interim. Washington, DC. December.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.

TABLE 4.1b
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE OUTDOOR WORKER SCENARIO - DERMAL CONTACT WITH SURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Dermal Contact	Outdoor Worker	Adult	On-site surface soil 0-2 feet bgs	Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.1 and 3.5 (Appendix A)	Site-Specific	Tables 3.1 and 3.5 (Appendix A)	$DAD(mg/kg-day) = \frac{DA_{event} \cdot EF \cdot ED \cdot EV \cdot SA}{BW \cdot AT}$
				AF	Adherence factor of soil to skin	mg/cm2-event	0.2	USEPA, 2004a	0.02	USEPA, 2004a	
				ABSd	Dermal absorption fraction	unitless	Chemical Specific	Appendix D-1	Chemical Specific	Appendix D-1	
				EF	Exposure frequency	days/year	250	USEPA, 1991a and 2002a	250	USEPA, 1991a and 2002a	
				ED	Exposure duration	years	25	USEPA, 1991a and 2002a	9	USEPA, 2004a	$DA_{event}(mg/cm^2-event) = C_{soil} \cdot AF \cdot ABS_d \cdot 10^{-6} kg/mg$
				EV	Event frequency	events/day	1	USEPA, 2004a	1	USEPA, 2004a	
				SAs	Skin surface area available for contact for soil	cm2	3300	USEPA, 2004a	3300	USEPA, 2004a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 2004a. RAGS Vol I: Human Health Evaluation Manual, Part E. EPA/540/R/99/005. July 2004
				ATnc	Averaging time for non-carcinogens	days	9125	USEPA, 1989	3285	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 1991a. Risk Assessment Guidance for Superfund: Volume 1: Human Health Evaluation Manual (Part B), Development of Risk-Based Preliminary Remediation Goals. Interim. Washington, DC. December.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.

TABLE 4.1c
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE OUTDOOR WORKER SCENARIO - NHALATION OF VAPORS AND PARTICULATES N SURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Outdoor Air Vapors and Particulates

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Outdoor Worker	Adult	On-site outdoor air vapors and particulates 0-2 feet bgs	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC\ (mg\ /\ m^3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.1 and 3 5 (Appendix A)	Site-Specific	Tables 3.1 and 3.5 (Appendix A)	
				ET	Exposure time	hr/day	8	Professional Judgment	8	Professional Judgment	
				EF	Exposure frequency	days/year	250	USEPA, 1991a and 2002a	250	USEPA, 1991a and 2002a	
				ED	Exposure duration	years	25	USEPA, 1991a and 2002a	9	USEPA, 2004a	
				Atnc(hours)	Averaging time for non-carcinogens	hours	219000	USEPA, 2009	78840	USEPA, 2009	
				ATc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	
				PEF	Particulate emissions factor	m3/kg	Site-Specific	Appendix E-2	Site-Specific	Appendix E-2	
				Q/Cwind	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ, 1999	40.76	TCEQ, 1999	
				V	Fraction of vegetative cover	unitless	0.5	TCEQ, 1999	0.5	TCEQ, 1999	
				Um	Mean annual windspeed	m/s	4.8	TCEQ, 1999	4.8	TCEQ, 1999	
				Ut	Equivalent threshold value of windspeed at 7m	m/s	11 32	TCEQ, 1999	11 32	TCEQ, 1999	
				F(x)	Function dependent on Um/Ut	unitless	0.22	TCEQ, 1999	0.22	TCEQ, 1999	
				VFs	Volatilization factor, soil to ambient air	m3/kg	Calculated	Appendix E-1	Chemical Specific	Appendix E-1	
				Q/Cvol	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ,1999	40.76	TCEQ,1999	
				T	Exposure interval	s	9 50E+08	TCEQ, 1999; USEPA, 2002a	9 50E+08	TCEQ, 1999; USEPA, 2002a	
				ρb	Dry soil bulk density	g/cm3	1.67	TCEQ, 1999	1.67	TCEQ, 1999	
				DA	Apparent diffusivity	cm2/s	Chemical Specific	Appendix E-1	Chemical Specific	Appendix E-1	
				θa	Air-filled soil porosity (Lair/Lsoil)	cm3-air/cm3-soil	0.21	TCEQ, 1999	0.21	TCEQ, 1999	
				Di	Chemical diffusivity in air	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				θw	Water-filled soil porosity (Lwater/Lsoil)	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				n	Total soil porosity	cm3-pore space/cm3-soil	0.37	TCEQ, 1999	0.37	TCEQ, 1999	
				Kd	Soil organic carbon partition coefficient; for organics, kd = Koc *foc	cm3-water/g-soil	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				Koc	Soil organic carbon-water partition coefficient	cm3-water/g-carbon	Chemical-Specific	Appendix D-2	Chemical-Specific	Appendix D-2	
				foc	Fraction organic carbon in soil	g-carbon/g-soil	0.008	TCEQ, 1999	0.008	TCEQ, 1999	

EC = Exposure Concentration

$$C_{air}\,(mg/m^3) = \frac{C_{soil}}{VF_s + PEF}$$

$$PEF\,(m^3/kg) = Q/C_{wind} \times \frac{3{,}600\,s/h}{0\ 036 \cdot (1-V) \cdot \left(\frac{U_m}{U_t}\right)^3 \cdot F(x)}$$

$$VF_s\,(m^3/kg) = \frac{Q/C_{vol} \cdot (3\ 14 \cdot D_A \cdot T)^{\frac{1}{2}} \cdot 10^{-4}\,m^2/cm^2}{2 \cdot \circ_b \cdot D_A}$$

$$DA(cm^2/s) = \frac{{}^{-10/3}_{a} \cdot D_i \cdot H' + {}^{-10/3}_{w} \cdot D_w}{n^2 \cdot (\circ_b \cdot K_d + {}^{-}_{w} + {}^{-}_{a} \cdot H')}$$

USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December 2002.

USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.

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USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

TABLE 4.1d
VALUES USED FOR DA LY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE OUTDOOR WORKER SCENARIO - INHALATION OF VAPORS FROM SUBSURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Outdoor Worker	Adult	On-site outdoor air vapors >2 feet bgs	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC\ (mg\ /\ m^3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.3 and 3.7 (Appendix A)	Site-Specific	Tables 3.3 and 3.7 (Appendix A)	
				ET	Exposure time	hr/day	8	Professional Judgment	8	Professional Judgment	
				EF	Exposure frequency	days/year	250	USEPA, 1991a and 2002a	250	USEPA, 1991a and 2002a	*EC = Exposure Concentration*
				ED	Exposure duration	years	25	USEPA, 1991a and 2002a	9	USEPA, 2004a	
				Atnc(hours)	Averaging time for non-carcinogens	hours	219000	USEPA, 2009	78840	USEPA, 2009	
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	$C_{air}(mg/m^3) = \frac{C_{soil}}{VF_s}$
				VFs	Volatilization factor, soil to ambient air	m3/kg	Calculated	Appendix E-1	Chemical Specific	Appendix E-1	
				Q/Cvol	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ,1999	40.76	TCEQ,1999	
				T	Exposure interval	s	9 50E+08	TCEQ, 1999; USEPA, 2002a	9.50E+08	TCEQ, 1999; USEPA, 2002a	$VF_s(m^3/kg) = \frac{Q/C_{vol} \cdot (3.14 \cdot D_A \cdot T)^{\frac{1}{2}} \cdot 10^{-4} m^2/cm^2}{2 \cdot \theta_b \cdot D_A}$
				ρb	Dry soil bulk density	g/cm3	1.67	TCEQ, 1999	1.67	TCEQ, 1999	
				DA	Apparent diffusivity	cm2/s	Chemical Specific	Appendix E-1	Chemical Specific	Appendix E-1	
				θa	Air-filled soil porosity (Lair/Lsoil)	cm3-air/cm3-soil	0.21	TCEQ, 1999	0.21	TCEQ, 1999	
				Di	Chemical diffusivity in air	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	$DA(cm^2/s) = \frac{\theta_a^{10/3} \cdot D_i \cdot H' + \theta_w^{10/3} \cdot D_w}{n^2 \cdot (\theta_b \cdot K_d + \theta_w + \theta_a \cdot H')}$
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				θw	Water-filled soil porosity (Lwater/Lsoil)	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December 2002.
				n	Total soil porosity	cm3-pore space/cm3-soil	0.37	TCEQ, 1999	0.37	TCEQ, 1999	
				Kd	Soil organic carbon partition coefficient; for organics, kd = Koc *foc	cm3-water/g-soil	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				Koc	Soil organic carbon-water partition coefficient	cm3-water/g-carbon	Chemical-Specific	Appendix D-2	Chemical-Specific	Appendix D-2	USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.
				foc	Fraction organic carbon in soil	g-carbon/g-soil	0 008	TCEQ, 1999	0.008	TCEQ, 1999	

References

TCEQ, 1999. Texas Risk Reduction Program (TRRP) Rule, 30 Texas Administrative Code (TAC) 350. Effective August 17, 2000.
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TABLE 4.1e
VALUES USED FOR DA LY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE OUTDOOR WORKER SCENARIO - INHALATION OF VAPORS FROM SUBSURFACE WASTE MATERIAL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Waste
Exposure Medium:	Outdoor Air Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Outdoor Worker	Adult	On-site outdoor air vapors > 2 feet bgs	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC\ (mg\ /\ m^3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Cwaste	Chemical concentration in waste	mg/kg	Site-Specific	Table 3.10 (Appendix A)	Site-Specific	Table 3.10 (Appendix A)	
				ET	Exposure time	hr/day	8	Professional Judgment	8	Professional Judgment	
				EF	Exposure frequency	days/year	250	USEPA, 1991a and 2002a	250	USEPA, 1991a and 2002a	*EC = Exposure Concentration*
				ED	Exposure duration	years	25	USEPA, 1991a and 2002a	9	USEPA, 2004a	
				Atnc(hours)	Averaging time for non-carcinogens	hours	219000	USEPA, 2009	78840	USEPA, 2009	
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	$C_{air}\,(mg/m^3) = \frac{C_{soil}}{VF_s}$
				VFs	Volatilization factor, soil to ambient air	m3/kg	Calculated	Appendix E-1	Chemical Specific	Appendix E-1	
				Q/Cvol	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ,1999	40.76	TCEQ,1999	
				T	Exposure interval	s	9.50E+08	TCEQ, 1999; USEPA, 2002a	9.50E+08	TCEQ, 1999; USEPA, 2002a	$VF_s(m^3/kg) = \frac{Q/C_{vol} \cdot (3.14 \cdot D_A \cdot T)^{\frac{1}{2}} \cdot 10^{-4} m^2/cm^2}{2 \cdot \theta_b \cdot D_A}$
				ρb	Dry soil bulk density	g/cm3	1.67	TCEQ, 1999	1.67	TCEQ, 1999	
				DA	Apparent diffusivity	cm2/s	Chemical Specific	Appendix E-1	Chemical Specific	Appendix E-1	
				θa	Air-filled soil porosity (Lair/Lsoil)	cm3-air/cm3-soil	0.21	TCEQ, 1999	0.21	TCEQ, 1999	
				Di	Chemical diffusivity in air	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	$DA(cm^2/s) = \frac{\theta_a^{10/3} \cdot D_i \cdot H' + \theta_w^{10/3} \cdot D_w}{n^2 \cdot (\theta_b \cdot K_d + \theta_w + \theta_a \cdot H')}$
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				θw	Water-filled soil porosity (Lwater/Lsoil)	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				n	Total soil porosity	cm3-pore space/cm3-soil	0.37	TCEQ, 1999	0.37	TCEQ, 1999	
				Kd	Soil organic carbon partition coefficient; for organics, kd = Koc *foc	cm3-water/g-soil	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				Koc	Soil organic carbon-water partition coefficient	cm3-water/g-carbon	Chemical-Specific	Appendix D-2	Chemical-Specific	Appendix D-2	
				foc	Fraction organic carbon in soil	g-carbon/g-soil	0.008	TCEQ, 1999	0.008	TCEQ, 1999	

USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December 2002.

USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.

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TABLE 4.1f
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE OUTDOOR WORKER SCENARIO - INGESTION OF GROUNDWATER (STU)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inges ion	Outdoor Worker	Adult	On-site groundwater -STU Tap water use	Cgw	Chemical concentration in groundwater	mg/L	Site-Specific	Tables 3.14 and 3.15 (Appendix A)	Site-Specific	Tables 3.14 and 3.15 (Appendix A)	$Intake(mg/kg-day)=\frac{C_{gw}\cdot IR_w\cdot EF\cdot ED}{BW\cdot AT}$ USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A. EPA/540/1-89/002. December 1989.
				IRw	Ingestion rate of water	L/day	1	USEPA, 1991b	1	USEPA, 1991b	
				EF	Exposure frequency	days/year	250	USEPA, 1991a and 2002a	250	USEPA, 1991a and 2002a	
				ED	Exposure duration	years	25	USEPA, 1991a and 2002a	9	USEPA, 2004a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	
				ATnc	Averaging time for non-carcinogens	days	9125	USEPA, 1989	3285	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evalua ion Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 1991a. Risk Assessment Guidance for Superfund: Volume 1: Human Health Evalua ion Manual (Part B), Development of Risk-Based Preliminary Remediation Goals. Interim. Washington, DC. December.
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TABLE 4.1g
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE OUTDOOR WORKER SCENARIO - INHALATION OF VAPORS MIGRATING FROM GROUNDWATER TO OUTDOOR AIR (UTU)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Outdoor Air Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CTE Rationale/Reference	Intake Equation/ Model Name
Inhalation	Outdoor Worker	Adult	On-Site Groundwater - UTU Vapors from Groundwater	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC(mg/m3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Cgw	Chemical concentration in groundwater	mg/L	Site-Specific	Table 3.12 (Appendix A)	Site-Specific	Table 3.12 (Appendix A)	
				ET	Exposure time	hr/day	8	Professional Judgment	8	Professional Judgment	
				EF	Exposure frequency	days/year	250	USEPA, 1991a and 2002a	250	USEPA, 1991a and 2002a	
				ED	Exposure duration	years	25	USEPA, 1991a and 2002a	9	USEPA, 2004a	
				Atnc(hours)	Averaging time for non-carcinogens	hours	219000	USEPA, 2009	78840	USEPA, 2009	
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	
				VFwamb	Volatilization factor, groundwater to ambient air	L/m3	Chemical Specific	Appendix F-1	Chemical Specific	Appendix F-1	*EC = Exposure Concentration*
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	$C_{air}(mg/m3) = C_{gw} \cdot VF_{wamb}$
				Uair	Windspeed above ground surface in ambient mixing zone	cm/s	2.40E+02	TCEQ, 1999	2.40E+02	TCEQ, 1999	$VF_{wamb}\left[\frac{mg/m^3 - air}{mg/L - H_2O}\right] = \frac{H'}{1+\left[\frac{U_{air} \cdot \mathbb{C}_{air} L_{gw}}{W_g D_{ws}^{eff}}\right]} \bullet \left[10^3 \frac{L}{m^3}\right]$
				dair	Ambient air mixing zone height	cm	200	TCEQ, 1999	200	TCEQ, 1999	
				Lgw	Depth to groundwater, Lgw = hcap + hv	cm	300	Site-specific	300	Site-specific	
				hcap	Thickness of the capillary fringe	cm	5	TCEQ, 1999	5	TCEQ, 1999	
				hv	Thickness of the vadose zone	cm	295	Site-specific	295	Site-specific	
				Wg	Width of gw source in the direction of the closest off-site property line (30-acre default)	cm	34800	TCEQ, 1999	34800	TCEQ, 1999	$D_{ws}^{eff}\left[\frac{cm^2}{s}\right] = \left(h_{cap} + h_v\right)\left[\frac{h_{cap}}{D_{cap}^{eff}} + \frac{h_v}{D_s^{eff}}\right]^{-1}$
				D^{eff}_{ws}	Effective diffusivity above water table	cm2/s	Chemical Specific	Appendix F-1	Chemical Specific	Appendix F-1	$D_{cap}^{eff}\left[\frac{cm^2}{s}\right] = D^{air}{}_{\frac{acap}{T}}^{-3.33} + \left[\frac{D^w}{H'}\right]_{\frac{wcap}{T}}^{-3.33}$
				D^{eff}_{cap}	Effective diffusivity in the capillary fringe	cm2/s	Chemical Specific	Appendix F-1	Chemical Specific	Appendix F-1	
				D^{eff}_{s}	Effective diffusivity in the vadose zone soils	cm2/s	Chemical Specific	Appendix F-1	Chemical Specific	Appendix F-1	$D_s^{eff}\left[\frac{cm^2}{s}\right] = D^{air}{}_{\frac{as}{T}}^{-3.33} + \left[\frac{D^w}{H'}\right]_{\frac{ws}{T}}^{-3.33}$
				θacap	Volumetric air content of capillary fringe soils	cm3-air/cm3-soil	0.037	TCEQ, 1999	0.037	TCEQ, 1999	
				θwcap	Volumetric water content of capillary fringe soils	cm3-H2O/cm3-soil	0.333	TCEQ, 1999	0.333	TCEQ, 1999	
				θas	Volumetric air content in vadose zone soils	cm3-air/cm3-soil	0 21	TCEQ, 1999	0.21	TCEQ, 1999	
				θws	Volumetric water content in vadose zone soils	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	TCEQ, 1999. Texas Risk Reduction Program (TRRP).
				θT	Total soil porosity	cm3 pore space/cm3 soil	0 37	TCEQ, 1999	0.37	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	USEPA, 2009. RAGS, Human Heal h Manual. Part F. January 2009.

References:

TCEQ, 1999. Texas Risk Reduction Program (TRRP) Rule, 30 Texas Administrative Code (TAC) 350. Effective August 17, 2000.
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USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.
USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

RME AND CTE OFF-SITE OUTDOOR WORKER

Scenario Table	Medium	Exposure Medium	Exposure Route
T-4.2a RME and CTE Ind GW Ing	Second Transmissive Unit	Tap water	Ingestion
T-4.2b RME and CTE Ind GW Inh Vap	Upper Transmissive Unit	Outdoor Air - vapors	Inhalation

TABLE 4.2a
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
OFF-SITE OUTDOOR WORKER SCENARIO - INGESTION OF GROUNDWATER (STU)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Ingestion	Outdoor Worker	Adult	Off-site groundwater - STU Tap water use	Cgw	Chemical concentration in groundwater	mg/L	Site-Specific	Table 3.16 (Appendix A)	Site-Specific	Table 3.16 (Appendix A)	$Intake(mg/kg-day) = \frac{C_{gw} \cdot IR_w \cdot EF \cdot ED}{BW \cdot AT}$
				IRw	Ingestion rate of water	L/day	1	USEPA, 1991b	1	USEPA, 1991b	
				EF	Exposure frequency	days/year	250	USEPA, 1991a and 2002a	250	USEPA, 1991a and 2002a	
				ED	Exposure duration	years	25	USEPA, 1991a and 2002a	9	USEPA, 2004a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A. EPA/540/1-89/002. December 1989.
				ATnc	Averaging time for non-carcinogens	days	9125	USEPA, 1989	3285	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

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TABLE 4.2b
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
OFF-SITE OUTDOOR WORKER SCENARIO - INHALATION OF VAPORS MIGRATING FROM GROUNDWATER TO OUTDOOR AIR (UTU)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Outdoor Air Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equa ion/ Model Name
Inhalation	Outdoor Worker	Adult	Off-site groundwater - UTU vapors from groundwater	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC(mg/m3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Cgw	Chemical concentration in groundwater	mg/L	Site-Specific	Table 3.15 (Appendix A)	Site-Specific	Table 3.15 (Appendix A)	
				ET	Exposure time	hr/day	8	Professional Judgment	8	Professional Judgment	
				EF	Exposure frequency	days/year	250	USEPA, 1991a and 2002a	250	USEPA, 1991a and 2002a	
				ED	Exposure dura ion	years	25	USEPA, 1991a and 2002a	9	USEPA, 2004a	
				Atnc(hours)	Averaging time for non-carcinogens	hours	219000	USEPA, 2009	78840	USEPA, 2009	
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	
				VFwamb	Vola ilization factor, groundwater to ambient air	L/m3	Chemical Specific	Appendix F-2	Chemical Specific	Appendix F-2	*EC = Exposure Concentration*
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	$C_{air}(mg/m3) = C_{gw} \cdot VF_{wamb}$
				Uair	Windspeed above ground surface in ambient mixing zone	cm/s	2.40E+02	TCEQ, 1999	2.40E+02	TCEQ, 1999	$VF_{wamb}\left[\frac{mg/m^3 - air}{mg/L - H_2O}\right] = \frac{H'}{1+\left[\frac{U_{air} \cdot \delta_{air} L_{gw}}{W_g D_{ws}^{eff}}\right]} \bullet \left[10^3 \frac{L}{m^3}\right]$
				dair	Ambient air mixing zone height	cm	200	TCEQ, 1999	200	TCEQ, 1999	
				Lgw	Depth to groundwater, Lgw = hcap + hv	cm	300	Site-specific	300	Site-specific	
				hcap	Thickness of the capillary fringe	cm	5	TCEQ, 1999	5	TCEQ, 1999	$D_{ws}^{eff}\left[\frac{cm^2}{s}\right] = \left(h_{cap} + h_v\right)\left[\frac{h_{cap}}{D_{cap}^{eff}} + \frac{h_v}{D_s^{eff}}\right]^{-1}$
				hv	Thickness of the vadose zone	cm	295	Site-specific	295	Site-specific	
				Wg	Width of gw source in the direction of the closest off-site property line (30-acre default)	cm	34800	TCEQ, 1999	34800	TCEQ, 1999	$D_{cap}^{eff}\left[\frac{cm^2}{s}\right] = D^{air}\frac{-3.33}{\frac{acap}{T^2}} + \left[\frac{D^w}{H'}\right]\left[\frac{-3.33}{\frac{wcap}{T^2}}\right]$
				D^{eff}_{ws}	Effective diffusivity above water table	cm2/s	Chemical Specific	Appendix F-2	Chemical Specific	Appendix F-2	
				D^{eff}_{cap}	Effective diffusivity in the capillary fringe	cm2/s	Chemical Specific	Appendix F-2	Chemical Specific	Appendix F-2	
				D^{eff}_{s}	Effective diffusivity in the vadose zone soils	cm2/s	Chemical Specific	Appendix F-2	Chemical Specific	Appendix F-2	$D_s^{eff}\left[\frac{cm^2}{s}\right] = D^{air}\frac{-3.33}{\frac{as}{T^2}} + \left[\frac{D^w}{H'}\right]\left[\frac{-3.33}{\frac{ws}{T^2}}\right]$
				θacap	Volumetric air content of capillary fringe soils	cm3-air/cm3-soil	0.037	TCEQ, 1999	0.037	TCEQ, 1999	
				θwcap	Volumetric water content of capillary fringe soils	cm3-H2O/cm3-soil	0.333	TCEQ, 1999	0.333	TCEQ, 1999	
				θas	Volumetric air content in vadose zone soils	cm3-air/cm3-soil	0.21	TCEQ, 1999	0.21	TCEQ, 1999	
				θws	Volumetric water content in vadose zone soils	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	TCEQ, 1999. Texas Risk Reduction Program (TRRP).
				θT	Total soil porosity	cm3-pore space/cm3-soil	0.37	TCEQ, 1999	0.37	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.

References:

TCEQ, 1999. Texas Risk Reduction Program (TRRP) Rule, 30 Texas Administrative Code (TAC) 350. Effective August 17, 2000.
USEPA, 1991a. Risk Assessment Guidance for Superfund: Volume 1: Human Health Evaluation Manual (Part B), Development of Risk-Based Preliminary Remediation Goals. Interim. Washington, DC. December.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.
USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

RME AND CTE ON-SITE INDOOR WORKER

Scenario Table	Medium	Exposure Medium	Exposure Route
T-4.3 RME and CTE Ind SG VI	Soil gas	Indoor air - vapors	Inhalation

TABLE 4.3
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE INDOOR WORKER SCENARIO -INHALATION OF VAPORS IN INDOOR AIR
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Soil Gas
Exposure Medium:	Indoor Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Indoor Worker	Adult	On-site indoor air vapors	Cair	Chemical concentration in air	mg/m3	Site-Specific	Appendix I	Site-Specific	Appendix I	$EC\ (mg\ /\ m^3) = \frac{C_{air} \cdot ET \cdot CF \cdot EF \cdot ED}{AT}$
				Csg	Concentration in soil gas	ug/m3	Site-Specific	Tables 3.19 (Appendix A)	Site-Specific	Tables 3.19 (Appendix A)	
				ET	Exposure time	hr/day	8	Professional Judgment	8	Professional Judgment	
				CF	Conversion Factor	mg/ug	0.001	Conversion Factor	0.001	Conversion Factor	*EC = Exposure Concentration*
				EF	Exposure frequency	days/year	250	USEPA, 1991a and 2002a	250	USEPA, 1991a and 2002a	
				ED	Exposure duration	years	25	USEPA, 1991a and 2002a	9	USEPA, 2004a	Air concentration estimated using USEPA (2004b). Vapor Intrusion Soil Gas Model
				Atnc(hours)	Averaging time for non-carcinogens	hours	219000	USEPA, 2009	78840	USEPA, 2009	
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.

References:

USEPA, 1991a. Risk Assessment Guidance for Superfund: Volume 1: Human Health Evaluation Manual (Part B), Development of Risk-Based Preliminary Remediation Goals. Interim. Washington, DC. December.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.
USEPA, 2004b. 3 Phase System Model and Soil Gas Model. February. Available online at http://www.epa.gov/oswer/riskassessment/airmodel/johnson_ettinger.htm
USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

RME AND CTE ON-SITE CONSTRUCTION WORKER

Scenario Table	Medium	Exposure Medium	Exposure Route
T-4.4a RME and CTE Const SS&SBS Ing	Surface and subsurface soil	Surface and subsurface soil	Ingestion
T-4.4b RME and CTE Const SS& SBS DC	Surface and subsurface soil	Surface and subsurface soil	Dermal contact
T-4.4c RME and CTE Const SS&SBS Inh Vap&Ds	Surface and subsurface soil	Vapors and particulates	Inhalation
T-4.4d RME and CTE Const Waste Ing	Waste	Waste	Ingestion
T-4.4e RME and CTE Const Waste DC	Waste	Waste	Dermal contact
T-4.4f RME and CTE Waste Inh Vap&Dst	Waste	Vapors and particulates	Inhalation
T-4.4g RME and CTE Const GW Ing	Upper Transmissive Unit	Groundwater in trench	Ingestion
T-4.4h RME and CTE Const GW DC	Upper Transmissive Unit	Groundwater in trench	Dermal contact
T-4.4i RME and CTE Const GW Inh Vap Trench	Upper Transmissive Unit	Outdoor air - vapors in trench	Inhalation

TABLE 4.4a
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE CONSTRUCTION WORKER SCENARIO - INGESTION OF SURFACE AND SUBSURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface and Subsurface Soil
Exposure Medium:	Surface and Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Ingestion	Construction Worker	Adult	On-site surface and subsurface soil 0-10 feet bgs	Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.2 and 3.6 (Appendix A)	Site-Specific	Tables 3.2 and 3.6 (Appendix A)	$Intake(mg/kg-day) = \frac{C_{soil} \cdot IR_{soil} \cdot FI \cdot EF \cdot ED \cdot 10^{-6} kg/mg}{BW \cdot AT}$
				IRsoil	Ingestion rate of soil	mg/day	330	USEPA, 2002a	100	USEPA, 1997	
				FIsoil	Fraction ingested, soil	unitless	1	Professional Judgment	1	Professional Judgment	
				EF	Exposure frequency	days/year	60	Professional Judgment	60	Professional Judgment	
				ED	Exposure duration	years	1	USEPA, 2002a	1	USEPA, 2002a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A. EPA/540/1-89/002. December 1989.
				ATnc	Averaging time for non-carcinogens	days	365	USEPA, 1989	365	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 1997. Exposure Factors Handbook. EPA/600/P-95/002Fa. Office of Research and Development. Washington, DC. August.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.

TABLE 4.4b
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAX MUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE CONSTRUCTION WORKER SCENARIO - DERMAL CONTACT WITH SURFACE AND SUBSURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface and Subsurface Soil
Exposure Medium:	Surface and Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Dermal Contact	Construction Worker	Adult	On-site surface and subsurface soil 0-10 feet bgs	Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.2 and 3.6 (Appendix A)	Site-Specific	Tables 3.2 and 3.6 (Appendix A)	$DAD(mg/kg-day)=\frac{DA_{event}\cdot EF\cdot ED\cdot EV\cdot SA}{BW\cdot AT}$
				AF	Adherence factor of soil to skin	mg/cm2-event	0.3	USEPA, 2004a	0.1	USEPA, 2004a	
				ABSd	Dermal absorption frac ion	unitless	Chemical Specific	Appendix D-1	Chemical Specific	Appendix D-1	
				EF	Exposure frequency	days/year	60	Professional Judgment	60	Professional Judgment	
				ED	Exposure duration	years	1	USEPA, 2002a	1	USEPA, 2002a	$DA_{event}(mg/cm^2-event)=C_{soil}\cdot AF\cdot ABS_d\cdot 10^{-6}kg/mg$
				EV	Event frequency	events/day	1	USEPA, 2004a	1	USEPA, 2004a	
				SAs	Skin surface area available for contact for soil	cm2	3300	USEPA, 2004a	3300	USEPA, 2004a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 2004a. RAGS Vol I: Human Health Evaluation Manual, Part E. EPA/540/R/99/005. July 2004
				ATnc	Averaging time for non-carcinogens	days	365	USEPA, 1989	365	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.

TABLE 4.4c
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE CONSTRUCTION WORKER SCENARIO - INHALATION OF VAPORS AND PARTICULATES N SURFACE AND SUBSURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface and Subsurface Soil
Exposure Medium:	Outdoor Air Vapors and particulates

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Construction Worker	Adult	On-site outdoor air vapors and particulates 0-10 feet bgs	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC\ (mg\ /\ m^3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.2 and 3.6 (Appendix A)	Site-Specific	Tables 3.2 and 3 6 (Appendix A)	
				ET	Exposure time	hr/day	8	Professional Judgment	8	Professional Judgment	
				EF	Exposure frequency	days/year	60	Professional Judgment	60	Professional Judgment	
				ED	Exposure duration	years	1	USEPA, 2002a	1	USEPA, 2002a	
				Atnc(hours)	Averaging time for non-carcinogens	hours	8760	USEPA, 2009	8760	USEPA, 2009	*EC = Exposure Concentration*
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	
				PEF	Particulate emissions factor	m3/kg	Site-Specific	Appendix E-2	Site-Specific	Appendix E-2	$C_{air}(mg/m^3) = \frac{C_{soil}}{VF_s + PEF}$
				Q/Cwind	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ, 1999	40.76	TCEQ, 1999	
				V	Fraction of vegetative cover	unitless	0.5	TCEQ, 1999	0.5	TCEQ, 1999	$PEF(m^3/kg) = Q/C_{wind} \times \frac{3{,}600 s/h}{0\ 036 \cdot (1-V) \cdot \left(\frac{U_m}{U_t}\right)^3 \cdot F(x)}$
				Um	Mean annual windspeed	m/s	4.8	TCEQ, 1999	4.8	TCEQ, 1999	
				Ut	Equivalent threshold value of windspeed at 7m	m/s	11.32	TCEQ, 1999	11.32	TCEQ, 1999	
				F(x)	Function dependent on Um/Ut	unitless	0.22	TCEQ, 1999	0 22	TCEQ, 1999	
				VFs	Volatilization factor, soil to ambient air	m3/kg	Chemical Specific	Appendix E-1	Calculated	Appendix E-1	$VF_s(m^3/kg) = \frac{Q/C_{vol} \cdot (3\ 14 \cdot D_A \cdot T)^{\frac{1}{2}} \cdot 10^{-4} m^2/cm^2}{2 \cdot \theta_b \cdot D_A}$
				Q/Cvol	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ,1999	40.76	TCEQ,1999	
				T	Exposure interval	s	9.50E+08	TCEQ, 1999; USEPA, 2002a	9.50E+08	TCEQ, 1999; USEPA, 2002a	
				ρb	Dry soil bulk density	g/cm3	1.67	TCEQ, 1999	1 67	TCEQ, 1999	$DA(cm^2/s) = \frac{\theta_a^{10/3} \cdot D_i \cdot H' + \theta_w^{10/3} \cdot D_w}{n^2 \cdot (\theta_b \cdot K_d + \theta_w + \theta_a \cdot H')}$
				DA	Apparent diffusivity	cm2/s	Chemical Specific	Appendix E-1	Chemical Specific	Appendix E-1	
				θa	Air-filled soil porosity (Lair/Lsoil)	cm3-air/cm3-soil	0.21	TCEQ, 1999	0 21	TCEQ, 1999	
				Di	Chemical diffusivity in air	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December 2002.
				θw	Water-filled soil porosity (Lwater/Lsoil)	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				n	Total soil porosity	cm3-pore space/cm3-soil	0.37	TCEQ, 1999	0 37	TCEQ, 1999	USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.
				Kd	Soil organic carbon partition coefficient; for organics, kd = Koc *foc	cm3-water/g-soil	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				Koc	Soil organic carbon-water partition coefficient	cm3-water/g-carbon	Chemical-Specific	Appendix D-2	Chemical-Specific	Appendix D-2	
				foc	Fraction organic carbon in soil	g-carbon/g-soil	0 008	TCEQ 1999	0 008	TCEQ 1999	

References

TCEQ, 1999. Texas Risk Reduction Program (TRRP) Rule, 30 Texas Administrative Code (TAC) 350. Effective August 17, 2000.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

TABLE 4.4d
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE CONSTRUCTION WORKER SCENARIO - INGESTION OF WASTE MATERIAL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Waste
Exposure Medium:	Waste

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Ingestion	Construction Worker	Adult	On-site waste 0-10 feet bgs	Cwaste	Chemical concentration in waste	mg/kg	Site-Specific	Table 3.9 (Appendix A)	Site-Specific	Table 3.9 (Appendix A)	$Intake(mg/kg-day) = \frac{C_{soil} \cdot IR_{soil} \cdot FI \cdot EF \cdot ED \cdot 10^{-6}\,kg/mg}{BW \cdot AT}$
				IRsoil	Ingestion rate of soil	mg/day	330	USEPA, 2002a	100	USEPA, 1997	
				FIsoil	Fraction ingested, soil	unitless	1	Professional Judgment	1	Professional Judgment	
				EF	Exposure frequency	days/year	60	Professional Judgment	60	Professional Judgment	
				ED	Exposure duration	years	1	USEPA, 2002a	1	USEPA, 2002a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A. EPA/540/1-89/002. December 1989.
				ATnc	Averaging time for non-carcinogens	days	365	USEPA, 1989	365	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 1997. Exposure Factors Handbook. EPA/600/P-95/002Fa. Office of Research and Development. Washington, DC. August.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.

TABLE 4.4e
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE CONSTRUCTION WORKER SCENARIO - DERMAL CONACT WITH WASTE MATERIAL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Waste
Exposure Medium:	Waste

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Dermal Contact	Construction Worker	Adult	On-site waste 0-10 feet bgs	Cwaste	Chemical concentration in waste	mg/kg	Site-Specific	Table 3.9 (Appendix A)	Site-Specific	Table 3.9 (Appendix A)	$DAD(mg/kg-day)=\frac{DA_{event}\cdot EF\cdot ED\cdot EV\cdot SA}{BW\cdot AT}$
				AF	Adherence factor of soil to skin	mg/cm2-event	0.3	USEPA, 2004a	0.1	USEPA, 2004a	
				ABSd	Dermal absorption fraction	unitless	Chemical Specific	Appendix D-1	Chemical Specific	Appendix D-1	
				EF	Exposure frequency	days/year	60	Professional Judgment	60	Professional Judgment	
				ED	Exposure duration	years	1	USEPA, 2002a	1	USEPA, 2002a	$DA_{event}(mg/cm^2-event)=C_{soil}\cdot AF\cdot ABS_d\cdot 10^{-6}kg/mg$
				EV	Event frequency	events/day	1	USEPA, 2004a	1	USEPA, 2004a	
				SAs	Skin surface area available for contact for soil	cm2	3300	USEPA, 2004a	3300	USEPA, 2004a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 2004a. RAGS Vol I: Human Health Evaluation Manual, Part E. EPA/540/R/99/005. July 2004
				ATnc	Averaging time for non-carcinogens	days	365	USEPA, 1989	365	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.

TABLE 4.4f
VALUES USED FOR DA LY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE CONSTRUCTION WORKER SCENARIO - INHALATION OF VAPORS AND PARTICULATES IN WASTE MATERIAL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Waste
Exposure Medium:	Outdoor Air Vapors and particulates

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Construction Worker	Adult	On-site waste 0-10 feet bgs	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC\ (mg\ /\ m^3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Cwaste	Chemical concentration in waste	mg/kg	Site-Specific	Table 3.9 (Appendix A)	Site-Specific	Table 3.9 (Appendix A)	
				ET	Exposure time	hr/day	8	Professional Judgment	8	Professional Judgment	
				EF	Exposure frequency	days/year	60	Professional Judgment	60	Professional Judgment	
				ED	Exposure duration	years	1	USEPA, 2002a	1	USEPA, 2002a	
				Atnc(hours)	Averaging time for non-carcinogens	hours	8760	USEPA, 2009	8760	USEPA, 2009	*EC = Exposure Concentration*
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	
				PEF	Particulate emissions factor	m3/kg	Site-Specific	Appendix E-2	Site-Specific	Appendix E-2	$C_{air}(mg/m^3) = \frac{C_{soil}}{VF_s + PEF}$
				Q/Cwind	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ, 1999	40.76	TCEQ, 1999	
				V	Fraction of vegetative cover	unitless	0.5	TCEQ, 1999	0 5	TCEQ, 1999	
				Um	Mean annual windspeed	m/s	4.8	TCEQ, 1999	4 8	TCEQ, 1999	$PEF(m^3/kg) = Q/C_{wind} \times \frac{3{,}600 s/h}{0\ 036 \cdot (1-V) \cdot \left(\frac{U_m}{U_t}\right)^3 \cdot F(x)}$
				Ut	Equivalent threshold value of windspeed at 7m	m/s	11.32	TCEQ, 1999	11 32	TCEQ, 1999	
				F(x)	Function dependent on Um/Ut	unitless	0.22	TCEQ, 1999	0.22	TCEQ, 1999	
				VFs	Volatilization factor, soil to ambient air	m3/kg	Chemical Specific	Appendix E-1	Calculated	Appendix E-1	
				Q/Cvol	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ,1999	40.76	TCEQ,1999	$VF_s(m^3/kg) = \frac{Q/C_{vol} \cdot (3.14 \cdot D_A \cdot T)^{\frac{1}{2}} \cdot 10^{-4} m^2/cm^2}{2 \cdot \theta_b \cdot D_A}$
				T	Exposure interval	s	9 50E+08	TCEQ, 1999; USEPA, 2002a	9.50E+08	TCEQ, 1999; USEPA, 2002a	
				ρb	Dry soil bulk density	g/cm3	1.67	TCEQ, 1999	1.67	TCEQ, 1999	
				DA	Apparent diffusivity	cm2/s	Chemical Specific	Appendix E-1	Chemical Specific	Appendix E-1	$DA(cm^2/s) = \frac{\theta_a^{10/3} \cdot D_i \cdot H' + \theta_w^{10/3} \cdot D_w}{n^2 \cdot (\theta_b \cdot K_d + \theta_w + \theta_a \cdot H')}$
				θa	Air-filled soil porosity (Lair/Lsoil)	cm3-air/cm3-soil	0.21	TCEQ, 1999	0.21	TCEQ, 1999	
				Di	Chemical diffusivity in air	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December 2002.
				θw	Water-filled soil porosity (Lwater/Lsoil)	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				n	Total soil porosity	cm3-pore space/cm3-soil	0.37	TCEQ, 1999	0.37	TCEQ, 1999	USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.
				Kd	Soil organic carbon partition coefficient; for organics, kd = Koc *foc	cm3-water/g-soil	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				Koc	Soil organic carbon-water partition coefficient	cm3-water/g-carbon	Chemical-Specific	Appendix D-2	Chemical-Specific	Appendix D-2	
				foc	Fraction organic carbon in soil	g-carbon/g-soil	0.008	TCEQ 1999	0.008	TCEQ 1999	

References

TCEQ, 1999. Texas Risk Reduction Program (TRRP) Rule, 30 Texas Administrative Code (TAC) 350. Effective August 17, 2000.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

TABLE 4.4g
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE CONSTRUCTION WORKER SCENARIO - INCIDENTAL INGESTION OF GROUNDWATER (TRENCH SCENARIO -UTU)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inges ion	Construction Worker	Adult	On-site groundwater -UTU Trench scenario	Cgw	Chemical concentra ion in groundwater	mg/L	Site-Specific	Table 3.12 (Appendix A)	Site-Specific	Table 3.12 (Appendix A)	$Intake\left(\frac{mg}{kg-day}\right) = \frac{C_{gw} \cdot IR_w \cdot ET \cdot EF \cdot ED}{BW \cdot AT}$
				$IRw_{(Trench)}$	Incidental ingestion rate of water	L/hr	0.05	USEPA, 1989	0.05	USEPA, 1989	
				ET	Exposure time	hr/day	8	Professional Judgment	8	Professional Judgment	
				EF	Exposure frequency	days/year	60	Professional Judgment	60	Professional Judgment	
				ED	Exposure duration	years	1	USEPA, 2002a	1	USEPA, 2002a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	
				ATnc	Averaging time for non-carcinogens	days	365	USEPA, 1989	365	USEPA, 1989	USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A.
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	EPA/540/1-89/002. December 1989.

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evalua ion Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.

TABLE 4.4h
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE CONSTRUCTION WORKER SCENARIO - DERMAL CONTACT WITH GROUNDWATER (TRENCH SCENARIO -UTU)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Dermal Contact	Construction Worker	Adult	On-site groundwater - UTU Trench scenario > 10 feet bgs	Cgw	Chemical concentration in groundwater	mg/L	Site-Specific	Table 3.12 (Appendix A)	Site-Specific	Table 3.12 (Appendix A)	$DAD(mg/kg-day) = \frac{DA_{event} \cdot EF \cdot ED \cdot EV \cdot SA}{BW \cdot AT}$
				FA	Fraction absorbed water	unitless	Chemical Specific	Appendix H-1	Chemical Specific	Appendix H-1	
				kp	Dermal permeability coefficient of compound in water	cm/hr	Chemical Specific	Appendix H-1	Chemical Specific	Appendix H-1	
				tau-event	Lag time per event	hours/event	Chemical Specific	Appendix H-1	Chemical Specific	Appendix H-1	
				t-event	Event duration	hours/event	8	Professional Judgment	8	Professional Judgment	
				B	Dimensionless ratio of Kp through stratum corneum	unitless	Chemical Specific	Appendix H-1	Chemical Specific	Appendix H-1	DA_{event} is f(kp, tau-event, t-event, B, …)
				EF	Exposure frequency	days/year	60	Professional Judgment	60	Professional Judgment	See Appendix H-2 for the derivation of DA_{event}
				ED	Exposure duration	years	1	USEPA, 2002a	1	USEPA, 2002a	
				EV	Event frequency	events/day	1	USEPA, 2004a	1	USEPA, 2004a	
				SA_w	Skin surface area available for contact with water	cm2	3300	USEPA, 2004a	3300	USEPA, 2004a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 2004a. RAGS Vol I: Human Health Evaluation Manual, Part E.
				ATnc	Averaging time for non-carcinogens	days	365	USEPA, 1989	365	USEPA, 1989	EPA/540/R/99/005. July 2004
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Heal h Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Heal h Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.

TABLE 4.4i
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE CONSTRUCTION WORKER SCENARIO - INHALATION OF VAPORS MIGRATING FROM GROUNDWATER (TRENCH SCENARIO -UTU)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Outdoor Air Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Ra ionale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Construction Worker	Adult	On-site groundwater - UTU Trench scenario > 10 feet bgs	Ctrench	Chemical concentration in air in trench	mg/m3	Site-Specific	Appendix G-1	Site-Specific	Appendix G-1	$EC(mg/m3) = \frac{C_{trench} \cdot ET \cdot EF \cdot ED}{AT}$
				Cgw	Chemical concentration in groundwater	mg/L	Site-Specific	Table 3.12 (Appendix A)	Site-Specific	Table 3.12 (Appendix A)	
				ET	Exposure time	hr/day	8	Professional Judgment	8	Professional Judgment	
				EF	Exposure frequency	days/year	60	Professional Judgment	60	Professional Judgment	
				ED	Exposure duration	years	1	USEPA, 2002a	1	USEPA, 2002a	
				Atnc(hours)	Averaging time for non-carcinogens	hours	8760	USEPA, 2009	8760	USEPA, 2009	
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	
				VF_{trench}	Volatilization factor in a trench	L/m3	Chemical Specific	Appendix G-1	Chemical Specific	Appendix G-1	
				K_i	Overall mass transfer coefficient of contaminant	cm/s	Chemical Specific	Appendix G-1	Chemical Specific	Appendix G-1	
				A	Area of trench	m2	2 23E+00	VDEQ, 2012	2.23E+00	VDEQ, 2012	
				F	Fraction of floor through which the contaminant can enter	unitless	1	VDEQ, 2012	1	VDEQ, 2012	
				ACH	Air changes per hour	h-1	360	VDEQ, 2012	360	VDEQ, 2012	
				V	Volume of trench	m3	6 80E+00	Site-specific	6.80E+00	Site-specific	
				k_{iL}	Liquid-phase mass transfer coefficient	cm/s	Chemical Specific	Appendix G-1	Chemical Specific	Appendix G-1	
				R	Ideal gas constant	atm-m3/mole-K	0.000082	VDEQ, 2012	0.000082	VDEQ, 2012	
				T	Average system absolute temperature	K	298	Site-specific	298	Site-specific	
				H_i	Henry's Law constant	atm-m3/mole	Chemical Specific	Appendix G-1	Chemical Specific	Appendix G-1	
				k_{iG}	Gas-phase mass transfer coefficient	cm/s	Chemical Specific	Appendix G-1	Chemical Specific	Appendix G-1	
				MW_{O2}	Molecular weight of oxygen	g/mol	32	VDEQ, 2012	32	VDEQ, 2012	
				MW_i	Molecular weight of contaminant	g/mol	Chemical Specific	Appendix G-1	Chemical Specific	Appendix G-1	
				$k_{L,O2}$	Liquid-phase mass transfer coefficient of oxygen at 25oC	cm/s	0.002	VDEQ, 2012	0 002	VDEQ, 2012	
				MW_{H2O}	Molecular weight of water	g/mol	18	VDEQ, 2012	18	VDEQ, 2012	
				$k_{G,H2O}$	Gas-phase mass transfer coefficient of water vapor at 25oC	cm/s	0.833	VDEQ, 2012	0 833	VDEQ, 2012	

EC = Exposure Concentration

$$C_{trench}(mg/m3) = C_{gw} \cdot VF_{trench}$$

$$VF_{trench} = \frac{K_i \cdot A \cdot F \cdot 10^{-3} \cdot 10^{4} \cdot 3600}{ACH \cdot V}$$

$$K_i = \frac{1}{\frac{1}{k_{iL}} + \frac{R \cdot T}{H_i k_{iG}}}$$

$$k_{iL} = \left(\frac{MW_{O2}}{MW_i}\right)^{0.5} \cdot \frac{T}{298} \cdot k_L, O_2$$

$$k_{iG} = \left(\frac{MW_{H2O}}{MW_i}\right)^{0.335} \cdot \left(\frac{T}{298}\right)^{1.005} \cdot k_G, H_2O$$

VDEQ, 2012. Voluntary Remediation Program Risk Assessment Guidance.
Trench Model (ground water less than 15 feet deep)
USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.

References:

USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.
VDEQ, 2012. Voluntary Remediation Program Risk Assessment Guidance. Available online at: http://www.deq virginia.gov/Programs/LandProtectionRevitalization/RemediationPrograms/VoluntaryRemediationProgram/VRPRiskAssessmentGuidance/Guidance aspx

RME AND CTE OFF-SITE CONSTRUCTION WORKER

Scenario Table	Medium	Exposure Medium	Exposure Route
T-4.5a RME and CTE Const GW Ing	Upper Transmissive Unit	Groundwater in trench	Ingestion
T-4.5b RME and CTE Const GW DC	Upper Transmissive Unit	Groundwater in trench	Dermal contact
T-4.5c RME and CTE Const GW Inh Vap Trench	Upper Transmissive Unit	Outdoor air - vapors in trench	Inhalation

TABLE 4.5a
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
OFF-SITE CONSTRUCTION WORKER SCENARIO - INCIDENTAL INGESTION OF GROUNDWATER (TRENCH SCENARIO -UTU)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inges ion	Construction Worker	Adult	Off-site groundwater - UTU Trench scenario > 10 feet bgs	Cgw	Chemical concentra ion in groundwater	mg/L	Site-Specific	Table 3.15 (Appendix A)	Site-Specific	Table 3.15 (Appendix A)	$Intake\left(\frac{mg}{kg-day}\right) = \frac{C_{gw} \cdot IR_w \cdot ET \cdot EF \cdot ED}{BW \cdot AT}$
				$IRw_{(Trench)}$	Incidental ingestion rate of water	L/hr	0.05	USEPA, 1989	0.05	USEPA, 1989	
				ET	Exposure time	hr/day	8	Professional Judgment	8	Professional Judgment	
				EF	Exposure frequency	days/year	60	Professional Judgment	60	Professional Judgment	
				ED	Exposure duration	years	1	USEPA, 2002a	1	USEPA, 2002a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	
				ATnc	Averaging time for non-carcinogens	days	365	USEPA, 1989	365	USEPA, 1989	USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A.
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	EPA/540/1-89/002. December 1989.

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evalua ion Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.

TABLE 4.5b
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAX MUM EXPOSURE AND CENTRAL TENDENCY
OFF-SITE CONSTRUCTION WORKER SCENARIO - DERMAL CONTACT WITH GROUNDWATER (TRENCH SCENARIO -UTU)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Dermal Contact	Construction Worker	Adult	Off-site groundwater- UTU Trench scenario > 10 feet bgs	Cgw	Chemical concentration in groundwater	mg/L	Site-Specific	Table 3.15 (Appendix A)	Site-Specific	Table 3.15 (Appendix A)	$DAD(mg/kg-day) = \frac{DA_{event} \cdot EF \cdot ED \cdot EV \cdot SA}{BW \cdot AT}$
				FA	Fraction absorbed water	unitless	Chemical Specific	Appendix H-2	Chemical Specific	Appendix H-2	
				kp	Dermal permeability coefficient of compound in water	cm/hr	Chemical Specific	Appendix H-2	Chemical Specific	Appendix H-2	
				tau-event	Lag ime per event	hours/event	Chemical Specific	Appendix H-2	Chemical Specific	Appendix H-2	
				t-event	Event duration	hours/event	8	Professional Judgment	8	Professional Judgment	
				B	Dimensionless ratio of Kp through stratum corneum	unitless	Chemical Specific	Appendix H-2	Chemical Specific	Appendix H-2	DA_{event} is f(kp, tau-event, t-event, B, …)
				EF	Exposure frequency	days/year	60	Professional Judgment	60	Professional Judgment	See Appendix H-2 for the derivation of DA_{event}
				ED	Exposure duration	years	1	USEPA, 2002a	1	USEPA, 2002a	
				EV	Event frequency	events/day	1	USEPA, 2004a	1	USEPA, 2004a	
				SA_w	Skin surface area available for contact with water	cm2	3300	USEPA, 2004a	3300	USEPA, 2004a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 2004a. RAGS Vol I: Human Health Evaluation Manual, Part E.
				ATnc	Averaging time for non-carcinogens	days	365	USEPA, 1989	365	USEPA, 1989	EPA/540/R/99/005. July 2004
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.

TABLE 4.5c
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAX MUM EXPOSURE AND CENTRAL TENDENCY
OFF-SITE CONSTRUCTION WORKER SCENARIO - INHALATION OF VAPORS MIGRATING FROM GROUNDWATER (TRENCH SCENARIO -UTU)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Outdoor Air Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Construction Worker	Adult	Off-site groundwater - UTU Trench scenario > 10 feet bgs	Ctrench	Chemical concentra ion in air in trench	mg/m3	Site-Specific	Appendix G-2	Site-Specific	Appendix G-2	$EC(mg/m3) = \frac{C_{trench} \cdot ET \cdot EF \cdot ED}{AT}$
				Cgw	Chemical concentra ion in groundwater	mg/L	Site-Specific	Table 3.15 (Appendix A)	Site-Specific	Table 3.15 (Appendix A)	
				ET	Exposure ime	hr/day	8	Professional Judgment	8	Professional Judgment	EC = Exposure Concentration
				EF	Exposure frequency	days/year	60	Professional Judgment	60	Professional Judgment	
				ED	Exposure duration	years	1	USEPA, 2002a	1	USEPA, 2002a	
				Atnc(hours)	Averaging ime for non-carcinogens	hours	8760	USEPA, 2009	8760	USEPA, 2009	$C_{trench}(mg/m3) = C_{gw} \cdot VF_{trench}$
				Atc(hours)	Averaging ime for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	
				VF_{trench}	Volatilization factor in a trench	L/m3	Chemical Specific	Appendix G-2	Chemical Specific	Appendix G-2	$VF_{trench} = \frac{K_i \cdot A \cdot F \cdot 10^{-3} \cdot 10^4 \cdot 3600}{ACH \cdot V}$
				K_i	Overall mass transfer coefficient of contaminant	cm/s	Chemical Specific	Appendix G-2	Chemical Specific	Appendix G-2	
				A	Area of trench	m2	2.23E+00	VDEQ, 2012	2.23E+00	VDEQ, 2012	
				F	Fraction of floor through which he contaminant can enter	unitless	1	VDEQ, 2012	1	VDEQ, 2012	
				ACH	Air changes per hour	h-1	360	VDEQ, 2012	360	VDEQ, 2012	$K_i = \frac{1}{\frac{1}{k_{iL}} + \frac{R \cdot T}{H_i k_{iG}}}$
				V	Volume of trench	m3	6.80E+00	Site-specific	6.80E+00	Site-specific	
				k_{iL}	Liquid-phase mass transfer coefficient	cm/s	Chemical Specific	Appendix G-2	Chemical Specific	Appendix G-2	
				R	Ideal gas constant	atm-m3/mole-K	0.000082	VDEQ, 2012	0.000082	VDEQ, 2012	
				T	Average system absolute temperature	K	298	Site-specific	298	Site-specific	$k_{iL} = \left(\frac{MW_{O2}}{MW_i}\right)^{0.5} \cdot \frac{T}{298} \cdot k_L, O_2$
				H_i	Henry's Law constant	atm-m3/mole	Chemical Specific	Appendix G-2	Chemical Specific	Appendix G-2	
				k_{iG}	Gas-phase mass transfer coefficient	cm/s	Chemical Specific	Appendix G-2	Chemical Specific	Appendix G-2	
				MW_{O2}	Molecular weight of oxygen	g/mol	32	VDEQ, 2012	32	VDEQ, 2012	$k_{iG} = \left(\frac{MW_{H2O}}{MW_i}\right)^{0.335} \cdot \left(\frac{T}{298}\right)^{1.005} \cdot k_G, H_2O$
				MW_i	Molecular weight of contaminant	g/mol	Chemical Specific	Appendix G-2	Chemical Specific	Appendix G-2	
				$k_{L,O2}$	Liquid-phase mass transfer coefficient of oxygen at 25oC	cm/s	0.002	VDEQ, 2012	0.002	VDEQ, 2012	VDEQ, 2012. Voluntary Remediation Program Risk Assessment Guidance.
				MW_{H2O}	Molecular weight of water	g/mol	18	VDEQ, 2012	18	VDEQ, 2012	Trench Model (ground water less than 15 feet deep)
				$k_{G,H2O}$	Gas-phase mass transfer coefficient of water vapor at 25oC	cm/s	0.833	VDEQ, 2012	0.833	VDEQ, 2012	USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.

References:

USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Heal h Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.
VDEQ, 2012. Voluntary Remediation Program Risk Assessment Guidance. Available online at: http://www.deq virginia.gov/Programs/LandProtectionRevitalization/RemediationPrograms/VoluntaryRemediationProgram/VRPRiskAssessmentGuidance/Guidance.aspx

RME AND CTE ON-SITE MAINTENANCE WORKER

Scenario Table	Medium	Exposure Medium	Exposure Route
T-4.6a RME and CTE Maint SS Ing	Surface soil	Surface soil	Ingestion
T-4.6b RME and CTE Maint SS DC	Surface soil	Surface soil	Dermal Contact
T-4.6c RME and CTE Maint SS Inh Vap&Dst	Surface soil	Vapors and dust	Inhalation
T-4.6d RME and CTE Maint SBS Inh Vap	Subsurface soil	Outdoor air - vapors	Inhalation
T-4.6e RME and CTE Maint Waste Inh Vap	Waste	Outdoor air - vapors	Inhalation
T-4.6f RME and CTE Maint Sed Ing	Sediment	Sediment	Ingestion
T-4.6g RME and CTE Maint Sed DC	Sediment	Sediment	Dermal Contact
T-4.6h RME and CTE Maint SW Ing	Surface water	Surface water	Ingestion
T-4.6i RME and CTE Maint SW DC	Surface water	Surface water	Dermal Contact
T-4.6j RME and CTE Maint GW Inh Vapor	Upper Transmissive Unit	Outdoor air - vapors	Inhalation

TABLE 4.6a
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE MAINTENANCE WORKER SCENARIO - INGESTION OF SURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Ingestion	Maintenance Worker	Adult	On-site surface soil 0-2 feet bgs	Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.1 and 3.5	Site-Specific	Tables 3.1 and 3.5	$Intake(mg/kg-day) = \frac{C_{soil} \cdot IR_{soil} \cdot FI \cdot EF \cdot ED \cdot 10^{-6} kg/mg}{BW \cdot AT}$
				IRsoil	Ingestion rate of soil	mg/day	50	USEPA, 1991a and 2002a	50	USEPA, 1991a and 2002a	
				FIsoil	Fraction ingested, soil	unitless	1	Professional Judgment	1	Professional Judgment	
				EF	Exposure frequency	days/year	12	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	10	Professional Judgment	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A.
				ATnc	Averaging time for non-carcinogens	days	3650	USEPA, 1989	3650	USEPA, 1989	EPA/540/1-89/002. December 1989.
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 1991a. Risk Assessment Guidance for Superfund: Volume 1: Human Health Evaluation Manual (Part B), Development of Risk-Based Preliminary Remediation Goals. Interim. Washington, DC. December.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.

TABLE 4.6b
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAX MUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE MAINTENANCE WORKER SCENARIO - DERMAL CONTACT WITH SURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil

Exposure Route	Receptor Popula ion	Receptor Age	Exposure Point	Parameter Code	Parameter Defini ion	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Dermal Contact	Maintenance Worker	Adult	On-site surface soil 0-2 feet bgs	Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.1 and 3.5 (Appendix A)	Site-Specific	Tables 3.1 and 3.5 (Appendix A)	$DAD(mg/kg-day) = \frac{DA_{event} \cdot EF \cdot ED \cdot EV \cdot SA}{BW \cdot AT}$
				AF	Adherence factor of soil to skin	mg/cm2-event	0.2	USEPA, 2004a	0.02	USEPA, 2004a	
				ABSd	Dermal absorption fraction	unitless	Chemical Specific	Appendix D-1	Chemical Specific	Appendix D-1	
				EF	Exposure frequency	days/year	12	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	10	Professional Judgment	$DA_{event}(mg/cm^2-event) = C_{soil} \cdot AF \cdot ABS_d \cdot 10^{-6} kg/mg$
				EV	Event frequency	events/day	1	USEPA, 2004a	1	USEPA, 2004a	
				SAs	Skin surface area available for contact for soil	cm2	3300	USEPA, 2004a	3300	USEPA, 2004a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 2004a. RAGS Vol I: Human Health Evaluation Manual, Part E. EPA/540/R/99/005. July 2004
				ATnc	Averaging time for non-carcinogens	days	3650	USEPA, 1989	3650	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evalua ion Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
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TABLE 4.6c
VALUES USED FOR DAILY NTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE MA NTENANCE WORKER SCENARIO - INHALATION OF VAPORS AND PARTICULATES IN SURFACE SO L
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Outdoor Air Vapors and particulates

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Maintenance Worker	Adult	On-site outdoor air vapors and particulates 0-2 feet bgs	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC\ (mg\ /\ m^3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.1 and 3 5 (Appendix A)	Site-Specific	Tables 3.1 and 3 5 (Appendix A)	
				ET	Exposure time	hr/day	2	Professional Judgment	2	Professional Judgment	
				EF	Exposure frequency	days/year	12	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	10	Professional Judgment	
				Atnc(hours)	Averaging time for non-carcinogens	hours	87600	USEPA, 2009	87600	USEPA, 2009	
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	
				PEF	Particulate emissions factor	m3/kg	Site-Specific	Appendix E-2	Site-Specific	Appendix E-2	
				Q/Cwind	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ, 1999	40.76	TCEQ, 1999	
				V	Fraction of vegetative cover	unitless	0.5	TCEQ, 1999	0 5	TCEQ, 1999	
				Um	Mean annual windspeed	m/s	4.8	TCEQ, 1999	4 8	TCEQ, 1999	
				Ut	Equivalent threshold value of windspeed at 7m	m/s	11.32	TCEQ, 1999	11 32	TCEQ, 1999	
				F(x)	Function dependent on Um/Ut	unitless	0 22	TCEQ, 1999	0.22	TCEQ, 1999	
				VFs	Volatilization factor, soil to ambient air	m3/kg	Chemical Specific	Appendix E-1	Chemical Specific	Appendix E-1	
				Q/Cvol	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ,1999	40.76	TCEQ,1999	
				T	Exposure interval	s	9.50E+08	TCEQ, 1999; USEPA, 2002a	9 50E+08	TCEQ, 1999; USEPA, 2002a	
				ρb	Dry soil bulk density	g/cm3	1 67	TCEQ, 1999	1.67	TCEQ, 1999	
				DA	Apparent diffusivity	cm2/s	Chemical Specific	Appendix E-1	Chemical Specific	Appendix E-1	
				θa	Air-filled soil porosity (Lair/Lsoil)	cm3-air/cm3-soil	0 21	TCEQ, 1999	0.21	TCEQ, 1999	
				Di	Chemical diffusivity in air	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				θw	Water-filled soil porosity (Lwater/Lsoil)	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				n	Total soil porosity	cm3-pore space/cm3-soil	0 37	TCEQ, 1999	0.37	TCEQ, 1999	
				Kd	Soil organic carbon partition coefficient; for organics, kd = Koc *foc	cm3-water/g-soil	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				Koc	Soil organic carbon-water partition coefficient	cm3-water/g-carbon	Chemical-Specific	Appendix D-2	Chemical-Specific	Appendix D-2	
				foc	Fraction organic carbon in soil	g-carbon/g-soil	0.008	TCEQ 1999	0.008	TCEQ 1999	

EC = Exposure Concentration

$$C_{air}(mg/m^3) = \frac{C_{soil}}{VF_s + PEF}$$

$$PEF(m^3/kg) = Q/C_{wind} \times \frac{3{,}600\,s/h}{0\ 036 \cdot (1-V) \cdot \left(\frac{U_m}{U_t}\right)^3 \cdot F(x)}$$

$$VF_s(m^3/kg) = \frac{Q/C_{vol} \cdot (3\ 14 \cdot D_A \cdot T)^{\frac{1}{2}} \cdot 10^{-4}\, m^2/cm^2}{2 \cdot \theta_b \cdot D_A}$$

$$DA(cm^2/s) = \frac{\theta_a^{10/3} \cdot D_i \cdot H' + \theta_w^{10/3} \cdot D_w}{n^2 \cdot (\theta_b \cdot K_d + \theta_w + \theta_a \cdot H')}$$

USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December 2002.

USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.

References

TCEQ, 1999. Texas Risk Reduction Program (TRRP) Rule, 30 Texas Administrative Code (TAC) 350. Effective August 17, 2000.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

TABLE 4.6d
VALUES USED FOR DAILY NTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE MA NTENANCE WORKER SCENARIO - INHALATION OF VAPORS FROM SUBSURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Maintenance Worker	Adult	On-site outdoor air vapors >2 feet bgs	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC\ (mg\ /\ m^3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Cwaste	Chemical concentration in waste	mg/kg	Site-Specific	Tables 3.3 and 3.7 (Appendix A)	Site-Specific	Tables 3.3 and 3.7 (Appendix A)	
				ET	Exposure time	hr/day	2	Professional Judgment	2	Professional Judgment	
				EF	Exposure frequency	days/year	12	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	10	Professional Judgment	
				Atnc(hours)	Averaging time for non-carcinogens	hours	87600	USEPA, 2009	87600	USEPA, 2009	
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	
				VFs	Volatilization factor, soil to ambient air	m3/kg	Chemical Specific	Appendix E	Chemical Specific	Appendix E	
				Q/Cvol	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ,1999	40.76	TCEQ,1999	
				T	Exposure interval	s	9.50E+08	TCEQ, 1999; USEPA, 2002a	9.50E+08	TCEQ, 1999; USEPA, 2002a	
				ρb	Dry soil bulk density	g/cm3	1 67	TCEQ, 1999	1.67	TCEQ, 1999	
				DA	Apparent diffusivity	cm2/s	Chemical Specific	Appendix E	Chemical Specific	Appendix E	
				θa	Air-filled soil porosity (Lair/Lsoil)	cm3-air/cm3-soil	0 21	TCEQ, 1999	0.21	TCEQ, 1999	
				Di	Chemical diffusivity in air	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				θw	Water-filled soil porosity (Lwater/Lsoil)	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	--	
				n	Total soil porosity	cm3-pore space/cm3-soil	0 37	TCEQ, 1999	0.37	TCEQ, 1999	
				Kd	Soil organic carbon partition coefficient; for organics, kd = Koc *foc	cm3-water/g-soil	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				Koc	Soil organic carbon-water partition coefficient	cm3-water/g-carbon	Chemical-Specific	Appendix D-2	Chemical-Specific	Appendix D-2	
				foc	Fraction organic carbon in soil	g-carbon/g-soil	0.008	TCEQ, 1999	0 008	TCEQ, 1999	

EC = Exposure Concentration

$$C_{air}(mg/m^3) = \frac{C_{soil}}{VF_s}$$

$$VF_s(m^3/kg) = \frac{Q/C_{vol} \cdot (3\ 14 \cdot D_A \cdot T)^{\frac{1}{2}} \cdot 10^{-4} m^2/cm^2}{2 \cdot \circ_b \cdot D_A}$$

$$DA(cm^2/s) = \frac{{}_a^{-10/3} \cdot D_i \cdot H' + {}_w^{-10/3} \cdot D_w}{n^2 \cdot (\circ_b \cdot K_d + {}_w^- + {}_a^- \cdot H')}$$

USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December 2002.

USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.

References

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USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

TABLE 4.6e
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAX MUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE MAINTENANCE WORKER SCENARIO - INHALATION OF VAPORS FROM SUBSURFACE WASTE MATERIAL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Waste
Exposure Medium:	Outdoor Air Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Maintenance Worker	Adult	On-site outdoor air vapors >2 feet bgs	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC\ (mg\ /\ m^3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Cwaste	Chemical concentration in waste	mg/kg	Site-Specific	Tables 3.10 (Appendix A)	Site-Specific	Tables 3.10 (Appendix A)	
				ET	Exposure time	hr/day	2	Professional Judgment	2	Professional Judgment	
				EF	Exposure frequency	days/year	12	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	10	Professional Judgment	
				Atnc(hours)	Averaging time for non-carcinogens	hours	87600	USEPA, 2009	87600	USEPA, 2009	*EC = Exposure Concentration*
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	$C_{air}(mg/m^3) = \frac{C_{soil}}{VF_s}$
				VFs	Volatiliza ion factor, soil to ambient air	m3/kg	Chemical Specific	Appendix E-1	Chemical Specific	Appendix E-1	
				Q/Cvol	Inverse of mean concentration in air at center of affected soil area (30-a	g/m2-s per kg/m3	40.76	TCEQ,1999	40.76	TCEQ,1999	$VF_s(m^3/kg) = \frac{Q/C_{vol} \cdot (3.14 \cdot D_A \cdot T)^{\frac{1}{2}} \cdot 10^{-4} m^2/cm^2}{2 \cdot \theta_b \cdot D_A}$
				T	Exposure interval	s	9.50E+08	TCEQ, 1999; USEPA, 2002a	9.50E+08	TCEQ, 1999; USEPA, 2002a	
				ρb	Dry soil bulk density	g/cm3	1.67	TCEQ, 1999	1.67	TCEQ, 1999	
				DA	Apparent diffusivity	cm2/s	Chemical Specific	Appendix E-1	Chemical Specific	Appendix E-1	$DA(cm^2/s) = \frac{\theta_a^{10/3} \cdot D_i \cdot H' + \theta_w^{10/3} \cdot D_w}{n^2 \cdot (\theta_b \cdot K_d + \theta_w + \theta_a \cdot H')}$
				θa	Air-filled soil porosity (Lair/Lsoil)	cm3-air/cm3-soil	0.21	TCEQ, 1999	0.21	TCEQ, 1999	
				Di	Chemical diffusivity in air	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				θw	Water-filled soil porosity (Lwater/Lsoil)	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				n	Total soil porosity	cm3-pore space/cm3-soil	0.37	TCEQ, 1999	0.37	TCEQ, 1999	
				Kd	Soil organic carbon partition coefficient; for organics, kd = Koc *foc	cm3-water/g-soil	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				Koc	Soil organic carbon-water partition coefficient	cm3-water/g-carbon	Chemical-Specific	Appendix D-2	Chemical-Specific	Appendix D-2	
				foc	Fraction organic carbon in soil	g-carbon/g-soil	0.008	TCEQ, 1999	0.008	TCEQ, 1999	

USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December 2002.

USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.

References:

TCEQ, 1999. Texas Risk Reduction Program (TRRP) Rule, 30 Texas Administrative Code (TAC) 350. Effective August 17, 2000.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evalua ion Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

TABLE 4.6f
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE MAINTENANCE WORKER SCENARIO - INGESTION OF SEDIMENT
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Ingestion	Maintenance Worker	Adult	Sediment - East Ditch	Csed	Chemical concentration in sediment	mg/kg	Site-Specific	Tables 3.17 (Appendix A)	Site-Specific	Tables 3.17 (Appendix A)	$Intake(mg/kg-day) = \frac{C_{sed} \cdot IR_{sed} \cdot FI_{sed} \cdot EF \cdot ED \cdot 10^{-6}\, kg/mg}{BW \cdot AT}$
				IRsed	Ingestion rate of sediment	mg/day	50	Professional Judgment	50	Professional Judgment	
				FIsed	Fraction ingested, sediment	unitless	1	Professional Judgment	1	Professional Judgment	
				EF	Exposure frequency	days/year	12	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	10	Professional Judgment	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A. EPA/540/1-89/002. December 1989.
				ATnc	Averaging time for non-carcinogens	days	3650	USEPA, 1989	3650	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

Reference:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.

TABLE 4.6g
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE MAINTENANCE WORKER SCENARIO - DERMAL CONTACT WITH SEDIMENT
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Dermal Contact	Maintenance Worker	Adult	Sediment - East Ditch	Csed	Chemical concentration in sediment	mg/kg	Site-Specific	Tables 3.17 (Appendix A)	Site-Specific	Tables 3.17 (Appendix A)	$DAD(mg/kg-day) = \frac{DA_{event} \cdot EF \cdot ED \cdot EV \cdot SA}{BW \cdot AT}$
				AF	Adherence factor of soil to skin	mg/cm2-event	0.2	USEPA, 2004a	0.02	USEPA, 2004a	
				ABSd	Dermal absorption fraction	unitless	Chemical Specific	Appendix D-1	Chemical Specific	Appendix D-1	
				EF	Exposure frequency	days/year	12	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	10	Professional Judgment	$DA_{event}(mg/cm^2-event) = C_{sed} \cdot AF \cdot ABS_d \cdot 10^{-6} kg/mg$
				EV	Event frequency	events/day	1	USEPA, 2004a	1	USEPA, 2004a	
				SA_s	Skin surface area available for contact for soil	cm2	3300	USEPA, 2004a	3300	USEPA, 2004a	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 2004a. RAGS Vol I: Human Health Evaluation Manual, Part E. EPA/540/R/99/005. July 2004
				ATnc	Averaging time for non-carcinogens	days	3650	USEPA, 1989	3650	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.

USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.

USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.

TABLE 4.6h
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE MAINTENANCE WORKER SCENARIO - INGESTION OF SURFACE WATER
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Ingestion	Maintenance Worker	Adult	Surface Water - East Ditch	Csw	Chemical concentration in surface water	mg/L	Site-Specific	Tables 3.18 (Appendix A)	Site-Specific	Tables 3.18 (Appendix A)	$Intake(mg/kg-day) = \frac{C_{sw} \cdot IR_{sw} \cdot ET \cdot EF \cdot ED}{BW \cdot AT}$
				IRsw	Ingestion rate of surface water	L/hr	0.05	USEPA, 1989	0.05	USEPA, 1989	
				ET	Exposure time	hr/day	2	Professional Judgment	2	Professional Judgment	
				EF	Exposure frequency	days/year	12	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	10	Professional Judgment	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A. EPA/540/1-89/002. December 1989.
				ATnc	Averaging time for non-carcinogens	days	3650	USEPA, 1989	3650	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

Reference:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.

TABLE 4.6i
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAX MUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE MAINTENANCE WORKER SCENARIO - DERMAL CONTACT WITH SURFACE WATER
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Ra ionale/Reference	Intake Equation/ Model Name
Dermal Contact	Maintenance Worker	Adult	Surface Water - East Ditch	Csw	Chemical concentration in surface water	mg/L	Site-Specific	Tables 3.18 (Appendix A)	Site-Specific	Tables 3.18 (Appendix A)	
				FA	Frac ion absorbed water	unitless	Chemical Specific	Appendix H-3	Chemical Specific	Appendix H-3	$DAD(mg/kg-day) = \frac{DA_{event} \cdot EF \cdot ED \cdot EV \cdot SA}{BW \cdot AT}$
				kp	Dermal permeability coefficient of compound in water	cm/hr	Chemical Specific	Appendix H-3	Chemical Specific	Appendix H-3	
				tau-event	Lag time per event	hours/event	Chemical Specific	Appendix H-3	Chemical Specific	Appendix H-3	
				t-event	Event duration	hours/event	2	Professional Judgment	2	Professional Judgment	DA_{event} is f(kp, tau-event, t-event, B, …)
				B	Dimensionless ra io of Kp through stratum corneum	unitless	Chemical Specific	Appendix H-3	Chemical Specific	Appendix H-3	See Appendix H-3 for the deriva ion of DA_{event}
				EF	Exposure frequency	days/year	12	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	10	Professional Judgment	
				EV	Event frequency	events/day	1	USEPA, 2004a	1	USEPA, 2004a	
				SAw	Skin surface area available for contact with water	cm2	18000	USEPA, 2004a; TCEQ, 2007	18000	USEPA, 2004a; TCEQ, 2007	
				BW	Body weight	kg	70	USEPA, 1989	70	USEPA, 1989	USEPA, 2004a. RAGS Vol I: Human Health Evaluation Manual, Part E.
				ATnc	Averaging time for non-carcinogens	days	3650	USEPA, 1989	3650	USEPA, 1989	EPA/540/R/99/005. July 2004
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

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USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.

TABLE 4.6j
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE MAINTENANCE WORKER SCENARIO - INHALATION OF VAPORS MIGRATING FROM GROUNDWATER TO OUTDOOR AIR (UTU)
Baseline Human Heal h Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Outdoor Air Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CTE Rationale/Reference	Intake Equation/ Model Name
Inhalation	Maintenance Worker	Adult	On-site groundwater - UTU vapors from groundwater	Cair	Chemical concentra ion in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC(mg/m3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Cgw	Chemical concentra ion in groundwater	mg/L	Site-Specific	Table 3.12 (Appendix A)	Site-Specific	Table 3.12 (Appendix A)	
				ET	Exposure time	hr/day	2	Professional Judgment	2	Professional Judgment	
				EF	Exposure frequency	days/year	12	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	10	Professional Judgment	
				Atnc(hours)	Averaging time for non-carcinogens	hours	87600	USEPA, 2009	87600	USEPA, 2009	
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	
				VFwamb	Volatilization factor, groundwater to ambient air	L/m3	Chemical Specific	Appendix F-1	Chemical Specific	Appendix F-1	*EC = Exposure Concentration*
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	$C_{air}(mg/m3) = C_{gw} \cdot VF_{wamb}$
				Uair	Windspeed above ground surface in ambient mixing zone	cm/s	2.40E+02	TCEQ, 1999	2.40E+02	TCEQ, 1999	$VF_{wamb}\left[\frac{mg/m^3 - air}{mg/L - H_2O}\right] = \frac{H'}{1+\left[\frac{U_{air} \cdot \phi_{air} \cdot L_{gw}}{W_g \cdot D_{ws}^{eff}}\right]} \bullet \left[10^3 \frac{L}{m^3}\right]$
				dair	Ambient air mixing zone height	cm	200	TCEQ, 1999	200	TCEQ, 1999	
				Lgw	Depth to groundwater, Lgw = hcap + hv	cm	300	Site-specific	300	Site-specific	
				hcap	Thickness of the capillary fringe	cm	5	TCEQ, 1999	5	TCEQ, 1999	
				hv	Thickness of the vadose zone	cm	295	Site-specific	295	Site-specific	
				Wg	Wid h of gw source in the direction of the closest off-site property line (30-acre default)	cm	34800	TCEQ, 1999	34800	TCEQ, 1999	$D_{ws}^{eff}\left[\frac{cm^2}{s}\right] = \left(h_{cap} + h_v\right)\left[\frac{h_{cap}}{D_{cap}^{eff}} + \frac{h_v}{D_s^{eff}}\right]^{-1}$
				D^{eff}_{ws}	Effective diffusivity above water table	cm2/s	Chemical Specific	Appendix F-1	Chemical Specific	Appendix F-1	$D_{cap}^{eff}\left[\frac{cm^2}{s}\right] = D^{air}{}_{\frac{acap}{T}}^{\frac{-3.33}{-2}} + \left[\frac{D^w}{H'}\right]_{\frac{wcap}{T}}^{\frac{-3.33}{-2}}$
				D^{eff}_{cap}	Effective diffusivity in he capillary fringe	cm2/s	Chemical Specific	Appendix F-1	Chemical Specific	Appendix F-1	
				D^{eff}_{s}	Effective diffusivity in he vadose zone soils	cm2/s	Chemical Specific	Appendix F-1	Chemical Specific	Appendix F-1	$D_s^{eff}\left[\frac{cm^2}{s}\right] = D^{air}{}_{\frac{as}{T}}^{\frac{-3.33}{-2}} + \left[\frac{D^w}{H'}\right]_{\frac{ws}{T}}^{\frac{-3.33}{-2}}$
				θacap	Volumetric air content of capillary fringe soils	cm3-air/cm3-soil	0.037	TCEQ, 1999	0.037	TCEQ, 1999	
				θwcap	Volumetric water content of capillary fringe soils	cm3-H2O/cm3-soil	0.333	TCEQ, 1999	0.333	TCEQ, 1999	
				θas	Volumetric air content in vadose zone soils	cm3-air/cm3-soil	0.21	TCEQ, 1999	0.21	TCEQ, 1999	
				θws	Volumetric water content in vadose zone soils	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	TCEQ, 1999. Texas Risk Reduction Program (TRRP).
				θT	Total soil porosity	cm3-pore-space/cm3-soil	0.37	TCEQ, 1999	0.37	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	USEPA, 2009. RAGS, Human Heal h Manual. Part F. January 2009.

References:

TCEQ, 1999. Texas Risk Reduction Program (TRRP) Rule, 30 Texas Administrative Code (TAC) 350. Effective August 17, 2000.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhala ion Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

RME AND CTE ON-SITE TRESPASSER

Scenario Table	Medium	Exposure Medium	Exposure Route
T-4.7a RME and CTE Tres SS Ing	Surface soil	Surface soil	Ingestion
T-4.7b RME and CTE Tres SS DC	Surface soil	Surface soil	Dermal Contact
T-4.7c RME and CTE Tres SS Inh Vap&Dst	Surface soil	Vapors and dust	Inhalation
T-4.7d RME and CTE Tres SBS Inh Vap	Subsurface soil	Outdoor air - vapors	Inhalation
T-4.7e RME and CTE Tres Waste Inh Vap	Waste	Outdoor air - vapors	Inhalation
T-4.7f RME and CTE Tres Sed Ing	Sediment	Sediment	Ingestion
T-4.7g RME and CTE Tres Sed DC	Sediment	Sediment	Dermal Contact
T-4.7h RME and CTE Tres SW Ing	Surface water	Surface water	Ingestion
T-4.7i RME and CTE Tres SW DC	Surface water	Surface water	Dermal Contact
T-4.7j RME and CTE Tres GW Inh Vapor	Upper Transmissive Unit	Outdoor air - vapors	Inhalation

TABLE 4.7a
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE TRESPASSER SCENARIO - INGESTION OF SURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Ingestion	Trespasser/Visitor	Adolescent	On-site surface soil 0-2 feet bgs	Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.1 and 3.5	Site-Specific	Tables 3.1 and 3.5	$Intake(mg/kg-day) = \frac{C_{soil} \cdot IR_{soil} \cdot FI \cdot EF \cdot ED \cdot 10^{-6}\, kg/mg}{BW \cdot AT}$
				IRsoil	Ingestion rate of soil	mg/day	100	USEPA, 1991b	100	USEPA, 1991b	
				FIsoil	Fraction ingested, soil	unitless	1	Professional Judgment	1	Professional Judgment	
				EF	Exposure frequency	days/year	52	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	5	Professional Judgment	
				BW	Body weight	kg	45	USEPA, 2000	45	USEPA, 2000	USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A. EPA/540/1-89/002.
				ATnc	Averaging time for non-carcinogens	days	3650	USEPA, 1989	1825	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 1991b. Risk Assessment Guidance for Superfund: Volume 1: Human Health Evaluation Manual, Supplemental Guidance, Standard Defaualt Exposure Factors. Interim Final Washington, DC. OSWER Directive 9285.6-03. April.
USEPA, 2000. Supplemental Guidance to Risk Assessment Guidance for Superfund: Region 4 Bulletins, Human Health Risk Assessment Bulletins. EPA Region 4, originally published November 1995, last updated May 2000.

TABLE 4.7b
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE TRESPASSER SCENARIO - DERMAL CONTACT WITH SURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Surface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Dermal Contact	Trespasser/Visitor	Adolescent	On-site surface soil 0-2 feet bgs	Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.1 and 3.5 (Appendix A)	Site-Specific	Tables 3.1 and 3.5 (Appendix A)	$DAD(mg/kg-day) = \frac{DA_{event} \cdot EF \cdot ED \cdot EV \cdot SA}{BW \cdot AT}$
				AF	Adherence factor of soil to skin	mg/cm2-event	0.3	USEPA, 2004a	0.04	USEPA, 2004a	
				ABSd	Dermal absorption fraction	unitless	Chemical Specific	Appendix D-1	Chemical Specific	Appendix D-1	
				EF	Exposure frequency	days/year	52	Professional Judgment	12	Professional Judgment	
				ED	Exposure dura ion	years	10	Professional Judgment	5	Professional Judgment	$DA_{event}(mg/cm^2-event) = C_{soil} \cdot AF \cdot ABS_d \cdot 10^{-6} kg/mg$
				EV	Event frequency	events/day	1	USEPA, 2004a	1	USEPA, 2004a	
				Sas	Skin surface area available for contact for soil	cm2	5700	USEPA, 2004a	5700	USEPA, 2004a	
				BW	Body weight	kg	45	USEPA, 2000	45	USEPA, 2000	USEPA, 2004a. RAGS Vol I: Human Health Evaluation Manual, Part E.
				ATnc	Averaging time for non-carcinogens	days	3650	USEPA, 1989	1825	USEPA, 1989	EPA/540/R/99/005. July 2004
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 2000. Supplemental Guidance to Risk Assessment Guidance for Superfund: Region 4 Bulle ins, Human Health Risk Assessment Bulletins. EPA Region 4, originally published November 1995, last updated May 2000.
USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.

TABLE 4.7c
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE TRESPASSER SCENARIO - INHALATION OF VAPORS AND PARTICULATES IN SURFACE SO L
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Outdoor Air
	Vapors and particulates

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Trespasser/Visitor	Adolescent	Ambient air - on-site vapors and particulates 0-2 feet bgs	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC\ (mg\ /\ m^3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.1 and 3.5 (Appendix A)	Site-Specific	Tables 3.1 and 3.5 (Appendix A)	*EC = Exposure Concentration*
				ET	Exposure time	hr/day	4	Professional Judgment	2	Professional Judgment	$C_{air}(mg/m^3) = \frac{C_{soil}}{VF_s + PEF}$
				EF	Exposure frequency	days/year	52	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	5	Professional Judgment	$PEF(m^3/kg) = Q/C_{wind} \times \frac{3{,}600 s/h}{0\ 036 \cdot (1-V) \cdot \left(\frac{U_m}{U_t}\right)^3 \cdot F(x)}$
				Atnc(hours)	Averaging time for non-carcinogens	hours	87600	USEPA, 2009	43800	USEPA, 2009	
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	$VF_s(m^3/kg) = \frac{Q/C_{vol} \cdot (3.14 \cdot D_A \cdot T)^{\frac{1}{2}} \cdot 10^{-4} m^2/cm^2}{2 \cdot \theta_b \cdot D_A}$
				PEF	Particulate emissions factor	m3/kg	Site-Specific	Appendix E-2	Site-Specific	Appendix E-2	
				Q/Cwind	Inverse of mean concentration in air at center of affected soil area (30-a	g/m2-s per kg/m3	40.76	TCEQ, 1999	40.76	TCEQ, 1999	$DA(cm^2/s) = \frac{\theta_a^{10/3} \cdot D_i \cdot H' + \theta_w^{10/3} \cdot D_w}{n^2 \cdot (\theta_b \cdot K_d + \theta_w + \theta_a \cdot H')}$
				V	Fraction of vegetative cover	unitless	0.5	TCEQ, 1999	0.5	TCEQ, 1999	
				Um	Mean annual windspeed	m/s	4.8	TCEQ, 1999	4.8	TCEQ, 1999	USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December 2002.
				Ut	Equivalent threshold value of windspeed at 7m	m/s	11.32	TCEQ, 1999	11.32	TCEQ, 1999	
				F(x)	Function dependent on Um/Ut	unitless	0.22	TCEQ, 1999	0.22	TCEQ, 1999	USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.
				VFs	Volatilization factor, soil to ambient air	m3/kg	Chemical Specific	Appendix E-2	Chemical Specific	Appendix E-2	
				Q/Cvol	Inverse of mean concentration in air at center of affected soil area (30-a	g/m2-s per kg/m3	40.76	TCEQ,1999	40.76	TCEQ,1999	
				T	Exposure interval	s	9.50E+08	TCEQ, 1999; USEPA, 2002a	9.50E+08	TCEQ, 1999; USEPA, 2002a	
				ρb	Dry soil bulk density	g/cm3	1.67	TCEQ, 1999	1.67	TCEQ, 1999	
				DA	Apparent diffusivity	cm2/s	Chemical Specific	Appendix E-2	Chemical Specific	Appendix E-2	
				θa	Air-filled soil porosity (Lair/Lsoil)	cm3-air/cm3-soil	0.21	TCEQ, 1999	0.21	TCEQ, 1999	
				Di	Chemical diffusivity in air	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				θw	Water-filled soil porosity (Lwater/Lsoil)	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				n	Total soil porosity	cm3-pore space/cm3-soil	0.37	TCEQ, 1999	0.37	TCEQ, 1999	
				Kd	Soil organic carbon partition coefficient; for organics, kd = Koc *foc	cm3-water/g-soil	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				Koc	Soil organic carbon-water partition coefficient	cm3-water/g-carbon	Chemical-Specific	Appendix D-2	Chemical-Specific	Appendix D-2	
				foc	Fraction organic carbon in soil	g-carbon/g-soil	0.008	TCEQ 1999	0 008	TCEQ 1999	

References

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USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.

USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

TABLE 4.7d
VALUES USED FOR DA LY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE TRESPASSER SCENARIO - INHALATION OF VAPORS FROM SUBSURFACE SOIL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Subsurface Soil
Exposure Medium:	Outdoor Air Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Trespasser/Visitor	Adolescent	Ambient air- on-site vapors >2 feet bgs	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC\ (mg\ /\ m^3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Csoil	Chemical concentration in soil	mg/kg	Site-Specific	Tables 3.3 and 3.7 (Appendix A)	Site-Specific	Tables 3.3 and 3.7 (Appendix A)	
				ET	Exposure time	hr/day	4	Professional Judgment	2	Professional Judgment	*EC = Exposure Concentration*
				EF	Exposure frequency	days/year	52	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	5	Professional Judgment	$C_{air}(mg/m^3) = \frac{C_{soil}}{VF_s}$
				Atnc(hours)	Averaging time for non-carcinogens	hours	87600	USEPA, 2009	43800	USEPA, 2009	
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	$VF_s(m^3/kg) = \frac{Q/C_{vol} \cdot (3.14 \cdot D_A \cdot T)^{\frac{1}{2}} \cdot 10^{-4} m^2/cm^2}{2 \cdot \theta_b \cdot D_A}$
				VFs	Volatilization factor, soil to ambient air	m3/kg	Chemical Specific	Appendix E-1	Chemical Specific	Appendix E-1	
				Q/Cvol	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ,1999	40.76	TCEQ,1999	
				T	Exposure interval	s	9.50E+08	TCEQ, 1999; USEPA, 2002a	9.50E+08	TCEQ, 1999; USEPA, 2002a	
				ρb	Dry soil bulk density	g/cm3	1.67	TCEQ, 1999	1 67	TCEQ, 1999	
				DA	Apparent diffusivity	cm2/s	Chemical Specific	Appendix E-1	Chemical Specific	Appendix E-1	$DA(cm^2/s) = \frac{\theta_a^{10/3} \cdot D_i \cdot H' + \theta_w^{10/3} \cdot D_w}{n^2 \cdot (\theta_b \cdot K_d + \theta_w + \theta_a \cdot H')}$
				θa	Air-filled soil porosity (Lair/Lsoil)	cm3-air/cm3-soil	0.21	TCEQ, 1999	0 21	TCEQ, 1999	
				Di	Chemical diffusivity in air	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				θw	Water-filled soil porosity (Lwater/Lsoil)	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				n	Total soil porosity	cm3-pore space/cm3-soil	0.37	TCEQ, 1999	0 37	TCEQ, 1999	
				Kd	Soil organic carbon partition coefficient; for organics, kd = Koc *foc	cm3-water/g-soil	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				Koc	Soil organic carbon-water partition coefficient	cm3-water/g-carbon	Chemical-Specific	Appendix D-2	Chemical-Specific	Appendix D-2	
				foc	Fraction organic carbon in soil	g-carbon/g-soil	0 008	TCEQ, 1999	0.008	TCEQ, 1999	

USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December 2002.

USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.

References

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USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

TABLE 4.7e
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE TRESPASSER SCENARIO - INHALATION OF VAPORS FROM SUBSURFACE WASTE MATERIAL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Waste
Exposure Medium:	Outdoor Air Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference
Inhalation	Trespasser/Visitor	Adolescent	Ambient air- on-site vapors >2 feet bgs	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated
				Cwaste	Chemical concentration in waste	mg/kg	Site-Specific	Tables 3.10 (Appendix A)	Site-Specific	Tables 3.10 (Appendix A)
				ET	Exposure time	hr/day	4	Professional Judgment	2	Professional Judgment
				EF	Exposure frequency	days/year	52	Professional Judgment	12	Professional Judgment
				ED	Exposure duration	years	10	Professional Judgment	5	Professional Judgment
				Atnc(hours)	Averaging time for non-carcinogens	hours	87600	USEPA, 2009	43800	USEPA, 2009
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009
				VFs	Volatilization factor, soil to ambient air	m3/kg	Chemical Specific	Appendix E-1	Chemical Specific	Appendix E-1
				Q/Cvol	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ,1999	40.76	TCEQ,1999
				T	Exposure interval	s	9.50E+08	TCEQ, 1999; USEPA, 2002a	9.50E+08	TCEQ, 1999; USEPA, 2002a
				ρb	Dry soil bulk density	g/cm3	1.67	TCEQ, 1999	1.67	TCEQ, 1999
				DA	Apparent diffusivity	cm2/s	Chemical Specific	Appendix E-1	Chemical Specific	--
				θa	Air-filled soil porosity (Lair/Lsoil)	cm3-air/cm3-soil	0.21	TCEQ, 1999	0.21	TCEQ, 1999
				Di	Chemical diffusivity in air	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2
				θw	Water-filled soil porosity (Lwater/Lsoil)	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2
				n	Total soil porosity	cm3-pore space/cm3-soil	0.37	TCEQ, 1999	0.37	TCEQ, 1999
				Kd	Soil organic carbon partition coefficient; for organics, kd = Koc *foc	cm3-water/g-soil	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2
				Koc	Soil organic carbon-water partition coefficient	cm3-water/g-carbon	Chemical-Specific	Appendix D-2	Chemical-Specific	Appendix D-2
				foc	Fraction organic carbon in soil	g-carbon/g-soil	0 008	TCEQ 1999	0.008	TCEQ 1999

Intake Equation/
Model Name

$$EC\ (mg\ /\ m^3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$$

EC = Exposure Concentration

$$C_{air}(mg/m^3) = \frac{C_{soil}}{VF_s}$$

$$VF_s(m^3/kg) = \frac{Q/C_{vol} \cdot (3.14 \cdot D_A \cdot T)^{\frac{1}{2}} \cdot 10^{-4}\, m^2/cm^2}{2 \cdot \theta_b \cdot D_A}$$

$$DA(cm^2/s) = \frac{\theta_a^{10/3} \cdot D_i \cdot H' + \theta_w^{10/3} \cdot D_w}{n^2 \cdot (\theta_b \cdot K_d + \theta_w + \theta_a \cdot H')}$$

USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December 2002.

USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.

References

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TABLE 4.7f
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE TRESPASSER SCENARIO - INGESTION OF SEDIMENT
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name (1)
Ingestion	Trespasser/Visitor	Adolescent	Sediment - East Ditch	Csed	Chemical concentration in sediment	mg/kg	Site-Specific	Tables 3.17 (Appendix A)	Site-Specific	Tables 3.17 (Appendix A)	$Intake(mg/kg-day) = \frac{C_{sed} \cdot IR_{sed} \cdot FI_{sed} \cdot EF \cdot ED \cdot 10^{-6} kg/mg}{BW \cdot AT}$
				IRsed	Ingestion rate of sediment	mg/day	100	USEPA, 1991b	100	USEPA, 1991b	
				FIsed	Fraction ingested, sediment	unitless	1	Professional Judgment	1	Professional Judgment	
				EF	Exposure frequency	days/year	52	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	5	Professional Judgment	
				BW	Body weight	kg	45	USEPA, 2000	45	USEPA, 2000	USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A. EPA/540/1-89/002.
				ATnc	Averaging time for non-carcinogens	days	3650	USEPA, 1989	1825	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

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USEPA, 2000. Supplemental Guidance to Risk Assessment Guidance for Superfund: Region 4 Bulletins, Human Health Risk Assessment Bulletins. EPA Region 4, originally published November 1995, last updated May 2000.

TABLE 4.7g
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAX MUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE TRESPASSER SCENARIO - DERMAL CONTACT WITH SEDIMENT
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Dermal Contact	Trespasser/Visitor	Adolescent	Sediment - East Ditch	Csed	Chemical concentration in sediment	mg/kg	Site-Specific	Tables 3.17 (Appendix A)	Site-Specific	Tables 3.17 (Appendix A)	$DAD(mg/kg-day)=\frac{DA_{event}\cdot EF\cdot ED\cdot EV\cdot SA}{BW\cdot AT}$
				AF	Adherence factor of soil to skin	mg/cm2-event	0.3	USEPA, 2004a	0.04	USEPA, 2004a	
				ABSd	Dermal absorption fraction	unitless	Chemical Specific	Appendix D-1	Chemical Specific	Appendix D-1	
				EF	Exposure frequency	days/year	52	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	5	Professional Judgment	$DA_{event}(mg/cm^2-event)=C_{sed}\cdot AF\cdot ABS_d\cdot 10^{-6}kg/mg$
				EV	Event frequency	events/day	1	USEPA, 2004a	1	USEPA, 2004a	
				SAs	Skin surface area available for contact for soil	cm2	5700	USEPA, 2004a	5700	USEPA, 2004a	
				BW	Body weight	kg	45	USEPA, 2000	45	USEPA, 2000	USEPA, 2004a. RAGS Vol I: Human Health Evaluation Manual, Part E. EPA/540/R/99/005. July 2004
				ATnc	Averaging time for non-carcinogens	days	3650	USEPA, 1989	1825	USEPA, 1989	
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 2000. Supplemental Guidance to Risk Assessment Guidance for Superfund: Region 4 Bulle ins, Human Health Risk Assessment Bulletins. EPA Region 4, originally published November 1995, last updated May 2000.
USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.

TABLE 4.7h
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE TRESPASSER SCENARIO - INGESTION OF SURFACE WATER
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Ingestion	Trespasser/Visitor	Adolescent	Surface Water - East Ditch	Csw	Chemical concentration in surface water	mg/L	Site-Specific	Tables 3.18 (Appendix A)	Site-Specific	Tables 3.18 (Appendix A)	$Intake(mg/kg-day) = \frac{C_{sw} \cdot IR_{sw} \cdot ET \cdot EF \cdot ED}{BW \cdot AT}$
				IRsw	Ingestion rate of surface water	L/hr	0.05	USEPA, 1989	0.05	USEPA, 1989	
				ET	Exposure time	hr/day	4	Professional Judgment	2	Professional Judgment	
				EF	Exposure frequency	days/year	52	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	5	Professional Judgment	
				BW	Body weight	kg	45	USEPA, 2000	45	USEPA, 2000	USEPA, 1989. RAGS Vol I: Human Health Evaluation Manual. Part A.
				ATnc	Averaging time for non-carcinogens	days	3650	USEPA, 1989	1825	USEPA, 1989	EPA/540/1-89/002.
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 2000. Supplemental Guidance to Risk Assessment Guidance for Superfund: Region 4 Bulletins, Human Health Risk Assessment Bulletins. EPA Region 4, originally published November 1995, last updated May 2000.

TABLE 4.7i
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAX MUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE TRESPASSER SCENARIO - DERMAL CONTACT WITH SURFACE WATER
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Dermal Contact	Trespasser/Visitor	Adolescent	Surface Water - East Ditch	Csw	Chemical concentration in surface water	mg/L	Site-Specific	Tables 3.18 (Appendix A)	Site-Specific	Tables 3.18 (Appendix A)	
				FA	Fraction absorbed water	unitless	Chemical Specific	Appendix H-3	Chemical Specific	Appendix H-3	$DAD(mg/kg-day) = \frac{DA_{event} \cdot EF \cdot ED \cdot EV \cdot SA}{BW \cdot AT}$
				kp	Dermal permeability coefficient of compound in water	cm/hr	Chemical Specific	Appendix H-3	Chemical Specific	Appendix H-3	
				tau-event	Lag time per event	hours/event	Chemical Specific	Appendix H-3	Chemical Specific	Appendix H-3	
				t-event	Event duration	hours/event	4	Professional Judgment	2	Professional Judgment	
				B	Dimensionless ratio of Kp hrough stratum corneum	unitless	Chemical Specific	Appendix H-3	Chemical Specific	Appendix H-3	
				EF	Exposure frequency	days/year	52	Professional Judgment	12	Professional Judgment	DA_{event} is f(kp, tau-event, t-event, B, …)
				ED	Exposure duration	years	10	Professional Judgment	5	Professional Judgment	See Appendix H-3 for the derivation of DA_{event}
				EV	Event frequency	events/day	1	USEPA, 2004a	1	USEPA, 2004a	
				SAw	Skin surface area available for contact wi h water	cm2	13,100	TCEQ, 2007	13,100	TCEQ, 2007	
				BW	Body weight	kg	45	USEPA, 2000	45	USEPA, 2000	USEPA, 2004a. RAGS Vol I: Human Health Evaluation Manual, Part E.
				ATnc	Averaging time for non-carcinogens	days	3650	USEPA, 1989	1825	USEPA, 1989	EPA/540/R/99/005. July 2004
				ATc	Averaging time for carcinogens	days	25550	USEPA, 1989	25550	USEPA, 1989	

References:

TCEQ, 2007. Determining PCLs for Surface Water and Sediment. RG-366/TRRP24. Available online athttp://www.tceq.texas gov/publications/rg/rg-366_trrp_24.html/at_download/file
USEPA, 1989. Risk Assessment Guidance for Superfund, Volume 1: Human Heal h Evaluation Manual (Part A). Office of Emergency and Remedial Response. Washington, DC. December.
USEPA, 2000. Supplemental Guidance to Risk Assessment Guidance for Superfund: Region 4 Bulletins, Human Health Risk Assessment Bulletins. EPA Region 4, originally published November 1995, last updated May 2000.
USEPA, 2004a. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E) Supplemental Guidance for Dermal Risk Assessment. Office of Emergency and Remedial Response. Washington, DC.

TABLE 4.7j
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE AND CENTRAL TENDENCY
ON-SITE TRESPASSER SCENARIO - NHALATION OF VAPORS MIGRAT NG FROM GROUNDWATER TO OUTDOOR AIR (UTU)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Outdoor Air Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	CT Value	CT Rationale/Reference	Intake Equation/ Model Name
Inhalation	Trespasser/Visitor	Adolescent	On-site groundwater - UTU vapors from groundwater	Cair	Chemical concentration in air	mg/m3	Site-Specific	Calculated	Site-Specific	Calculated	$EC(mg/m3) = \frac{C_{air} \cdot ET \cdot EF \cdot ED}{AT}$
				Cgw	Chemical concentration in groundwater	mg/L	Site-Specific	Table 3.12 (Appendix A)	Site-Specific	Table 3.12 (Appendix A)	
				ET	Exposure time	hr/day	4	Professional Judgment	2	Professional Judgment	
				EF	Exposure frequency	days/year	52	Professional Judgment	12	Professional Judgment	
				ED	Exposure duration	years	10	Professional Judgment	5	Professional Judgment	
				Atnc(hours)	Averaging time for non-carcinogens	hours	87600	USEPA, 2009	43800	USEPA, 2009	
				Atc(hours)	Averaging time for carcinogens	hours	613200	USEPA, 2009	613200	USEPA, 2009	
				VFwamb	Volatilization factor, groundwater to ambient air	L/m3	Chemical Specific	Appendix F-1	Chemical Specific	Appendix F-1	
				H'	Henry's law constant	unitless	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	
				Uair	Windspeed above ground surface in ambient mixing zone	cm/s	2.40E+02	TCEQ, 1999	2.40E+02	TCEQ, 1999	
				dair	Ambient air mixing zone height	cm	200	TCEQ, 1999	200	TCEQ, 1999	
				Lgw	Depth to groundwater, Lgw = hcap + hv	cm	300	Site-specific	300	Site-specific	
				hcap	Thickness of the capillary fringe	cm	5	TCEQ, 1999	5	TCEQ, 1999	
				hv	Thickness of the vadose zone	cm	295	Site-specific	295	Site-specific	
				Wg	Width of gw source in the direction of the closest off-site property line (30-acre default)	cm	34800	TCEQ, 1999	34800	TCEQ, 1999	
				D^{eff}_{ws}	Effective diffusivity above water table	cm2/s	Chemical Specific	Appendix F-1	Chemical Specific	Appendix F-1	
				D^{eff}_{cap}	Effective diffusivity in the capillary fringe	cm2/s	Chemical Specific	Appendix F-1	Chemical Specific	Appendix F-1	
				D^{eff}_{s}	Effective diffusivity in the vadose zone soils	cm2/s	Chemical Specific	Appendix F-1	Chemical Specific	Appendix F-1	
				θacap	Volumetric air content of capillary fringe soils	cm3-air/cm3-soil	0.037	TCEQ, 1999	0.037	TCEQ, 1999	
				θwcap	Volumetric water content of capillary fringe soils	cm3-H2O/cm3-soil	0.333	TCEQ, 1999	0.333	TCEQ, 1999	
				θas	Volumetric air content in vadose zone soils	cm3-air/cm3-soil	0.21	TCEQ, 1999	0 21	TCEQ, 1999	
				θws	Volumetric water content in vadose zone soils	cm3-H2O/cm3-soil	0.16	TCEQ, 1999	0.16	TCEQ, 1999	
				θT	Total soil porosity	cm3-pore-space/cm3-soil	0.37	TCEQ, 1999	0 37	TCEQ, 1999	
				Dw	Chemical diffusivity in water	cm2/s	Chemical Specific	Appendix D-2	Chemical Specific	Appendix D-2	

EC = Exposure Concentration

$$C_{air}(mg/m3) = C_{gw} \cdot VF_{wamb}$$

$$VF_{wamb}\left[\frac{mg/m^3 - air}{mg/L - H_2O}\right] = \frac{H'}{1 + \left[\frac{U_{air} \delta_{air} L_{gw}}{W_g D^{eff}_{ws}}\right]} \bullet \left[10^3 \frac{L}{m^3}\right]$$

$$D^{eff}_{ws}\left[\frac{cm^2}{s}\right] = \left(h_{cap} + h_v\right)\left[\frac{h_{cap}}{D^{eff}_{cap}} + \frac{h_v}{D^{eff}_{s}}\right]^{-1}$$

$$D^{eff}_{cap}\left[\frac{cm^2}{s}\right] = D^{air}\frac{^{-3.33}_{acap}}{^{-2}_{T}} + \left[\frac{D^w}{H'}\right]\left[\frac{^{-3.33}_{wcap}}{^{-2}_{T}}\right]$$

$$D^{eff}_{s}\left[\frac{cm^2}{s}\right] = D^{air}\frac{^{-3.33}_{as}}{^{-2}_{T}} + \left[\frac{D^w}{H'}\right]\left[\frac{^{-3.33}_{ws}}{^{-2}_{T}}\right]$$

TCEQ, 1999. Texas Risk Reduction Program (TRRP).

USEPA, 2009. RAGS, Human Health Manual. Part F. January 2009.

References

TCEQ, 1999. Texas Risk Reduction Program (TRRP) Rule, 30 Texas Administrative Code (TAC) 350. Effective August 17, 2000.
USEPA, 2002a. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. December.
USEPA, 2009. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part F) Supplemental Guidance for Inhalation Risk Assessment. OSWR 9285.7-82. Washington, DC. January.

TABLE 5.1
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD		Oral Absorption Efficiency for Dermal ABS_{GI} (1)	Absorbed RfD for Dermal		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfD: Target Organ(s)	
		Value	Units		Value	Units			Source(s)	Date(s) (MM/DD/YYYY) (2)
Aldrin	Chronic	3.0E-05	mg/kg-day	5.00E-01	3.0E-05	mg/kg-day	Liver	1000	I	2/6/2014
alpha-BHC	Chronic	8.0E-03	mg/kg-day	9.70E-01	8.0E-03	mg/kg-day	Liver	100	A	2/6/2014
Total PCBs	Chronic	2.0E-05	mg/kg-day	8.10E-01	2.0E-05	mg/kg-day	Immune system/Occular	300	I	2/6/2014
Arsenic	Chronic	3.0E-04	mg/kg-day	9.50E-01	3.0E-04	mg/kg-day	Vascular system/Skin	3	I	2/6/2014
Benz-a-anthracene	---	---	mg/kg-day	8.90E-01	---	mg/kg-day	---	---	---	2/6/2014
Benzene	Chronic	4.0E-03	mg/kg-day	9.70E-01	4.0E-03	mg/kg-day	Blood	300	I	2/6/2014
Benzo-a-pyrene	---	---	mg/kg-day	8.90E-01	---	mg/kg-day	---	---	---	2/6/2014
Benzo-b-fluoranthene	---	---	mg/kg-day	8.90E-01	---	mg/kg-day	---	---	---	2/6/2014
beta-BHC	---	---	mg/kg-day	9.10E-01	---	mg/kg-day	---	---	---	2/6/2014
Bis (2-ethyl-hexyl) phthalate	Chronic	2.0E-02	mg/kg-day	1.90E-01	3.8E-03	mg/kg-day	Liver	1000	I	2/6/2014
Cobalt	Chronic	3.0E-04	mg/kg-day	8.00E-01	3.0E-04	mg/kg-day	Thyroid	3000	P	4/30/2014
4,4'-DDD	---	---	mg/kg-day	7.00E-01	---	mg/kg-day	---	---	---	4/30/2014
4,4'-DDE	---	---	mg/kg-day	7.00E-01	---	mg/kg-day	---	---	---	4/30/2014
Dibenz-a,h-anthracene	---	---	mg/kg-day	8.90E-01	---	mg/kg-day	---	---	---	2/6/2014
Dibromochloromethane	Chronic	2.0E-02	mg/kg-day	6.00E-01	2.0E-02	mg/kg-day	Liver	1000	I	4/30/2014
Dieldrin	Chronic	5.0E-05	mg/kg-day	5.00E-01	5.0E-05	mg/kg-day	Liver	100	I	2/6/2014
Dimethylphenol, 2,4-	Chronic	2.0E-02	mg/kg-day	5.00E-01	2.0E-02	mg/kg-day	Nervous System/Blood	3000	I	4/30/2014
Dinitro-2-methylphenol, 4,6-	Chronic	8.0E-05	mg/kg-day	1.00E+00	8.0E-05	mg/kg-day	Body weight/Occular	10000	P	4/30/2014
Ethyl benzene	Chronic	1.0E-01	mg/kg-day	9.70E-01	1.0E-01	mg/kg-day	Liver/Kidney	1000	I	2/6/2014
gamma-BHC	Chronic	3.0E-04	mg/kg-day	9.70E-01	3.0E-04	mg/kg-day	Liver/Kidney	1000	I	4/30/2014
Heptachlor	Chronic	5.0E-04	mg/kg-day	7.20E-01	5.0E-04	mg/kg-day	Liver	300	I	4/30/2014
Heptachlor epoxide	Chronic	1.3E-05	mg/kg-day	7.20E-01	1.3E-05	mg/kg-day	Liver	1000	I	2/6/2014
Indeno-1,2,3-cd-pyrene	---	---	mg/kg-day	8.90E-01	---	mg/kg-day	---	---	---	2/6/2014
Lead (inorganic)	---	---	mg/kg-day	1.50E-01	---	mg/kg-day	---	---	---	2/6/2014
Manganese	Chronic	1.4E-01	mg/kg-day	6.00E-02	8.4E-03	mg/kg-day	Nervous system	1	I	4/30/2014
Mercury	Chronic	3.0E-04	mg/kg-day	7.00E-02	2.1E-05	mg/kg-day	Immune system	1000	I (for HgCl2)	2/6/2014
Methylene chloride	Chronic	6.0E-03	mg/kg-day	9.50E-01	6.0E-03	mg/kg-day	Liver	30	I	2/6/2014
Methylnaphthalene, 1-	Chronic	7.0E-02	mg/kg-day	8.90E-01	7.0E-02	mg/kg-day	Lung	1000	A	2/6/2014
Methylphenol, 3&4[a]	Chronic	5.0E-03	mg/kg-day	5.00E-01	5.0E-03	mg/kg-day	Nervous System/ Respiratory/Body weight	1000	H	2/6/2014
Naphthalene	Chronic	2.0E-02	mg/kg-day	8.90E-01	2.0E-02	mg/kg-day	Body weight	3000	I	2/6/2014
Pentachlorophenol	Chronic	5.0E-03	mg/kg-day	7.60E-01	5.0E-03	mg/kg-day	Liver	300	I	4/30/2014
Selenium	Chronic	5.0E-03	mg/kg-day	5.00E-01	5.0E-03	mg/kg-day	Liver/Hair/Nail	3	I	2/6/2014
Trimethylbenzene, 1,2,4-	---	---	mg/kg-day	8.00E-01	---	mg/kg-day	---	---	---	2/6/2014
Trimethylbenzene, 1,3,5-	Chronic	1.0E-02	mg/kg-day	8.00E-01	1.0E-02	mg/kg-day	Liver	10000	P	2/6/2014
TPH (C_5-C_8 Aliphatics)[b]	Chronic	---	mg/kg-day	8.00E-01	---	mg/kg-day	---	---	---	2/6/2014

Footnotes:
(1) Texas Risk Reduction Program, June 2012
(2) Date source was accessed.
RfDd=RfDo*ABS_{GI} when ABS_{GI} < 50%, o herwise RfDd=RfDo
Source: A = ATSDR MRL; H = HEAST; I = IRIS; P = PPRTV
[a]The lower of the toxicity values for 3&4 methylphenol was used.
[b]Toxicity data for n-hexane was used as a reasonable surrogate.

TABLE 5.2
NON-CANCER TOXICITY DATA -- INHALATION
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Chemical of Potential Concern	Chronic/ Subchronic	Inhalation RfC		Extrapolated RfD		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfC: Target Organ(s)	
		Value	Units	Value	Units			Source(s)	Date(s) (MM/DD/YYYY) (1)
Aldrin	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
alpha-BHC	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Total PCBs	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Arsenic	Chronic	1.5E-05	mg/m^3	4.29E-06	mg/kg-day	Developmental, cardiovascular system, nervous system	30	CAL	2/6/2014
Benz-a-anthracene	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Benzene	Chronic	3.0E-02	mg/m^3	8.57E-03	mg/kg-day	Blood	300	I	2/6/2014
Benzo-a-pyrene	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Benzo-b-fluoranthene	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
beta-BHC	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Bis (2-ethyl-hexyl) phthalate	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Cobalt	Chronic	6.0E-06	mg/m^3	1.71E-06	mg/kg-day	Respiratory	300	P	4/30/2014
4,4'-DDD	---	---	mg/m^3	---	mg/kg-day	---	---	---	4/30/2014
4,4'-DDE	---	---	mg/m^3	---	mg/kg-day	---	---	---	4/30/2014
Dibenz-a,h-anthracene	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Dibromochloromethane	---	---	mg/m^3	---	mg/kg-day	---	---	---	4/30/2014
Dieldrin	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Dimethylphenol, 2,4-	---	---	mg/m^3	---	mg/kg-day	---	---	---	4/30/2014
Dinitro-2-methylphenol, 4,6-	---	---	mg/m^3	---	mg/kg-day	---	---	---	4/30/2014
Ethyl benzene	Chronic	1.0E+00	mg/m^3	2.86E-01	mg/kg-day	Developmental	300	I	2/6/2014
gamma-BHC	---	---	mg/m3	---	mg/kg-day	---	---	---	4/30/2014
Heptachlor	---	---	mg/m3	---	mg/kg-day	---	---	---	4/30/2014
Heptachlor epoxide	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Indeno-1,2,3-cd-pyrene	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Lead (inorganic)	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Manganese	Chronic	5.0E-05	mg/m^3	1.43E-05	mg/kg-day	Nervous system	1000	I	4/30/2014
Mercury	Chronic	3.0E-04	mg/m^3	8.57E-05	mg/kg-day	Nervous system	30	I	2/6/2014
Methylene chloride	Chronic	6.0E-01	mg/m^3	1.71E-01	mg/kg-day	Liver	30	I	2/6/2014
Methylnaphthalene, 1-	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Methylphenol, 3&4[a]	Chronic	6.0E-01	mg/m^3	1.71E-01	mg/kg-day	Nervous system	300	CAL	2/6/2014
Naphthalene	Chronic	3.0E-03	mg/m^3	8.57E-04	mg/kg-day	Nasal	3000	I	2/6/2014
Pentachlorophenol	---	---	mg/m^3	---	mg/kg-day	---	---	---	4/30/2014
Selenium	---	---	mg/m^3	---	mg/kg-day	---	---	---	2/6/2014
Trimethylbenzene, 1,2,4-	Chronic	7.0E-03	mg/m^3	2.00E-03	mg/kg-day	Blood	3000	P	2/6/2014
Trimethylbenzene, 1,3,5-	Chronic	---	mg/m^3	---	mg/kg-day	---	---	---	5/5/2014
TPH (C_5-C_8 Aliphatics)[b]	Chronic	7.0E-01	mg/m^3	2.00E-01	mg/kg-day	Nervous system	300	I	2/6/2014

Footnotes:

(1) Date source was accessed.

RfD (mg/kg-day) = RfC (mg/m^3) · 20 m^3/day · 1/70 kg

Source: I = IRIS; P = PPRTV; CAL = Cal EPA;

[a]The lower of the toxicity values for 3&4 methylphenol was used.

[b]Toxicity data for n-hexane was used as a reasonable surrogate.

TABLE 6.1
CANCER TOXICITY DATA -- ORAL/DERMAL
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Chemical of Potential Concern	Oral Cancer Slope Factor		Oral Absorption Efficiency for Dermal ABS_{GI} (1)	Absorbed Cancer Slope Factor for Dermal		Weight of Evidence/ Cancer Guideline Description	Oral CSF	
	Value	Units		Value	Units		Source(s)	Date(s) (MM/DD/YYYY) (2)
Aldrin	1.70E+01	$(mg/kg\text{-}day)^{-1}$	5.00E-01	1.70E+01	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
alpha-BHC	6.30E+00	$(mg/kg\text{-}day)^{-1}$	9.70E-01	6 30E+00	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
Total PCBs	2.00E+00	$(mg/kg\text{-}day)^{-1}$	8.10E-01	2 00E+00	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
Arsenic	1.50E+00	$(mg/kg\text{-}day)^{-1}$	9.50E-01	1 50E+00	$(mg/kg\text{-}day)^{-1}$	A	I	2/6/2014
Benz-a-anthracene	7 30E-01	$(mg/kg\text{-}day)^{-1}$	8.90E-01	7 30E-01	$(mg/kg\text{-}day)^{-1}$	B2	E	2/6/2014
Benzene	5 50E-02	$(mg/kg\text{-}day)^{-1}$	9.70E-01	5 50E-02	$(mg/kg\text{-}day)^{-1}$	A	I	2/6/2014
Benzo-a-pyrene	7.30E+00	$(mg/kg\text{-}day)^{-1}$	8.90E-01	7 30E+00	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
Benzo-b-fluoranthene	7 30E-01	$(mg/kg\text{-}day)^{-1}$	8.90E-01	7 30E-01	$(mg/kg\text{-}day)^{-1}$	B2	E	2/6/2014
beta-BHC	1.80E+00	$(mg/kg\text{-}day)^{-1}$	9.10E-01	1 80E+00	$(mg/kg\text{-}day)^{-1}$	C	I	2/6/2014
Bis (2-ethyl-hexyl) phthalate	1.40E-02	$(mg/kg\text{-}day)^{-1}$	1.90E-01	7 37E-02	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
Cobalt	---	$(mg/kg\text{-}day)^{-1}$	8.00E-01	---	$(mg/kg\text{-}day)^{-1}$	---	---	4/30/2014
DDD	2.40E-01	$(mg/kg\text{-}day)^{-1}$	7.00E-01	2.40E-01	$(mg/kg\text{-}day)^{-1}$	B2	I	4/30/2014
DDE	3.40E-01	$(mg/kg\text{-}day)^{-1}$	7.00E-01	3.40E-01	$(mg/kg\text{-}day)^{-1}$	B2	I	4/30/2014
Dibenz-a,h-anthracene	7.30E+00	$(mg/kg\text{-}day)^{-1}$	8.90E-01	7 30E+00	$(mg/kg\text{-}day)^{-1}$	B2	E	2/6/2014
Dibromochloromethane	8.40E-02	$(mg/kg\text{-}day)^{-1}$	6.00E-01	8.40E-02	$(mg/kg\text{-}day)^{-1}$	C	I	4/30/2014
Dieldrin	1.60E+01	$(mg/kg\text{-}day)^{-1}$	5.00E-01	1 60E+01	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
Dimethyl phenol, 2,4-	---	$(mg/kg\text{-}day)^{-1}$	5.00E-01	---	$(mg/kg\text{-}day)^{-1}$	---	---	4/30/2014
Dinitro-2-methylphenol, 4,6-	---	$(mg/kg\text{-}day)^{-1}$	1 00E+00	---	$(mg/kg\text{-}day)^{-1}$	---	---	4/30/2014
Ethyl benzene	1.10E-02	$(mg/kg\text{-}day)^{-1}$	9.70E-01	1.10E-02	$(mg/kg\text{-}day)^{-1}$	D	CAL	2/6/2014
Gamma-BHC	1.10E+00	$(mg/kg\text{-}day)^{-1}$	9.70E-01	1.10E+00	$(mg/kg\text{-}day)^{-1}$	B2	CAL	4/30/2014
Heptachlor	4.50E+00	$(mg/kg\text{-}day)^{-1}$	7.20E-01	4 50E+00	$(mg/kg\text{-}day)^{-1}$	B2	I	4/30/2014
Heptachlor epoxide	9.10E+00	$(mg/kg\text{-}day)^{-1}$	7.20E-01	9.10E+00	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
Indeno-1,2,3-cd-pyrene	7 30E-01	$(mg/kg\text{-}day)^{-1}$	8.90E-01	7 30E-01	$(mg/kg\text{-}day)^{-1}$	B2	E	2/6/2014
Lead (inorganic)	---	$(mg/kg\text{-}day)^{-1}$	1.50E-01	---	$(mg/kg\text{-}day)^{-1}$	B2	CAL	2/6/2014
Manganese	---	$(mg/kg\text{-}day)^{-1}$	6.00E-02	---	$(mg/kg\text{-}day)^{-1}$	---	---	4/30/2014
Mercury	---	$(mg/kg\text{-}day)^{-1}$	7.00E-02	---	$(mg/kg\text{-}day)^{-1}$	D	---	2/6/2014
Methylene chloride	2 00E-03	$(mg/kg\text{-}day)^{-1}$	9.50E-01	2 00E-03	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
Methylnaphthalene, 1-	2 90E-02	$(mg/kg\text{-}day)^{-1}$	8.90E-01	2 90E-02	$(mg/kg\text{-}day)^{-1}$	C	P	2/6/2014
Methylphenol, 3&4[a]	---	$(mg/kg\text{-}day)^{-1}$	5.00E-01	---	$(mg/kg\text{-}day)^{-1}$	C	---	2/6/2014
Naphthalene	---	$(mg/kg\text{-}day)^{-1}$	8.90E-01	---	$(mg/kg\text{-}day)^{-1}$	C	---	2/6/2014
Pentachlorophenol	4 00E-01	$(mg/kg\text{-}day)^{-1}$	7.60E-01	4 00E-01	$(mg/kg\text{-}day)^{-1}$	LC	I	4/30/2014
Selenium	---	$(mg/kg\text{-}day)^{-1}$	5.00E-01	---	$(mg/kg\text{-}day)^{-1}$	D	---	2/6/2014
Trimethylbenzene, 1,2,4-	---	$(mg/kg\text{-}day)^{-1}$	8.00E-01	---	$(mg/kg\text{-}day)^{-1}$	D	P	2/6/2014
Trimethylbenzene, 1,3,5-	---	$(mg/kg\text{-}day)^{-1}$	8.00E-01	---	$(mg/kg\text{-}day)^{-1}$	---	---	2/6/2014
TPH (C_5-C_8 Aliphatics)[b]	---	$(mg/kg\text{-}day)^{-1}$	8.00E-01	---	$(mg/kg\text{-}day)^{-1}$	---	---	2/6/2014

Footnotes:
(1) Texas Risk Reduction Program, June 2012
(2) Date source was accessed.
Source: I = RIS; P = PPRTV; E= US EPA, 1993; CAL = California EPA
A = Human Carcinogen
B2 = Probably human carcinogen - based on sufficient evidence of carcinogenicity in animals
C = Possible carcinogen
D = Not classified as to human carcinogenicity
LC = Likely to be carcinogenic
[a]The lower of the toxicity values for 3&4 methylphenol was used.
[b]Toxicity data for n-hexane was used as a reasonable surrogate.

TABLE 6 2
CANCER TOXICITY DATA -- INHALATION
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Chemical of Poten ial Concern	Unit Risk		Inhalation Cancer Slope Factor		Weight of Evidence/ Cancer Guideline Description	Unit Risk: Inhala ion CSF	
	Value	Units	Value	Units		Source(s)	Date(s) (MM/DD/YYYY) (1)
Aldrin	4.9E-03	$(ug/m3)^{-1}$	1.72E+01	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
alpha-BHC	1.8E-03	$(ug/m3)^{-1}$	6.30E+00	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
Total PCBs	5.7E-04	$(ug/m3)^{-1}$	2.00E+00	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
Arsenic	4.3E-03	$(ug/m3)^{-1}$	1.51E+01	$(mg/kg\text{-}day)^{-1}$	A	I	2/6/2014
Benz-a-anthracene	1.1E-04	$(ug/m3)^{-1}$	3.85E-01	$(mg/kg\text{-}day)^{-1}$	B2	CAL	2/6/2014
Benzene	7.8E-06	$(ug/m3)^{-1}$	2.73E-02	$(mg/kg\text{-}day)^{-1}$	A	I	2/6/2014
Benzo-a-pyrene	1.1E-03	$(ug/m3)^{-1}$	3.85E+00	$(mg/kg\text{-}day)^{-1}$	B2	CAL	2/6/2014
Benzo-b-fluoranthene	1.1E-04	$(ug/m3)^{-1}$	3.85E-01	$(mg/kg\text{-}day)^{-1}$	B2	CAL	2/6/2014
beta-BHC	5.3E-04	$(ug/m3)^{-1}$	1.86E+00	$(mg/kg\text{-}day)^{-1}$	C	I	2/6/2014
Bis (2-e hyl-hexyl) phthalate	2.4E-06	$(ug/m3)^{-1}$	8.40E-03	$(mg/kg\text{-}day)^{-1}$	B2	CAL	2/6/2014
Cobalt	9.0E-03	$(ug/m3)^{-1}$	3.15E+01	$(mg/kg\text{-}day)^{-1}$	LC	P	4/30/2014
4,4'-DDD	6.9E-05	$(ug/m3)^{-1}$	2.42E-01	$(mg/kg\text{-}day)^{-1}$	B2	CAL	4/30/2014
4,4'-DDE	9.7E-05	$(ug/m3)^{-1}$	3.40E-01	$(mg/kg\text{-}day)^{-1}$	B2	CAL	4/30/2014
Dibenz-a,h-an hracene	1.2E-03	$(ug/m3)^{-1}$	4.20E+00	$(mg/kg\text{-}day)^{-1}$	B2	CAL	2/6/2014
Dibromochloromethane	2.7E-05	$(ug/m3)^{-1}$	9.45E-02	$(mg/kg\text{-}day)^{-1}$	C	CAL	4/30/2014
Dieldrin	4.6E-03	$(ug/m3)^{-1}$	1.61E+01	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
Dimethyl phenol, 2,4-	---	$(ug/m3)^{-1}$	---	$(mg/kg\text{-}day)^{-1}$	---	---	4/30/2014
Dinitro-2-methylphenol, 4,6-	---	$(ug/m3)^{-1}$	---	$(mg/kg\text{-}day)^{-1}$	---	---	4/30/2014
Ethyl benzene	2.5E-06	$(ug/m3)^{-1}$	8.75E-03	$(mg/kg\text{-}day)^{-1}$	D	CAL	2/6/2014
gamma-BHC	3.1E-04	$(ug/m3)^{-1}$	1.09E+00	$(mg/kg\text{-}day)^{-1}$	B2	CAL	4/30/2014
Heptachlor	1.3E-03	$(ug/m3)^{-1}$	4.55E+00	$(mg/kg\text{-}day)^{-1}$	B2	I	4/30/2014
Heptachlor epoxide	2.6E-03	$(ug/m3)^{-1}$	9.10E+00	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
Indeno-1,2,3-cd-pyrene	1.1E-04	$(ug/m3)^{-1}$	3.85E-01	$(mg/kg\text{-}day)^{-1}$	B2	CAL	2/6/2014
Lead (inorganic)	---	$(ug/m3)^{-1}$	---	$(mg/kg\text{-}day)^{-1}$	B2	CAL	2/6/2014
Manganese	---	$(ug/m3)^{-1}$	---	$(mg/kg\text{-}day)^{-1}$	D	I	4/30/2014
Mercury	---	$(ug/m3)^{-1}$	---	$(mg/kg\text{-}day)^{-1}$	D	I	2/6/2014
Methylene chloride (dichloromethane)	1.0E-08	$(ug/m3)^{-1}$	3.50E-05	$(mg/kg\text{-}day)^{-1}$	B2	I	2/6/2014
Methylnaphthalene, 1-	---	$(ug/m3)^{-1}$	---	$(mg/kg\text{-}day)^{-1}$	---	---	2/6/2014
Methylphenol, 3&4[a]	---	$(ug/m3)^{-1}$	---	$(mg/kg\text{-}day)^{-1}$	C	---	2/6/2014
Naphthalene	3.4E-05	$(ug/m3)^{-1}$	1.19E-01	$(mg/kg\text{-}day)^{-1}$	C	CAL	2/6/2014
Pentachlorophenol	5.1E-06	$(ug/m3)^{-1}$	1.79E-02	$(mg/kg\text{-}day)^{-1}$	LC	CAL	4/30/2014
Selenium	---	$(ug/m3)^{-1}$	---	$(mg/kg\text{-}day)^{-1}$	D	---	2/6/2014
Trime hylbenzene, 1,2,4-	---	$(ug/m3)^{-1}$	---	$(mg/kg\text{-}day)^{-1}$	D	---	2/6/2014
Trime hylbenzene, 1,3,5-[a]	---	$(ug/m3)^{-1}$	---	$(mg/kg\text{-}day)^{-1}$	---	---	2/6/2014
TPH (C_5-C_8 Aliphatics)[b]	---	$(ug/m3)^{-1}$	----	$(mg/kg\text{-}day)^{-1}$	----	----	2/6/2014

Footnotes:
(1) Date source was accessed.
Source: I = IRIS; CAL = California EPA
A = Human Carcinogen
B2 = Probably human carcinogen - based on sufficient evidence of carcinogenicity in animals
C = Possible carcinogen
D = Not classified as to human carcinogenicity
LC = Likely to be carcinogenic
[a]The lower of the toxicity values for 3&4 methylphenol was used.
[b]Toxicity data for n-hexane was used as a reasonable surrogate.

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk			Intake/Exposure		RfD/RfC		
					Value	Units	Value	Units	Value	Unit	Cancer Risk	Value	Units	Value	Unit	Hazard Quotient
South Pit Exposure Area -UTU	Groundwater	Outdoor Air	Inhalation	Arsenic	2.4E+00	mg/l	---	ug/m3	4.3E-03	(ug/m3)-1	---	---	mg/m3	1.5E-05	mg/m3	---
				alpha-BHC	7.5E-03	mg/l	4.2E-07	ug/m3	1.8E-03	(ug/m3)-1	7.6E-10	1.2E-09	mg/m3	---	mg/m3	---
				Dieldrin	4.9E-03	mg/l	1.3E-07	ug/m3	4.6E-03	(ug/m3)-1	6.0E-10	3.7E-10	mg/m3	---	mg/m3	---
				Benzene	5.8E+00	mg/l	2.3E-01	ug/m3	7.8E-06	(ug/m3)-1	1.8E-06	6.3E-04	mg/m3	3.0E-02	mg/m3	2.1E-02
				3&4-Methylphenol	5.7E+01	mg/l	3.2E-03	ug/m3	---	(ug/m3)-1	---	9.0E-06	mg/m3	6.0E-01	mg/m3	1.5E-05
			Inhalation Exp. Route Total								**1.8E-06**					**2.1E-02**
		Outdoor Air Exp. Point Total									**1.8E-06**					**2.1E-02**
	Groundwater Exp. Medium Total										**1.8E-06**					**2.1E-02**
South Pit Exposure Area -UTU Medium Total											**1.8E-06**					**2.1E-02**
South Pit Exposure Area -STU	Groundwater	Tap Water	Ingestion	Arsenic	1.8E-02	mg/l	6.2E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.3E-05	1.7E-04	mg/kg-day	3.0E-04	mg/kg-day	5.8E-01
				Cobalt	7.9E-03	mg/l	2.7E-05	mg/kg-day	---	(mg/kg-day)-1	---	7.7E-05	mg/kg-day	3.0E-04	mg/kg-day	2.6E-01
				Manganese	5.8E-01	mg/l	2.0E-03	mg/kg-day	---	(mg/kg-day)-1	---	5.6E-03	mg/kg-day	1.4E-01	mg/kg-day	4.0E-02
				4,4´-DDD	8.0E-05	mg/l	2.8E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	6.7E-08	7.8E-07	mg/kg-day	---	mg/kg-day	---
				alpha-BHC	1.1E-05	mg/l	3.8E-08	mg/kg-day	6.3E+00	(mg/kg-day)-1	2.4E-07	1.1E-07	mg/kg-day	8.0E-03	mg/kg-day	1.3E-05
				beta-BHC	7.8E-05	mg/l	2.7E-07	mg/kg-day	1.8E+00	(mg/kg-day)-1	4.9E-07	7.6E-07	mg/kg-day	---	mg/kg-day	---
				Dieldrin	4.8E-06	mg/l	1.7E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.7E-07	4.7E-08	mg/kg-day	5.0E-05	mg/kg-day	9.4E-04
				Heptachlor	2.4E-06	mg/l	8.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-08	2.3E-08	mg/kg-day	5.0E-04	mg/kg-day	4.7E-05
				Benzene	4.2E-04	mg/l	1.5E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	8.1E-08	4.1E-06	mg/kg-day	4.0E-03	mg/kg-day	1.0E-03
			Ingestion Exp. Route Total								**9.4E-05**					**8.8E-01**
		Tap Water Exp. Point Total									**9.4E-05**					**8.8E-01**
	Groundwater Exp. Medium Total										**9.4E-05**					**8.8E-01**
South Pit Exposure Area -STU Medium Total											**9.4E-05**					**8.8E-01**
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	5.3E+00	mg/kg	9.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.4E-06	2.6E-06	mg/kg-day	3.0E-04	mg/kg-day	8.6E-03
				Mercury	2.9E+00	mg/kg	5.0E-07	mg/kg-day	---	(mg/kg-day)-1	---	1.4E-06	mg/kg-day	3.0E-04	mg/kg-day	4.7E-03
				Heptachlor epoxide	3.3E-01	mg/kg	5.8E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	5.2E-07	1.6E-07	mg/kg-day	1.3E-05	mg/kg-day	1.2E-02
				Total PCBs	1.4E-01	mg/kg	2.5E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.0E-08	7.0E-08	mg/kg-day	2.0E-05	mg/kg-day	3.5E-03
				Benz(a)anthracene	5.0E-01	mg/kg	8.7E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.4E-08	2.4E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.3E-01	mg/kg	9.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.7E-07	2.6E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	1.1E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	7.8E-08	3.0E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	3.0E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.2E-07	8.5E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	6.5E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.7E-08	1.8E-07	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**3.0E-06**					**2.9E-02**
Surface Soil	Surface Soil	Surface Soil	Dermal Contact	Arsenic	5.3E+00	mg/kg	3.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.5E-07	1.0E-06	mg/kg-day	3.0E-04	mg/kg-day	3.4E-03
				Mercury	2.9E+00	mg/kg	6.6E-08	mg/kg-day	---	(mg/kg-day)-1	---	1.9E-07	mg/kg-day	2.1E-05	mg/kg-day	8.8E-03
				Heptachlor epoxide	3.3E-01	mg/kg	7.6E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.9E-07	2.1E-07	mg/kg-day	1.3E-05	mg/kg-day	1.6E-02
				Total PCBs	1.4E-01	mg/kg	4.6E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	9.3E-08	1.3E-07	mg/kg-day	2.0E-05	mg/kg-day	6.5E-03
				Benz(a)anthracene	5.0E-01	mg/kg	1.5E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.1E-07	4.2E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.3E-01	mg/kg	1.6E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-06	4.4E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	1.8E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.3E-07	5.1E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	5.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.8E-07	1.5E-07	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	1.1E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	8.1E-08	3.1E-07	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**3.2E-06**					**3.5E-02**
		Surface Soil Exp. Point Total									**6.2E-06**					**6.4E-02**
	Surface Soil Exp. Medium Total										**6.2E-06**					**6.4E-02**

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk			Intake/Exposure		RfD/RfC		
					Value	Units	Value	Units	Value	Unit	Cancer Risk	Value	Units	Value	Unit	Hazard Quotient
Surface Soil	Vapors & Par iculates	Outdoor Air	Inhalation	Arsenic	5.3E+00	mg/kg	9.0E-07	ug/m3	4.3E-03	(ug/m3)-1	3.9E-09	2.5E-09	mg/m3	1.5E-05	mg/m3	1.7E-04
				Mercury	2.9E+00	mg/kg	4.9E-07	ug/m3	---	(ug/m3)-1	---	1.4E-09	mg/m3	3.0E-04	mg/m3	4.6E-06
				Heptachlor epoxide	3.3E-01	mg/kg	5.6E-08	ug/m3	2.6E-03	(ug/m3)-1	1.5E-10	1.6E-10	mg/m3	---	mg/m3	---
				Total PCBs	1.4E-01	mg/kg	2.5E-08	ug/m3	5.7E-04	(ug/m3)-1	1.4E-11	6.9E-11	mg/m3	---	mg/m3	---
				Benz(a)anthracene	5.0E-01	mg/kg	8.4E-08	ug/m3	1.1E-04	(ug/m3)-1	9.2E-12	2.3E-10	mg/m3	---	mg/m3	---
				Benzo(a)pyrene	5.3E-01	mg/kg	8.8E-08	ug/m3	1.1E-03	(ug/m3)-1	9.7E-11	2.5E-10	mg/m3	---	mg/m3	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	1.0E-07	ug/m3	1.1E-04	(ug/m3)-1	1.1E-11	2.8E-10	mg/m3	---	mg/m3	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	2.8E-08	ug/m3	1.2E-03	(ug/m3)-1	3.4E-11	7.9E-11	mg/m3	---	mg/m3	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	5.9E-08	ug/m3	1.1E-04	(ug/m3)-1	6.5E-12	1.7E-10	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**4.2E-09**					**1.7E-04**
		Outdoor Air Exp. Point Total									**4.2E-09**					**1.7E-04**
	Vapors & Par iculates Exp. Medium Total										**4.2E-09**					**1.7E-04**
Surface Soil Medium Total											**6.2E-06**					**6.5E-02**
Subsurface Soil	Vapors	Outdoor Air	Inhalation	Mercury	7.0E-01	mg/kg	7.2E-04	ug/m3	---	(ug/m3)-1	---	2.0E-06	mg/m3	3.0E-04	mg/m3	6.8E-03
				Total PCBs	1.3E+00	mg/kg	1.0E-04	ug/m3	5.7E-04	(ug/m3)-1	5.7E-08	2.8E-07	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**5.7E-08**					**6.8E-03**
		Outdoor Air Exp. Point Total									**5.7E-08**					**6.8E-03**
	Vapors Exp. Medium Total										**5.7E-08**					**6.8E-03**
Subsurface Soil Medium Total											**5.7E-08**					**6.8E-03**
Waste	Vapors	Outdoor Air	Inhalation	Mercury	1.5E+00	mg/kg	1.6E-03	ug/m3	---	(ug/m3)-1	---	4.4E-06	mg/m3	3.0E-04	mg/m3	1.5E-02
				Heptachlor epoxide	1.1E+00	mg/kg	6.9E-05	ug/m3	2.6E-03	(ug/m3)-1	1.8E-07	1.9E-07	mg/m3	---	mg/m3	---
				1,3,5-Trimethylbenzene	4.0E+01	mg/kg	2.2E-01	ug/m3	---	(ug/m3)-1	---	6.1E-04	mg/m3	---	mg/m3	---
				Benzene	6.0E+01	mg/kg	1.3E+00	ug/m3	7.8E-06	(ug/m3)-1	9.8E-06	3.5E-03	mg/m3	3.0E-02	mg/m3	1.2E-01
			Inhalation Exp. Route Total								**1.0E-05**					**1.3E-01**
		Outdoor Air Exp. Point Total									**1.0E-05**					**1.3E-01**
	Vapors Exp. Medium Total										**1.0E-05**					**1.3E-01**
Waste Medium Total											**1.0E-05**					**1.3E-01**
Total of Receptor Risk Across All Media											**1.1E-04**	Total of Receptor Hazards Across All Media				**1.1E+00**

TABLE 7.2a RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Indoor Worker (Adult Video Store, Sample SG-22)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Indoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
					Value	Units	Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
							Value	Units	Value	Unit		Value	Units	Value	Unit	
Soil Gas	Indoor Air	Adult Video Store SG-22	Inhalation	Benzene	3.0E+01	ug/m3	2.4E+00	ug/m3	7.8E-06	(ug/m3)-1	1.9E-05	6.7E-03	mg/m3	3.0E-02	mg/m3	2.2E-01
				Ethylbenzene	3.4E+00	ug/m3	2.8E-01	ug/m3	2.5E-06	(ug/m3)-1	7.0E-07	7.8E-04	mg/m3	1.0E+00	mg/m3	7.8E-04
				TPH (C5-C8 Aliphatics)	5.9E+02	ug/m3	4.8E+01	ug/m3	---	(ug/m3)-1	---	1.3E-01	mg/m3	7.0E-01	mg/m3	1.9E-01
			Inhalation Exp. Route Total								**1.9E-05**					**4.2E-01**
		Adult Video Store SG-22 Exp. Point Total									**1.9E-05**					**4.2E-01**
	Indoor Air Exp. Medium Total										**1.9E-05**					**4.2E-01**
Soil Gas Medium Total											**1.9E-05**					**4.2E-01**
										Total of Receptor Risk Across All Media	**1.9E-05**			Total of Receptor Hazards Across All Media		**4.2E-01**

TABLE 7.2b RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Indoor Worker (Adult Video Store, Sample SG-13)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Indoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Unit		Value	Units	Value	Unit	
Soil Gas	Indoor Air	Adult Video Store SG-13	Inhalation	TPH (C5-C8 Aliphatics)	4.7E+01	ug/m3	3.9E+00	ug/m3	---	(ug/m3)-1	---	1.1E-02	mg/m3	7.0E-01	mg/m3	1.5E-02
			Inhalation Exp. Route Total								---					**1.5E-02**
		Adult Video Store SG-13 Exp. Point Total									---					**1.5E-02**
	Indoor Air Exp. Medium Total										---					**1.5E-02**
Soil Gas Medium Total											---					**1.5E-02**
Total of Receptor Risk Across All Media											---	Total of Receptor Hazards Across All Media				**1.5E-02**

TABLE 7.2c RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Indoor Worker (Robert's Equipment, Sample SG-33)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Indoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Unit		Value	Units	Value	Unit	
Soil Gas	Indoor Air	Robert's Equipment Building SG-33	Inhalation	Benzene	4.4E+01	ug/m3	3.6E+00	ug/m3	7.8E-06	(ug/m3)-1	2.8E-05	1.0E-02	mg/m3	3.0E-02	mg/m3	3.4E-01
				Ethylbenzene	2.6E+00	ug/m3	2.1E-01	ug/m3	2.5E-06	(ug/m3)-1	5.3E-07	6.0E-04	mg/m3	1.0E+00	mg/m3	6.0E-04
				TPH (C5-C8 Aliphatics)	7.9E+02	ug/m3	6.5E+01	ug/m3	---	(ug/m3)-1	---	1.8E-01	mg/m3	7.0E-01	mg/m3	2.6E-01
			Inhalation Exp. Route Total								**2.9E-05**					**6.0E-01**
		Robert's Equipment Building SG-33 Exp. Point Total									**2.9E-05**					**6.0E-01**
	Indoor Air Exp. Medium Total										**2.9E-05**					**6.0E-01**
Soil Gas Medium Total											**2.9E-05**					**6.0E-01**
Total of Receptor Risk Across All Media											**2.9E-05**	Total of Receptor Hazards Across All Media				**6.0E-01**

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAX MUM EXPOSURE
South Pit Exposure Area - On-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk			Intake/Exposure		RfD/RfC		Hazard
					Value	Units	Value	Units	Value	Unit	Cancer Risk	Value	Units	Value	Unit	Quotient
South Pit Exposure Area -UTU	Groundwater in Trench	Groundwater in Trench	Ingestion	Arsenic	2.4E+00	mg/l	3 2E-05	mg/kg-day	1 5E+00	(mg/kg-day)-1	4.8E-05	2.3E-03	mg/kg-day	3.0E-04	mg/kg-day	7.5E+00
				alpha-BHC	7.5E-03	mg/l	1 0E-07	mg/kg-day	6 3E+00	(mg/kg-day)-1	6.3E-07	7.0E-06	mg/kg-day	8.0E-03	mg/kg-day	8.8E-04
				Dieldrin	4.9E-03	mg/l	6 6E-08	mg/kg-day	1 6E+01	(mg/kg-day)-1	1.1E-06	4.6E-06	mg/kg-day	5.0E-05	mg/kg-day	9.2E-02
				Benzene	5.8E+00	mg/l	7 8E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	4.3E-06	5.4E-03	mg/kg-day	4.0E-03	mg/kg-day	1.4E+00
				3&4-Methylphenol	5.7E+01	mg/l	7 6E-04	mg/kg-day	---	(mg/kg-day)-1	---	5.4E-02	mg/kg-day	5.0E-03	mg/kg-day	1.1E+01
			Ingestion Exp. Route Total								**5.4E-05**					**2.0E+01**
South Pit Exposure Area -UTU	Groundwater in Trench	Groundwater in Trench	Dermal Contact	Arsenic	2.4E+00	mg/l	2.1E-06	mg/kg-day	1 5E+00	(mg/kg-day)-1	3.2E-06	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	5.0E-01
				alpha-BHC	7.5E-03	mg/l	3 3E-07	mg/kg-day	6 3E+00	(mg/kg-day)-1	2.1E-06	2.3E-05	mg/kg-day	8.0E-03	mg/kg-day	2.9E-03
				Dieldrin	4.9E-03	mg/l	1 5E-07	mg/kg-day	1 6E+01	(mg/kg-day)-1	2.5E-06	1.1E-05	mg/kg-day	5.0E-05	mg/kg-day	2.2E-01
				Benzene	5.8E+00	mg/l	7 9E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	4.4E-06	5.5E-03	mg/kg-day	4.0E-03	mg/kg-day	1.4E+00
				3&4-Methylphenol	5.7E+01	mg/l	4 2E-04	mg/kg-day	---	(mg/kg-day)-1	---	2.9E-02	mg/kg-day	5.0E-03	mg/kg-day	5.9E+00
			Dermal Contact Exp. Route Total								**1.2E-05**					**8.0E+00**
		Trench Exp. Point Total									**6.6E-05**					**2.8E+01**
	Groundwater in Trench Exp. Medium Total										**6.6E-05**					**2.8E+01**
South Pit Exposure Area -UTU	Vapors	Outdoor Air	Inhalation	Arsenic	2.4E+00	mg/l	---	ug/m3	4.3E-03	(ug/m3)-1	---	---	mg/m3	1.5E-05	mg/m3	---
				alpha-BHC	7.5E-03	mg/l	2 3E-05	ug/m3	1.8E-03	(ug/m3)-1	4.1E-08	1.6E-06	mg/m3	---	mg/m3	---
				Dieldrin	4.9E-03	mg/l	1 8E-05	ug/m3	4.6E-03	(ug/m3)-1	8.1E-08	1.2E-06	mg/m3	---	mg/m3	---
				Benzene	5.8E+00	mg/l	1 9E-01	ug/m3	7.8E-06	(ug/m3)-1	1.5E-06	1.3E-02	mg/m3	3.0E-02	mg/m3	4.4E-01
				3&4-Methylphenol	5.7E+01	mg/l	2.1E-02	ug/m3	---	(ug/m3)-1	---	1.5E-03	mg/m3	6.0E-01	mg/m3	2.5E-03
			Inhalation Exp. Route Total								**1.6E-06**					**4.4E-01**
		Outdoor Air Exp. Point Total									**1.6E-06**					**4.4E-01**
	Outdoor Vapors Exp. Medium Total										**1.6E-06**					**4.4E-01**
South Pit Exposure Area -UTU Medium Total											**6.8E-05**					**2.8E+01**
Surface and Subsurface Soil	Surface and Subsurface Soil	Surface and Subsurface Soil	Ingestion	Arsenic	1 2E+01	mg/kg	1 3E-07	mg/kg-day	1 5E+00	(mg/kg-day)-1	1.9E-07	9.0E-06	mg/kg-day	3.0E-04	mg/kg-day	3.0E-02
				Mercury	1.7E+00	mg/kg	1 9E-08	mg/kg-day	---	(mg/kg-day)-1	---	1.3E-06	mg/kg-day	3.0E-04	mg/kg-day	4.4E-03
				Heptachlor epoxide	7.9E-01	mg/kg	8.7E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	8.0E-08	6.1E-07	mg/kg-day	1.3E-05	mg/kg-day	4.7E-02
				Total PCBs	1 2E+00	mg/kg	1 3E-08	mg/kg-day	2 0E+00	(mg/kg-day)-1	2.6E-08	9.2E-07	mg/kg-day	2.0E-05	mg/kg-day	4.6E-02
				Benzene	6 0E+00	mg/kg	6 6E-08	mg/kg-day	5.5E-02	(mg/kg-day)-1	3.7E-09	4.6E-06	mg/kg-day	4.0E-03	mg/kg-day	1.2E-03
				Benz(a)anthracene	4.1E-01	mg/kg	4 5E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.3E-09	3.2E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	7.8E-01	mg/kg	8 6E-09	mg/kg-day	7 3E+00	(mg/kg-day)-1	6.3E-08	6.0E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	3.5E-01	mg/kg	3 8E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.8E-09	2.7E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1 5E+00	mg/kg	1.7E-08	mg/kg-day	7 3E+00	(mg/kg-day)-1	1.2E-07	1.2E-06	mg/kg-day	---	mg/kg-day	---
				Indeno(1 2 3-cd)pyrene	2.0E-01	mg/kg	2 3E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.6E-09	1.6E-07	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**4.9E-07**					**1.3E-01**
Surface and Subsurface Soil	Surface and Subsurface Soil	Surface and Subsurface Soil	Dermal Contact	Arsenic	1 2E+01	mg/kg	1 2E-08	mg/kg-day	1 5E+00	(mg/kg-day)-1	1.7E-08	8.1E-07	mg/kg-day	3.0E-04	mg/kg-day	2.7E-03
				Mercury	1.7E+00	mg/kg	5 6E-10	mg/kg-day	---	(mg/kg-day)-1	---	3.9E-08	mg/kg-day	2.1E-05	mg/kg-day	1.9E-03
				Heptachlor epoxide	7.9E-01	mg/kg	2 6E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.4E-08	1.8E-07	mg/kg-day	1.3E-05	mg/kg-day	1.4E-02
				Total PCBs	1 2E+00	mg/kg	5 5E-09	mg/kg-day	2 0E+00	(mg/kg-day)-1	1.1E-08	3.9E-07	mg/kg-day	2.0E-05	mg/kg-day	1.9E-02
				Benzene	6 0E+00	mg/kg	---	mg/kg-day	5.5E-02	(mg/kg-day)-1	---	---	mg/kg-day	4.0E-03	mg/kg-day	---
				Benz(a)anthracene	4.1E-01	mg/kg	1 8E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.3E-09	1.2E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	7.8E-01	mg/kg	3.4E-09	mg/kg-day	7 3E+00	(mg/kg-day)-1	2.5E-08	2.4E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	3.5E-01	mg/kg	1 5E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.1E-09	1.0E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1 5E+00	mg/kg	6 5E-09	mg/kg-day	7 3E+00	(mg/kg-day)-1	4.7E-08	4.5E-07	mg/kg-day	---	mg/kg-day	---
				Indeno(1 2 3-cd)pyrene	2.0E-01	mg/kg	8 8E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.4E-10	6.2E-08	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**1.3E-07**					**3.8E-02**
		Surface and Subsurface Soil Exp. Point Total									**6.2E-07**					**1.7E-01**
	Surface and Subsurface Soil Exp. Medium Total										**6.2E-07**					**1.7E-01**

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAX MUM EXPOSURE
South Pit Exposure Area - On-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk			Intake/Exposure		RfD/RfC		Hazard
					Value	Units	Value	Units	Value	Unit	Cancer Risk	Value	Units	Value	Unit	Quotient
Surface and Subsurface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	1 2E+01	mg/kg	1 9E-08	ug/m3	4.3E-03	(ug/m3)-1	8.2E-11	1.3E-09	mg/m3	1.5E-05	mg/m3	8.9E-05
				Mercury	1.7E+00	mg/kg	2 8E-09	ug/m3	---	(ug/m3)-1	---	1.9E-10	mg/m3	3.0E-04	mg/m3	6.5E-07
				Heptachlor epoxide	7.9E-01	mg/kg	1 3E-09	ug/m3	2.6E-03	(ug/m3)-1	3.4E-12	9.0E-11	mg/m3	---	mg/m3	---
				Total PCBs	1 2E+00	mg/kg	1 9E-09	ug/m3	5.7E-04	(ug/m3)-1	1.1E-12	1.4E-10	mg/m3	---	mg/m3	---
				Benzene	6 0E+00	mg/kg	9 8E-09	ug/m3	7.8E-06	(ug/m3)-1	7.7E-14	6.9E-10	mg/m3	3.0E-02	mg/m3	2.3E-08
				Benz(a)anthracene	4.1E-01	mg/kg	6 6E-10	ug/m3	1.1E-04	(ug/m3)-1	7.3E-14	4.6E-11	mg/m3	---	mg/m3	---
				Benzo(a)pyrene	7.8E-01	mg/kg	1 2E-09	ug/m3	1.1E-03	(ug/m3)-1	1.4E-12	8.7E-11	mg/m3	---	mg/m3	---
				Benzo(b)fluoranthene	3.5E-01	mg/kg	5 5E-10	ug/m3	1.1E-04	(ug/m3)-1	6.1E-14	3.9E-11	mg/m3	---	mg/m3	---
				Dibenz(a,h)anthracene	1 5E+00	mg/kg	2 3E-09	ug/m3	1.2E-03	(ug/m3)-1	2.8E-12	1.6E-10	mg/m3	---	mg/m3	---
				Indeno(1 2 3-cd)pyrene	2.0E-01	mg/kg	3.1E-10	ug/m3	1.1E-04	(ug/m3)-1	3.5E-14	2.2E-11	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**9.1E-11**					**8.9E-05**
		Outdoor Air Exp. Point Total									**9.1E-11**					**8.9E-05**
	Vapors & Particulates Exp. Medium Total										**9.1E-11**					**8.9E-05**
Surface and Subsurface Soil Medium Total											**6.2E-07**					**1.7E-01**
Waste	Waste	Waste	Ingestion	Arsenic	6.9E+00	mg/kg	7 6E-08	mg/kg-day	1 5E+00	(mg/kg-day)-1	1.1E-07	5.3E-06	mg/kg-day	3.0E-04	mg/kg-day	1.8E-02
				Mercury	3.2E+00	mg/kg	3 5E-08	mg/kg-day	---	(mg/kg-day)-1	---	2.5E-06	mg/kg-day	3.0E-04	mg/kg-day	8.2E-03
				alpha-BHC	5.5E-01	mg/kg	6.1E-09	mg/kg-day	6 3E+00	(mg/kg-day)-1	3.8E-08	4.3E-07	mg/kg-day	8.0E-03	mg/kg-day	5.3E-05
				Heptachlor epoxide	1.4E+00	mg/kg	1 6E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.4E-07	1.1E-06	mg/kg-day	1.3E-05	mg/kg-day	8.5E-02
				1,3,5-Trimethylbenzene	1.4E+02	mg/kg	1 5E-06	mg/kg-day	---	(mg/kg-day)-1	---	1.1E-04	mg/kg-day	1.0E-02	mg/kg-day	1.1E-02
				Benzene	1.8E+02	mg/kg	2 0E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.1E-07	1.4E-04	mg/kg-day	4.0E-03	mg/kg-day	3.5E-02
				Ethylbenzene	1.3E+02	mg/kg	1 5E-06	mg/kg-day	1.1E-02	(mg/kg-day)-1	1.6E-08	1.0E-04	mg/kg-day	1.0E-01	mg/kg-day	1.0E-03
				Naphthalene	8.3E+01	mg/kg	9 2E-07	mg/kg-day	---	(mg/kg-day)-1	---	6.4E-05	mg/kg-day	2.0E-02	mg/kg-day	3.2E-03
				1-Methylnaphthalene	2.0E+02	mg/kg	2 3E-06	mg/kg-day	2.9E-02	(mg/kg-day)-1	6.6E-08	1.6E-04	mg/kg-day	7.0E-02	mg/kg-day	2.3E-03
				Benz(a)anthracene	4.8E+00	mg/kg	5 3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.9E-08	3.7E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	4.8E+00	mg/kg	5 3E-08	mg/kg-day	7 3E+00	(mg/kg-day)-1	3.8E-07	3.7E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	3.2E+00	mg/kg	3 5E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.6E-08	2.5E-06	mg/kg-day	---	mg/kg-day	---
				Dibenz(a h)anthracene	1.3E+00	mg/kg	1.4E-08	mg/kg-day	7 3E+00	(mg/kg-day)-1	1.0E-07	9.9E-07	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**1.0E-06**					**1.6E-01**
		Waste	Dermal Contact	Arsenic	6.9E+00	mg/kg	6 9E-09	mg/kg-day	1 5E+00	(mg/kg-day)-1	1.0E-08	4.8E-07	mg/kg-day	3.0E-04	mg/kg-day	1.6E-03
				Mercury	3.2E+00	mg/kg	1.1E-09	mg/kg-day	---	(mg/kg-day)-1	---	7.4E-08	mg/kg-day	2.1E-05	mg/kg-day	3.5E-03
				alpha-BHC	5.5E-01	mg/kg	7 3E-10	mg/kg-day	6 3E+00	(mg/kg-day)-1	4.6E-09	5.1E-08	mg/kg-day	8.0E-03	mg/kg-day	6.4E-06
				Heptachlor epoxide	1.4E+00	mg/kg	4.7E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.3E-08	3.3E-07	mg/kg-day	1.3E-05	mg/kg-day	2.5E-02
				1,3,5-Trimethylbenzene	1.4E+02	mg/kg	---	mg/kg-day	---	(mg/kg-day)-1	---	---	mg/kg-day	1.0E-02	mg/kg-day	---
				Benzene	1.8E+02	mg/kg	---	mg/kg-day	5.5E-02	(mg/kg-day)-1	---	---	mg/kg-day	4.0E-03	mg/kg-day	---
				Ethylbenzene	1.3E+02	mg/kg	---	mg/kg-day	1.1E-02	(mg/kg-day)-1	---	---	mg/kg-day	1.0E-01	mg/kg-day	---
				Naphthalene	8.3E+01	mg/kg	3 6E-07	mg/kg-day	---	(mg/kg-day)-1	---	2.5E-05	mg/kg-day	2.0E-02	mg/kg-day	1.3E-03
				1-Methylnaphthalene	2.0E+02	mg/kg	8 8E-07	mg/kg-day	2.9E-02	(mg/kg-day)-1	2.6E-08	6.2E-05	mg/kg-day	7.0E-02	mg/kg-day	8.8E-04
				Benz(a)anthracene	4.8E+00	mg/kg	2.1E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.5E-08	1.5E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	4.8E+00	mg/kg	2.1E-08	mg/kg-day	7 3E+00	(mg/kg-day)-1	1.5E-07	1.4E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	3.2E+00	mg/kg	1.4E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.0E-08	9.6E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.3E+00	mg/kg	5 5E-09	mg/kg-day	7 3E+00	(mg/kg-day)-1	4.0E-08	3.9E-07	mg/kg-day	---	mg/kg-day	---
			Dermal ContactExp. Route Total								**3.0E-07**					**3.3E-02**
		Waste Exp. Point Total									**1.3E-06**					**2.0E-01**
	Waste Exp. Medium Total										**1.3E-06**					**2.0E-01**
Waste	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	6.9E+00	mg/kg	1.1E-08	ug/m3	4.3E-03	(ug/m3)-1	4.9E-11	7.9E-10	mg/m3	1.5E-05	mg/m3	5.3E-05
				Mercury	3.2E+00	mg/kg	5 2E-09	ug/m3	---	(ug/m3)-1	---	3.7E-10	mg/m3	3.0E-04	mg/m3	1.2E-06
				alpha-BHC	5.5E-01	mg/kg	9 0E-10	ug/m3	1.8E-03	(ug/m3)-1	1.6E-12	6.3E-11	mg/m3	---	mg/m3	---
				Heptachlor epoxide	1.4E+00	mg/kg	2 3E-09	ug/m3	2.6E-03	(ug/m3)-1	6.0E-12	1.6E-10	mg/m3	---	mg/m3	---
				1,3,5-Trimethylbenzene	1.4E+02	mg/kg	2 2E-07	ug/m3	---	(ug/m3)-1	---	1.6E-08	mg/m3	---	mg/m3	---
				Benzene	1.8E+02	mg/kg	2 9E-07	ug/m3	7.8E-06	(ug/m3)-1	2.3E-12	2.1E-08	mg/m3	3.0E-02	mg/m3	6.8E-07
				Ethylbenzene	1.3E+02	mg/kg	2 2E-07	ug/m3	2.5E-06	(ug/m3)-1	5.4E-13	1.5E-08	mg/m3	1.0E+00	mg/m3	1.5E-08
				Naphthalene	8.3E+01	mg/kg	1.4E-07	ug/m3	3.4E-05	(ug/m3)-1	4.6E-12	9.5E-09	mg/m3	3.0E-03	mg/m3	3.2E-06
				1-Methylnaphthalene	2.0E+02	mg/kg	3 3E-07	ug/m3	---	(ug/m3)-1	---	2.3E-08	mg/m3	---	mg/m3	---
				Benz(a)anthracene	4.8E+00	mg/kg	7 8E-09	ug/m3	1.1E-04	(ug/m3)-1	8.6E-13	5.5E-10	mg/m3	---	mg/m3	---
				Benzo(a)pyrene	4.8E+00	mg/kg	7 6E-09	ug/m3	1.1E-03	(ug/m3)-1	8.4E-12	5.3E-10	mg/m3	---	mg/m3	---
				Benzo(b)fluoranthene	3.2E+00	mg/kg	5.1E-09	ug/m3	1.1E-04	(ug/m3)-1	5.6E-13	3.5E-10	mg/m3	---	mg/m3	---
				Dibenz(a,h)anthracene	1.3E+00	mg/kg	2 0E-09	ug/m3	1.2E-03	(ug/m3)-1	2.4E-12	1.4E-10	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**7.6E-11**					**5.8E-05**
		Outdoor Air Exp. Point Total									**7.6E-11**					**5.8E-05**
	Vapors & Particulates Exp. Medium Total										**7.6E-11**					**5.8E-05**
Waste Medium Total											**1.3E-06**					**2.0E-01**

Total of Receptor Risks Across All Media	**7.0E-05**	Total of Receptor Hazards Across All Media	**2.8E+01**

TABLE 7.4 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Maintenance Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Maintenance Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Unit		Value	Units	Value	Unit	
South Pit Exposure Area -UTU	Vapors	Outdoor Air	Inhalation	Arsenic	2.4E+00	mg/l	---	ug/m3	4.3E-03	(ug/m3)-1	---	---	mg/m3	1.5E-05	mg/m3	---
				alpha-BHC	7.5E-03	mg/l	2.0E-09	ug/m3	1.8E-03	(ug/m3)-1	3.6E-12	1.4E-11	mg/m3	---	mg/m3	---
				Dieldrin	4.9E-03	mg/l	6.3E-10	ug/m3	4.6E-03	(ug/m3)-1	2.9E-12	4.4E-12	mg/m3	---	mg/m3	---
				Benzene	5.8E+00	mg/l	1.1E-03	ug/m3	7.8E-06	(ug/m3)-1	8.5E-09	7.6E-06	mg/m3	3.0E-02	mg/m3	2.5E-04
				3&4-Me hylphenol	5.7E+01	mg/l	1.5E-05	ug/m3	---	(ug/m3)-1	---	1.1E-07	mg/m3	6.0E-01	mg/m3	1.8E-07
			Inhalation Exp. Route Total								**8.5E-09**					**2.5E-04**
		Outdoor Air Exp. Point Total									**8.5E-09**					**2.5E-04**
	Vapors Exp. Medium Total										**8.5E-09**					**2.5E-04**
South Pit Exposure Area -UTU Medium Total											**8.5E-09**					**2.5E-04**
Surface Water	Surface Water	East Ditch	Ingestion	Arsenic	1.6E-02	mg/l	1.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-07	7.3E-07	mg/kg-day	3.0E-04	mg/kg-day	2.4E-03
				Aldrin	2.9E-05	mg/l	1.9E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	3.3E-09	1.4E-09	mg/kg-day	3.0E-05	mg/kg-day	4.5E-05
			Ingestion Exp. Route Total								**1.6E-07**					**2.5E-03**
Surface Water	Surface Water	East Ditch	Dermal Contact	Arsenic	1.6E-02	mg/l	3.8E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.7E-08	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	8.8E-04
				Aldrin	2.9E-05	mg/l	6.5E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	1.1E-08	4.6E-09	mg/kg-day	3.0E-05	mg/kg-day	1.5E-04
			Dermal Contact Exp. Route Total								**6.8E-08**					**1.0E-03**
		East Ditch Exp. Point Total									**2.3E-07**					**3.5E-03**
	Surface Water Exp. Medium Total										**2.3E-07**					**3.5E-03**
Surface Water Medium Total											**2.3E-07**					**3.5E-03**
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	5.3E+00	mg/kg	1.8E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.7E-08	1.2E-07	mg/kg-day	3.0E-04	mg/kg-day	4.1E-04
				Mercury	2.9E+00	mg/kg	9.6E-09	mg/kg-day	---	(mg/kg-day)-1	---	6.7E-08	mg/kg-day	3.0E-04	mg/kg-day	2.2E-04
				Heptachlor epoxide	3.3E-01	mg/kg	1.1E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.0E-08	7.7E-09	mg/kg-day	1.3E-05	mg/kg-day	6.0E-04
				Total PCBs	1.4E-01	mg/kg	4.8E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	9.7E-10	3.4E-09	mg/kg-day	2.0E-05	mg/kg-day	1.7E-04
				Benz(a)anthracene	5.0E-01	mg/kg	1.7E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-09	1.2E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.3E-01	mg/kg	1.8E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.3E-08	1.2E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	2.1E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.5E-09	1.4E-08	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	5.8E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.3E-09	4.1E-09	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	1.2E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	9.1E-10	8.7E-09	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**5.9E-08**					**1.4E-03**
Surface Soil	Surface Soil	Surface Soil	Dermal Contact	Arsenic	5.3E+00	mg/kg	7.0E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-08	4.9E-08	mg/kg-day	3.0E-04	mg/kg-day	1.6E-04
				Mercury	2.9E+00	mg/kg	1.3E-09	mg/kg-day	---	(mg/kg-day)-1	---	8.9E-09	mg/kg-day	2.1E-05	mg/kg-day	4.2E-04
				Heptachlor epoxide	3.3E-01	mg/kg	1.5E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.3E-08	1.0E-08	mg/kg-day	1.3E-05	mg/kg-day	7.9E-04
				Total PCBs	1.4E-01	mg/kg	8.9E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.8E-09	6.2E-09	mg/kg-day	2.0E-05	mg/kg-day	3.1E-04
				Benz(a)anthracene	5.0E-01	mg/kg	2.9E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.1E-09	2.0E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.3E-01	mg/kg	3.0E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.2E-08	2.1E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	3.5E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.6E-09	2.5E-08	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	1.0E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	7.3E-09	7.0E-09	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	2.1E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.6E-09	1.5E-08	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**6.1E-08**					**1.7E-03**
		Surface Soil Exp. Point Total									**1.2E-07**					**3.1E-03**
	Surface Soil Exp. Medium Total										**1.2E-07**					**3.1E-03**

TABLE 7.4 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Maintenance Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Maintenance Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Unit		Value	Units	Value	Unit	
Surface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	5.3E+00	mg/kg	4.3E-09	ug/m3	4.3E-03	(ug/m3)-1	1.9E-11	3.0E-11	mg/m3	1.5E-05	mg/m3	2.0E-06
				Mercury	2.9E+00	mg/kg	2.4E-09	ug/m3	---	(ug/m3)-1	---	1.6E-11	mg/m3	3.0E-04	mg/m3	5.5E-08
				Heptachlor epoxide	3.3E-01	mg/kg	2.7E-10	ug/m3	2.6E-03	(ug/m3)-1	7.0E-13	1.9E-12	mg/m3	---	mg/m3	---
				Total PCBs	1.4E-01	mg/kg	1.2E-10	ug/m3	5.7E-04	(ug/m3)-1	6.7E-14	8.2E-13	mg/m3	---	mg/m3	---
				Benz(a)anthracene	5.0E-01	mg/kg	4.0E-10	ug/m3	1.1E-04	(ug/m3)-1	4.4E-14	2.8E-12	mg/m3	---	mg/m3	---
				Benzo(a)pyrene	5.3E-01	mg/kg	4.2E-10	ug/m3	1.1E-03	(ug/m3)-1	4.6E-13	3.0E-12	mg/m3	---	mg/m3	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	4.9E-10	ug/m3	1.1E-04	(ug/m3)-1	5.4E-14	3.4E-12	mg/m3	---	mg/m3	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	1.4E-10	ug/m3	1.2E-03	(ug/m3)-1	1.6E-13	9.5E-13	mg/m3	---	mg/m3	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	2.9E-10	ug/m3	1.1E-04	(ug/m3)-1	3.1E-14	2.0E-12	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**2.0E-11**					**2.1E-06**
		Outdoor Air Exp. Point Total									**2.0E-11**					**2.1E-06**
	Vapors & Particulates Exp. Medium Total										**2.0E-11**					**2.1E-06**
Surface Soil Medium Total											**1.2E-07**					**3.1E-03**
Subsurface Soil	Vapors	Outdoor Air	Inhalation	Mercury	7.0E-01	mg/kg	3.5E-06	ug/m3	---	(ug/m3)-1	---	2.4E-08	mg/m3	3.0E-04	mg/m3	8.1E-05
				Total PCBs	1.3E+00	mg/kg	4.8E-07	ug/m3	5.7E-04	(ug/m3)-1	2.7E-10	3.4E-09	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**2.7E-10**					**8.1E-05**
		Outdoor Air Exp. Point Total									**2.7E-10**					**8.1E-05**
	Vapors Exp. Medium Total										**2.7E-10**					**8.1E-05**
Subsurface Soil Medium Total											**2.7E-10**					**8.1E-05**
Waste	Vapors	Outdoor Air	Inhalation	Mercury	1.5E+00	mg/kg	7.6E-06	ug/m3	---	(ug/m3)-1	---	5.3E-08	mg/m3	3.0E-04	mg/m3	1.8E-04
				Heptachlor epoxide	1.1E+00	mg/kg	3.3E-07	ug/m3	2.6E-03	(ug/m3)-1	8.6E-10	2.3E-09	mg/m3	---	mg/m3	---
				1,3,5-Trimethylbenzene	4.0E+01	mg/kg	1.0E-03	ug/m3	---	(ug/m3)-1	---	7.3E-06	mg/m3	---	mg/m3	---
				Benzene	6.0E+01	mg/kg	6.0E-03	ug/m3	7.8E-06	(ug/m3)-1	4.7E-08	4.2E-05	mg/m3	3.0E-02	mg/m3	1.4E-03
			Inhalation Exp. Route Total								**4.8E-08**					**1.6E-03**
		Outdoor Air Exp. Point Total									**4.8E-08**					**1.6E-03**
	Vapors Exp. Medium Total										**4.8E-08**					**1.6E-03**
Waste Medium Total											**4.8E-08**					**1.6E-03**
Sediment	Sediment	East Ditch	Ingestion	Benz(a)anthracene	5.8E+00	mg/kg	1.9E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.4E-08	1.4E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	1.7E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-07	1.2E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	1.5E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.1E-08	1.1E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	3.7E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.7E-08	2.6E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	1.2E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	8.6E-09	8.2E-08	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**1.8E-07**					**---**
Sediment	Sediment	East Ditch	Dermal Contact	Benz(a)anthracene	5.8E+00	mg/kg	3.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.4E-08	2.3E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	2.9E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.1E-07	2.0E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	2.6E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.9E-08	1.9E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	6.3E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.6E-08	4.4E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	2.0E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.5E-08	1.4E-07	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**3.1E-07**					**---**
		East Ditch Exp. Point Total									**5.0E-07**					**---**
	Sediment Exp. Medium Total										**5.0E-07**					**---**
Sediment Medium Total											**5.0E-07**					**---**
											Total of Receptor Risk Across All Media	**9.0E-07**		Total of Receptor Hazards Across All Media		**8.5E-03**

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Adolescent Trespasser
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk			Intake/Exposure		RfD/RfC		
					Value	Units	Value	Units	Value	Unit	Cancer Risk	Value	Units	Value	Unit	Hazard Quotient
South Pit Exposure Area -UTU	Vapors	Outdoor Air	Inhalation	Arsenic	2.4E+00	mg/l	---	mg/m3	4.3E-03	(ug/m3)-1	---	---	mg/m3	1.5E-05	mg/m3	---
				alpha-BHC	7.5E-03	mg/l	1.8E-08	mg/m3	1.8E-03	(ug/m3)-1	3.2E-11	1.2E-10	mg/m3	---	mg/m3	---
				Dieldrin	4.9E-03	mg/l	5.4E-09	mg/m3	4.6E-03	(ug/m3)-1	2.5E-11	3.8E-11	mg/m3	---	mg/m3	---
				Benzene	5.8E+00	mg/l	9.4E-03	mg/m3	7.8E-06	(ug/m3)-1	7.3E-08	6.6E-05	mg/m3	3.0E-02	mg/m3	2.2E-03
				3&4-Methylphenol	5.7E+01	mg/l	1.3E-04	mg/m3	---	(ug/m3)-1	---	9.4E-07	mg/m3	6.0E-01	mg/m3	1.6E-06
			Inhalation Exp. Route Total								**7.3E-08**					**2.2E-03**
		Outdoor Air Exp. Point Total									**7.3E-08**					**2.2E-03**
	Vapors Exp. Medium Total										**7.3E-08**					**2.2E-03**
South Pit Exposure Area -UTU Medium Total											**7.3E-08**					**2.2E-03**
Surface Water	Surface Water	East Ditch	Ingestion	Arsenic	1.6E-02	mg/l	1.4E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.1E-06	9.9E-06	mg/kg-day	3.0E-04	mg/kg-day	3.3E-02
				Aldrin	2.9E-05	mg/l	2.6E-09	mg/kg-day	1.7E+01	(mg/kg-day)-1	4.5E-08	1.8E-08	mg/kg-day	3.0E-05	mg/kg-day	6.1E-04
			Ingestion Exp. Route Total								**2.2E-06**					**3.4E-02**
Surface Water	Surface Water	East Ditch	Dermal Contact	Arsenic	1.6E-02	mg/l	3.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.5E-07	2.6E-06	mg/kg-day	3.0E-04	mg/kg-day	8.6E-03
				Aldrin	2.9E-05	mg/l	4.5E-09	mg/kg-day	1.7E+01	(mg/kg-day)-1	7.7E-08	3.2E-08	mg/kg-day	3.0E-05	mg/kg-day	1.1E-03
			Dermal Contact Exp. Route Total								**6.3E-07**					**9.7E-03**
		East Ditch Exp. Point Total									**2.8E-06**					**4.3E-02**
	Surface Water Exp. Medium Total										**2.8E-06**					**4.3E-02**
Surface Water Medium Total											**2.8E-06**					**4.3E-02**
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	5.3E+00	mg/kg	2.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.6E-07	1.7E-06	mg/kg-day	3.0E-04	mg/kg-day	5.6E-03
				Mercury	2.9E+00	mg/kg	1.3E-07	mg/kg-day	---	(mg/kg-day)-1	---	9.1E-07	mg/kg-day	3.0E-04	mg/kg-day	3.0E-03
				Heptachlor epoxide	3.3E-01	mg/kg	1.5E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.4E-07	1.0E-07	mg/kg-day	1.3E-05	mg/kg-day	8.0E-03
				Total PCBs	1.4E-01	mg/kg	6.5E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.3E-08	4.6E-08	mg/kg-day	2.0E-05	mg/kg-day	2.3E-03
				Benz(a)anthracene	5.0E-01	mg/kg	2.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.6E-08	1.6E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.3E-01	mg/kg	2.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.7E-07	1.7E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	2.8E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.0E-08	1.9E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	7.9E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.7E-08	5.5E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	1.7E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-08	1.2E-07	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**7.9E-07**					**1.9E-02**
Surface Soil	Surface Soil	Surface Soil	Dermal Contact	Arsenic	5.3E+00	mg/kg	1.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.8E-07	8.6E-07	mg/kg-day	3.0E-04	mg/kg-day	2.9E-03
				Mercury	2.9E+00	mg/kg	2.2E-08	mg/kg-day	---	(mg/kg-day)-1	---	1.6E-07	mg/kg-day	2.1E-05	mg/kg-day	7.4E-03
				Heptachlor epoxide	3.3E-01	mg/kg	2.6E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.3E-07	1.8E-07	mg/kg-day	1.3E-05	mg/kg-day	1.4E-02
				Total PCBs	1.4E-01	mg/kg	1.6E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.1E-08	1.1E-07	mg/kg-day	2.0E-05	mg/kg-day	5.5E-03
				Benz(a)anthracene	5.0E-01	mg/kg	5.0E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.7E-08	3.5E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.3E-01	mg/kg	5.3E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.9E-07	3.7E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	6.2E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.5E-08	4.3E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	1.7E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.3E-07	1.2E-07	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	3.7E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.7E-08	2.6E-07	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**1.1E-06**					**2.9E-02**
		Surface Soil Exp. Point Total									**1.9E-06**					**4.8E-02**
	Surface Soil Exp. Medium Total										**1.9E-06**					**4.8E-02**

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Adolescent Trespasser
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Unit		Value	Units	Value	Unit	
Surface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	5.3E+00	mg/kg	3.8E-08	ug/m3	4.3E-03	(ug/m3)-1	1.6E-10	2.6E-10	mg/m3	1.5E-05	mg/m3	1.8E-05
				Mercury	2.9E+00	mg/kg	2.0E-08	ug/m3	---	(ug/m3)-1	---	1.4E-10	mg/m3	3.0E-04	mg/m3	4.8E-07
				Heptachlor epoxide	3.3E-01	mg/kg	2.3E-09	ug/m3	2.6E-03	(ug/m3)-1	6.1E-12	1.6E-11	mg/m3	---	mg/m3	---
				Total PCBs	1.4E-01	mg/kg	1.0E-09	ug/m3	5.7E-04	(ug/m3)-1	5.8E-13	7.1E-12	mg/m3	---	mg/m3	---
				Benz(a)anthracene	5.0E-01	mg/kg	3.5E-09	ug/m3	1.1E-04	(ug/m3)-1	3.8E-13	2.4E-11	mg/m3	---	mg/m3	---
				Benzo(a)pyrene	5.3E-01	mg/kg	3.7E-09	ug/m3	1.1E-03	(ug/m3)-1	4.0E-12	2.6E-11	mg/m3	---	mg/m3	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	4.2E-09	ug/m3	1.1E-04	(ug/m3)-1	4.7E-13	3.0E-11	mg/m3	---	mg/m3	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	1.2E-09	ug/m3	1.2E-03	(ug/m3)-1	1.4E-12	8.3E-12	mg/m3	---	mg/m3	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	2.5E-09	ug/m3	1.1E-04	(ug/m3)-1	2.7E-13	1.7E-11	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**1.8E-10**					**1.8E-05**
		Outdoor Air Exp. Point Total									**1.8E-10**					**1.8E-05**
	Vapors & Particulates Exp. Medium Total										**1.8E-10**					**1.8E-05**
Surface Soil Medium Total											**1.9E-06**					**4.8E-02**
Subsurface Soil	Vapors	Outdoor Air	Inhalation	Mercury	7.0E-01	mg/kg	3.0E-05	ug/m3	---	(ug/m3)-1	---	2.1E-07	mg/m3	3.0E-04	mg/m3	7.0E-04
				Total PCBs	1.3E+00	mg/kg	4.2E-06	ug/m3	5.7E-04	(ug/m3)-1	2.4E-09	2.9E-08	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**2.4E-09**					**7.0E-04**
		Outdoor Air Exp. Point Total									**2.4E-09**					**7.0E-04**
	Vapors Exp. Medium Total										**2.4E-09**					**7.0E-04**
Subsurface Soil Medium Total											**2.4E-09**					**7.0E-04**
Waste	Vapors	Outdoor Air	Inhalation	Mercury	1.5E+00	mg/kg	6.6E-05	ug/m3	---	(ug/m3)-1	---	4.6E-07	mg/m3	3.0E-04	mg/m3	1.5E-03
				Heptachlor epoxide	1.1E+00	mg/kg	2.9E-06	ug/m3	2.6E-03	(ug/m3)-1	7.4E-09	2.0E-08	mg/m3	---	mg/m3	---
				1,3,5-Trimethylbenzene	4.0E+01	mg/kg	9.1E-03	ug/m3	---	(ug/m3)-1	---	6.3E-05	mg/m3	---	mg/m3	---
				Benzene	6.0E+01	mg/kg	5.2E-02	ug/m3	7.8E-06	(ug/m3)-1	4.1E-07	3.7E-04	mg/m3	3.0E-02	mg/m3	1.2E-02
			Inhalation Exp. Route Total								**4.1E-07**					**1.4E-02**
		Outdoor Air Exp. Point Total									**4.1E-07**					**1.4E-02**
	Vapors Exp. Medium Total										**4.1E-07**					**1.4E-02**
Waste Medium Total											**4.1E-07**					**1.4E-02**
Sediment	Sediment	East Ditch	Ingestion	Benz(a)anthracene	5.8E+00	mg/kg	2.6E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.9E-07	1.8E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	2.3E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.7E-06	1.6E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	2.1E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.5E-07	1.5E-06	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	5.0E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.6E-07	3.5E-07	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	1.6E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-07	1.1E-06	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**2.5E-06**					**---**
Sediment	Sediment	East Ditch	Dermal Contact	Benz(a)anthracene	5.8E+00	mg/kg	5.8E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.3E-07	4.1E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	5.0E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.7E-06	3.5E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	4.6E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.4E-07	3.2E-06	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	1.1E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	8.1E-07	7.7E-07	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	3.5E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.6E-07	2.5E-06	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**5.5E-06**					**---**
		East Ditch Exp. Point Total									**8.0E-06**					**---**
	Sediment Exp. Medium Total										**8.0E-06**					**---**
Sediment Medium Total											**8.0E-06**					**---**
											Total of Receptor Risk Across All Media	**1.3E-05**		Total of Receptor Hazards Across All Media		**1.1E-01**

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
North Pit Exposure Area - On-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
					Value	Units	Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
							Value	Units	Value	Unit		Value	Units	Value	Unit	
North Pit Exposure Area -STU	Groundwater	Tap Water	Ingestion	Arsenic	9.3E-03	mg/l	3.2E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.9E-05	9.1E-05	mg/kg-day	3.0E-04	mg/kg-day	3.0E-01
				alpha-BHC	6.7E-06	mg/l	2.3E-08	mg/kg-day	6.3E+00	(mg/kg-day)-1	1.5E-07	6.6E-08	mg/kg-day	8.0E-03	mg/kg-day	8.2E-06
				Heptachlor	1.9E-06	mg/l	6.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-08	1.9E-08	mg/kg-day	5.0E-04	mg/kg-day	3.7E-05
			Ingestion Exp. Route Total								**4.9E-05**					**3.0E-01**
		Tap Water Exp. Point Total									**4.9E-05**					**3.0E-01**
	Groundwater Exp. Medium Total										**4.9E-05**					**3.0E-01**
North Pit Exposure Area -STU Medium Total											**4.9E-05**					**3.0E-01**
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	6.8E+00	mg/kg	1.2E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.8E-06	3.3E-06	mg/kg-day	3.0E-04	mg/kg-day	1.1E-02
				Lead	2.9E+02	mg/kg	5.0E-05	mg/kg-day	---	(mg/kg-day)-1	---	1.4E-04	mg/kg-day	---	mg/kg-day	---
				Mercury	8.7E+00	mg/kg	1.5E-06	mg/kg-day	---	(mg/kg-day)-1	---	4.3E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Benzo(a)pyrene	8.8E-02	mg/kg	1.5E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.1E-07	4.3E-08	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	1.6E-06	mg/kg-day	1.4E-02	(mg/kg-day)-1	2.2E-08	4.4E-06	mg/kg-day	2.0E-02	mg/kg-day	2.2E-04
			Ingestion Exp. Route Total								**1.9E-06**					**2.6E-02**
Surface Soil	Surface Soil	Surface Soil	Dermal Contact	Arsenic	6.8E+00	mg/kg	4.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.1E-07	1.3E-06	mg/kg-day	3.0E-04	mg/kg-day	4.4E-03
				Lead	2.9E+02	mg/kg	6.6E-06	mg/kg-day	---	(mg/kg-day)-1	---	1.9E-05	mg/kg-day	---	mg/kg-day	---
				Mercury	8.7E+00	mg/kg	2.0E-07	mg/kg-day	---	(mg/kg-day)-1	---	5.6E-07	mg/kg-day	2.1E-05	mg/kg-day	2.7E-02
				Benzo(a)pyrene	8.8E-02	mg/kg	2.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.9E-07	7.4E-08	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	2.1E-06	mg/kg-day	7.4E-02	(mg/kg-day)-1	1.5E-07	5.8E-06	mg/kg-day	3.8E-03	mg/kg-day	1.5E-03
			Dermal Contact Exp. Route Total								**1.1E-06**					**3.3E-02**
		Surface Soil Exp. Point Total									**3.0E-06**					**5.8E-02**
	Surface Soil Exp. Medium Total										**3.0E-06**					**5.8E-02**
Surface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	6.8E+00	mg/kg	1.2E-06	ug/m3	4.3E-03	(ug/m3)-1	5.0E-09	3.3E-09	mg/m3	1.5E-05	mg/m3	2.2E-04
				Lead	2.9E+02	mg/kg	4.9E-05	ug/m3	---	(ug/m3)-1	---	1.4E-07	mg/m3	---	mg/m3	---
				Mercury	8.7E+00	mg/kg	1.5E-06	ug/m3	---	(ug/m3)-1	---	4.2E-09	mg/m3	3.0E-04	mg/m3	1.4E-05
				Benzo(a)pyrene	8.8E-02	mg/kg	1.5E-08	ug/m3	1.1E-03	(ug/m3)-1	1.6E-11	4.1E-11	mg/m3	---	mg/m3	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	1.5E-06	ug/m3	2.4E-06	(ug/m3)-1	3.6E-12	4.2E-09	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**5.0E-09**					**2.3E-04**
		Outdoor Air Exp. Point Total									**5.0E-09**					**2.3E-04**
	Vapors & Particulates Exp. Medium Total										**5.0E-09**					**2.3E-04**
Surface Soil Medium Total											**3.0E-06**					**5.9E-02**
Subsurface Soil	Vapors	Outdoor Air	Inhalation	Mercury	2.8E+00	mg/kg	2.9E-03	ug/m3	---	(ug/m3)-1	---	8.1E-06	mg/m3	3.0E-04	mg/m3	2.7E-02
			Inhalation Exp. Route Total								**---**					**2.7E-02**
		Outdoor Air Exp. Point Total									**---**					**2.7E-02**
	Vapors Exp. Medium Total										**---**					**2.7E-02**
Subsurface Soil Medium Total											**---**					**2.7E-02**
Total of Receptor Risk Across All Media											**5.2E-05**	Total of Receptor Hazards Across All Media				**3.9E-01**

TABLE 7.7 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
North Pit Exposure Area - On-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk			Intake/Exposure		RfD/RfC		
					Value	Units	Value	Units	Value	Unit	Cancer Risk	Value	Units	Value	Unit	Hazard Quotient
Surface and Subsurface Soil	Surface and Subsurface Soil	Surface and Subsurface Soil	Ingestion	Arsenic	6.9E+00	mg/kg	7.6E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-07	5.3E-06	mg/kg-day	3.0E-04	mg/kg-day	1.8E-02
				Lead	1.8E+02	mg/kg	2.0E-06	mg/kg-day	---	(mg/kg-day)-1	---	1.4E-04	mg/kg-day	---	mg/kg-day	---
				Mercury	5.7E+00	mg/kg	6.3E-08	mg/kg-day	---	(mg/kg-day)-1	---	4.4E-06	mg/kg-day	3.0E-04	mg/kg-day	1.5E-02
				Benzo(a)pyrene	5.7E-02	mg/kg	6.3E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.6E-09	4.4E-08	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	4.9E+00	mg/kg	5.4E-08	mg/kg-day	1.4E-02	(mg/kg-day)-1	7.6E-10	3.8E-06	mg/kg-day	2.0E-02	mg/kg-day	1.9E-04
			Ingestion Exp. Route Total								**1.2E-07**					**3.3E-02**
Surface and Subsurface Soil	Surface and Subsurface Soil	Surface and Subsurface Soil	Dermal Contact	Arsenic	6.9E+00	mg/kg	6.8E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.0E-08	4.8E-07	mg/kg-day	3.0E-04	mg/kg-day	1.6E-03
				Lead	1.8E+02	mg/kg	5.9E-08	mg/kg-day	---	(mg/kg-day)-1	---	4.1E-06	mg/kg-day	---	mg/kg-day	---
				Mercury	5.7E+00	mg/kg	1.9E-09	mg/kg-day	---	(mg/kg-day)-1	---	1.3E-07	mg/kg-day	2.1E-05	mg/kg-day	6.3E-03
				Benzo(a)pyrene	5.7E-02	mg/kg	2.5E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.8E-09	1.7E-08	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	4.9E+00	mg/kg	1.6E-08	mg/kg-day	7.4E-02	(mg/kg-day)-1	1.2E-09	1.1E-06	mg/kg-day	3.8E-03	mg/kg-day	3.0E-04
			Dermal Contact Exp. Route Total								**1.3E-08**					**8.2E-03**
		Surface and Subsurface Soil Exp. Point Total									**1.3E-07**					**4.1E-02**
	Surface and Subsurface Soil Exp. Medium Total										**1.3E-07**					**4.1E-02**
Surface and Subsurface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	6.9E+00	mg/kg	1.1E-08	ug/m3	4.3E-03	(ug/m3)-1	4.8E-11	7.9E-10	mg/m3	1.5E-05	mg/m3	5.3E-05
				Lead	1.8E+02	mg/kg	2.9E-07	ug/m3	---	(ug/m3)-1	---	2.0E-08	mg/m3	---	mg/m3	---
				Mercury	5.7E+00	mg/kg	9.3E-09	ug/m3	---	(ug/m3)-1	---	6.5E-10	mg/m3	3.0E-04	mg/m3	2.2E-06
				Benzo(a)pyrene	5.7E-02	mg/kg	9.1E-11	ug/m3	1.1E-03	(ug/m3)-1	1.0E-13	6.4E-12	mg/m3	---	mg/m3	---
				Bis(2-ethylhexyl)phthalate	4.9E+00	mg/kg	7.9E-09	ug/m3	2.4E-06	(ug/m3)-1	1.9E-14	5.5E-10	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**4.9E-11**					**5.5E-05**
		Outdoor Air Exp. Point Total									**4.9E-11**					**5.5E-05**
	Vapors & Particulates Exp. Medium Total										**4.9E-11**					**5.5E-05**
Surface and Subsurface Soil Medium Total											**1.3E-07**					**4.1E-02**

Total of Receptor Risks Across All Media	**1.3E-07**	Total of Receptor Hazards Across All Media	**4.1E-02**

TABLE 7.8 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAX MUM EXPOSURE
North Pit Exposure Area - On-Site Maintenance Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Maintenance Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Value	Intake/Exposure Units	CSF/Unit Risk Value	CSF/Unit Risk Unit	Cancer Risk	Non-Cancer Risk Calculations: Intake/Exposure Value	Intake/Exposure Units	RfD/RfC Value	RfD/RfC Unit	Hazard Quotient
Surface Water	Surface Water	East Ditch	Ingestion	Arsenic	1.6E-02	mg/l	1.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-07	7.3E-07	mg/kg-day	3.0E-04	mg/kg-day	2.4E-03
				Aldrin	2.9E-05	mg/l	1.9E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	3 3E-09	1.4E-09	mg/kg-day	3.0E-05	mg/kg-day	4.5E-05
			Ingestion Exp. Route Total								**1.6E-07**					**2.5E-03**
Surface Water	Surface Water	East Ditch	Dermal Contact	Arsenic	1.6E-02	mg/l	3.8E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.7E-08	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	8.8E-04
				Aldrin	2.9E-05	mg/l	6.5E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	1.1E-08	4.6E-09	mg/kg-day	3.0E-05	mg/kg-day	1.5E-04
			Dermal Contact Exp. Route Total								**6.8E-08**					**1.0E-03**
		East Ditch Exp. Point Total									**2.3E-07**					**3.5E-03**
	Surface Water Exp. Medium Total										**2.3E-07**					**3.5E-03**
Surface Water Medium Total											**2.3E-07**					**3.5E-03**
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	6.8E+00	mg/kg	2.3E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.4E-08	1.6E-07	mg/kg-day	3.0E-04	mg/kg-day	5.3E-04
				Lead	2.9E+02	mg/kg	9.6E-07	mg/kg-day	---	(mg/kg-day)-1	---	6.8E-06	mg/kg-day	---	mg/kg-day	---
				Mercury	8.7E+00	mg/kg	2.9E-08	mg/kg-day	---	(mg/kg-day)-1	---	2.1E-07	mg/kg-day	3.0E-04	mg/kg-day	6.8E-04
				Benzo(a)pyrene	8.8E-02	mg/kg	3.0E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	2 2E-09	2.1E-09	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	3.0E-08	mg/kg-day	1.4E-02	(mg/kg-day)-1	4 2E-10	2.1E-07	mg/kg-day	2.0E-02	mg/kg-day	1.1E-05
			Ingestion Exp. Route Total								**3.7E-08**					**1.2E-03**
Surface Soil	Surface Soil	Surface Soil	Dermal Contact	Arsenic	6.8E+00	mg/kg	9.1E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.4E-08	6.4E-08	mg/kg-day	3.0E-04	mg/kg-day	2.1E-04
				Lead	2.9E+02	mg/kg	1.3E-07	mg/kg-day	---	(mg/kg-day)-1	---	8.9E-07	mg/kg-day	---	mg/kg-day	---
				Mercury	8.7E+00	mg/kg	3.9E-09	mg/kg-day	---	(mg/kg-day)-1	---	2.7E-08	mg/kg-day	2.1E-05	mg/kg-day	1.3E-03
				Benzo(a)pyrene	8.8E-02	mg/kg	5.1E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.7E-09	3.6E-09	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	4.0E-08	mg/kg-day	7.4E-02	(mg/kg-day)-1	2 9E-09	2.8E-07	mg/kg-day	3.8E-03	mg/kg-day	7.4E-05
			Dermal Contact Exp. Route Total								**2.0E-08**					**1.6E-03**
		Surface Soil Exp. Point Total									**5.7E-08**					**2.8E-03**
	Surface Soil Exp. Medium Total										**5.7E-08**					**2.8E-03**
Surface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	6.8E+00	mg/kg	5.6E-09	ug/m3	4.3E-03	(ug/m3)-1	2.4E-11	3.9E-11	mg/m3	1.5E-05	mg/m3	2.6E-06
				Lead	2.9E+02	mg/kg	2.4E-07	ug/m3	---	(ug/m3)-1	---	1.7E-09	mg/m3	---	mg/m3	---
				Mercury	8.7E+00	mg/kg	7.2E-09	ug/m3	---	(ug/m3)-1	---	5.0E-11	mg/m3	3.0E-04	mg/m3	1.7E-07
				Benzo(a)pyrene	8.8E-02	mg/kg	7.1E-11	ug/m3	1.1E-03	(ug/m3)-1	7 8E-14	4.9E-13	mg/m3	---	mg/m3	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	7.3E-09	ug/m3	2.4E-06	(ug/m3)-1	1.7E-14	5.1E-11	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**2.4E-11**					**2.8E-06**
		Outdoor Air Exp. Point Total									**2.4E-11**					**2.8E-06**
	Vapors & Particulates Exp. Medium Total										**2.4E-11**					**2.8E-06**
Surface Soil Medium Total											**5.7E-08**					**2.8E-03**
Subsurface Soil	Vapors	Outdoor Air	Inhalation	Mercury	2.8E+00	mg/kg	1.4E-05	ug/m3	---	(ug/m3)-1	---	9.7E-08	mg/m3	3.0E-04	mg/m3	3.2E-04
			Inhalation Exp. Route Total								**---**					**3.2E-04**
		Outdoor Air Exp. Point Total									**---**					**3.2E-04**
	Vapors Exp. Medium Total										**---**					**3.2E-04**
Subsurface Soil Medium Total											**---**					**3.2E-04**
Sediment	Sediment	East Ditch	Ingestion	Benz(a)an hracene	5.8E+00	mg/kg	1.9E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.4E-08	1.4E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	1.7E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1 2E-07	1.2E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	1.5E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.1E-08	1.1E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	3.7E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.7E-08	2.6E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	1.2E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	8.6E-09	8.2E-08	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**1.8E-07**					**---**
Sediment	Sediment	East Ditch	Dermal Contact	Benz(a)an hracene	5.8E+00	mg/kg	3.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.4E-08	2.3E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	2.9E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.1E-07	2.0E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	2.6E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1 9E-08	1.9E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	6.3E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.6E-08	4.4E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	2.0E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1 5E-08	1.4E-07	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**3.1E-07**					**---**
		East Ditch Exp. Point Total									**5.0E-07**					**---**
	Sediment Exp. Medium Total										**5.0E-07**					**---**
Sediment Medium Total											**5.0E-07**					**---**
Total of Receptor Risk Across All Media											**7.8E-07**	Total of Receptor Hazards Across All Media				**6.7E-03**

TABLE 7.9 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
North Pit Exposure Area - On-Site Adolescent Trespasser
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk			Intake/Exposure		RfD/RfC		
					Value	Units	Value	Units	Value	Unit	Cancer Risk	Value	Units	Value	Unit	Hazard Quotient
Surface Water	Surface Water	East Ditch	Ingestion	Arsenic	1.6E-02	mg/l	1.4E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.1E-06	9.9E-06	mg/kg-day	3.0E-04	mg/kg-day	3.3E-02
				Aldrin	2.9E-05	mg/l	2.6E-09	mg/kg-day	1.7E+01	(mg/kg-day)-1	4.5E-08	1.8E-08	mg/kg-day	3.0E-05	mg/kg-day	6.1E-04
			Ingestion Exp. Route Total								**2.2E-06**					**3.4E-02**
Surface Water	Surface Water	East Ditch	Dermal Contact	Arsenic	1.6E-02	mg/l	3.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.5E-07	2.6E-06	mg/kg-day	3.0E-04	mg/kg-day	8.6E-03
				Aldrin	2.9E-05	mg/l	4.5E-09	mg/kg-day	1.7E+01	(mg/kg-day)-1	7.7E-08	3.2E-08	mg/kg-day	3.0E-05	mg/kg-day	1.1E-03
			Dermal Contact Exp. Route Total								**6.3E-07**					**9.7E-03**
		East Ditch Exp. Point Total									**2.8E-06**					**4.3E-02**
	Surface Water Exp. Medium Total										**2.8E-06**					**4.3E-02**
Surface Water Medium Total											**2.8E-06**					**4.3E-02**
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	6.8E+00	mg/kg	3.1E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.6E-07	2.2E-06	mg/kg-day	3.0E-04	mg/kg-day	7.2E-03
				Lead	2.9E+02	mg/kg	1.3E-05	mg/kg-day	---	(mg/kg-day)-1	---	9.1E-05	mg/kg-day	---	mg/kg-day	---
				Mercury	8.7E+00	mg/kg	4.0E-07	mg/kg-day	---	(mg/kg-day)-1	---	2.8E-06	mg/kg-day	3.0E-04	mg/kg-day	9.2E-03
				Benzo(a)pyrene	8.8E-02	mg/kg	4.0E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.9E-08	2.8E-08	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	4.1E-07	mg/kg-day	1.4E-02	(mg/kg-day)-1	5.7E-09	2.9E-06	mg/kg-day	2.0E-02	mg/kg-day	1.4E-04
			Ingestion Exp. Route Total								**5.0E-07**					**1.7E-02**
Surface Soil	Surface Soil	Surface Soil	Dermal Contact	Arsenic	6.8E+00	mg/kg	1.6E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.4E-07	1.1E-06	mg/kg-day	3.0E-04	mg/kg-day	3.7E-03
				Lead	2.9E+02	mg/kg	2.2E-06	mg/kg-day	---	(mg/kg-day)-1	---	1.6E-05	mg/kg-day	---	mg/kg-day	---
				Mercury	8.7E+00	mg/kg	6.8E-08	mg/kg-day	---	(mg/kg-day)-1	---	4.7E-07	mg/kg-day	2.1E-05	mg/kg-day	2.3E-02
				Benzo(a)pyrene	8.8E-02	mg/kg	8.9E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.5E-08	6.2E-08	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	7.0E-07	mg/kg-day	7.4E-02	(mg/kg-day)-1	5.1E-08	4.9E-06	mg/kg-day	3.8E-03	mg/kg-day	1.3E-03
			Dermal Contact Exp. Route Total								**3.5E-07**					**2.8E-02**
		North Area Exp. Point Total									**8.5E-07**					**4.4E-02**
	Surface Soil Exp. Medium Total										**8.5E-07**					**4.4E-02**
Surface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	6.8E+00	mg/kg	4.9E-08	ug/m3	4.3E-03	(ug/m3)-1	2.1E-10	3.4E-10	mg/m3	1.5E-05	mg/m3	2.3E-05
				Lead	2.9E+02	mg/kg	2.0E-06	ug/m3	---	(ug/m3)-1	---	1.4E-08	mg/m3	---	mg/m3	---
				Mercury	8.7E+00	mg/kg	6.2E-08	ug/m3	---	(ug/m3)-1	---	4.3E-10	mg/m3	3.0E-04	mg/m3	1.4E-06
				Benzo(a)pyrene	8.8E-02	mg/kg	6.1E-10	ug/m3	1.1E-03	(ug/m3)-1	6.7E-13	4.3E-12	mg/m3	---	mg/m3	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	6.3E-08	ug/m3	2.4E-06	(ug/m3)-1	1.5E-13	4.4E-10	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**2.1E-10**					**2.4E-05**
		Outdoor Air Exp. Point Total									**2.1E-10**					**2.4E-05**
	Vapors & Particulates Exp. Medium Total										**2.1E-10**					**2.4E-05**
Surface Soil Medium Total											**8.5E-07**					**4.4E-02**
Subsurface Soil	Vapors	Outdoor Air	Inhalation	Mercury	2.8E+00	mg/kg	1.2E-04	ug/m3	---	(ug/m3)-1	---	8.4E-07	mg/m3	3.0E-04	mg/m3	2.8E-03
			Inhalation Exp. Route Total								**---**					**2.8E-03**
		Outdoor Air Exp. Point Total									**---**					**2.8E-03**
	Vapors Exp. Medium Total										**---**					**2.8E-03**
Subsurface Soil Medium Total											**---**					**2.8E-03**
Sediment	Sediment	East Ditch	Ingestion	Benz(a)anthracene	5.8E+00	mg/kg	2.6E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.9E-07	1.8E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	2.3E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.7E-06	1.6E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	2.1E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.5E-07	1.5E-06	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	5.0E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.6E-07	3.5E-07	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	1.6E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-07	1.1E-06	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**2.5E-06**					**---**
Sediment	Sediment	East Ditch	Dermal Contact	Benz(a)anthracene	5.8E+00	mg/kg	5.8E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.3E-07	4.1E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	5.0E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.7E-06	3.5E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	4.6E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.4E-07	3.2E-06	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	1.1E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	8.1E-07	7.7E-07	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	3.5E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.6E-07	2.5E-06	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**5.5E-06**					**---**
		East Ditch Exp. Point Total									**8.0E-06**					**---**
	Sediment Exp. Medium Total										**8.0E-06**					**---**
Sediment Medium Total											**8.0E-06**					**---**
										Total of Receptor Risk Across All Media	**1.2E-05**			Total of Receptor Hazards Across All Media		**9.0E-02**

TABLE 7.10 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
Off-Site Exposure Area - Off-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk			Intake/Exposure		RfD/RfC		
					Value	Units	Value	Units	Value	Unit	Cancer Risk	Value	Units	Value	Unit	Hazard Quotient
Off-Site Exposure Area - UTU	Outdoor Air	Outdoor Air	Inhalation	Benzene	3.5E+00	mg/l	1.4E-01	ug/m3	7.8E-06	(ug/m3)-1	1.1E-06	3.8E-04	mg/m3	3.0E-02	mg/m3	1.3E-02
			Inhalation Exp. Route Total								**1.1E-06**					**1.3E-02**
		Vapors Exp. Point Total									**1.1E-06**					**1.3E-02**
	Groundwater Exp. Medium Total										**1.1E-06**					**1.3E-02**
Off-Site Exposure Area - UTU Medium Total											**1.1E-06**					**1.3E-02**
Off-Site Exposure Area -STU	Groundwater	Tap Water	Ingestion	Arsenic	1.1E-01	mg/l	3.7E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.6E-04	1.0E-03	mg/kg-day	3.0E-04	mg/kg-day	3.5E+00
				Cobalt	6.0E-03	mg/l	2.1E-05	mg/kg-day	---	(mg/kg-day)-1	---	5.9E-05	mg/kg-day	3.0E-04	mg/kg-day	2.0E-01
				Manganese	3.6E+00	mg/l	1.2E-02	mg/kg-day	---	(mg/kg-day)-1	---	3.5E-02	mg/kg-day	1.4E-01	mg/kg-day	2.5E-01
				4,4´-DDE	2.9E-04	mg/l	1.0E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.4E-07	2.8E-06	mg/kg-day	---	mg/kg-day	---
				beta-BHC	7.6E-05	mg/l	2.7E-07	mg/kg-day	1.8E+00	(mg/kg-day)-1	4.8E-07	7.4E-07	mg/kg-day	---	mg/kg-day	---
				Dieldrin	4.9E-06	mg/l	1.7E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.7E-07	4.8E-08	mg/kg-day	5.0E-05	mg/kg-day	9.6E-04
				gamma-BHC	4.2E-05	mg/l	1.5E-07	mg/kg-day	1.1E+00	(mg/kg-day)-1	1.6E-07	4.1E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				Heptachlor	9.2E-06	mg/l	3.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-07	9.0E-08	mg/kg-day	5.0E-04	mg/kg-day	1.8E-04
				Heptachlor epoxide	1.9E-04	mg/l	6.6E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.0E-06	1.9E-06	mg/kg-day	1.3E-05	mg/kg-day	1.4E-01
				1,2,4-Trimethylbenzene	2.2E-02	mg/l	7.7E-05	mg/kg-day	---	(mg/kg-day)-1	---	2.2E-04	mg/kg-day	---	mg/kg-day	---
				Benzene	1.9E-02	mg/l	6.6E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	3.7E-06	1.9E-04	mg/kg-day	4.0E-03	mg/kg-day	4.6E-02
				Dibromochloromethane	3.8E-04	mg/l	1.3E-06	mg/kg-day	8.4E-02	(mg/kg-day)-1	1.1E-07	3.7E-06	mg/kg-day	2.0E-02	mg/kg-day	1.9E-04
				Ethylbenzene	5.8E-02	mg/l	2.0E-04	mg/kg-day	1.1E-02	(mg/kg-day)-1	2.2E-06	5.7E-04	mg/kg-day	1.0E-01	mg/kg-day	5.7E-03
				Naphthalene	2.0E-02	mg/l	7.0E-05	mg/kg-day	---	(mg/kg-day)-1	---	2.0E-04	mg/kg-day	2.0E-02	mg/kg-day	9.8E-03
				1-Methylnaphthalene	5.7E-03	mg/l	2.0E-05	mg/kg-day	2.9E-02	(mg/kg-day)-1	5.8E-07	5.6E-05	mg/kg-day	7.0E-02	mg/kg-day	8.0E-04
				2,4-Dimethylphenol	4.6E-01	mg/l	1.6E-03	mg/kg-day	---	(mg/kg-day)-1	---	4.5E-03	mg/kg-day	2.0E-02	mg/kg-day	2.3E-01
				4,6-Dinitro-2-methylphenol	1.9E-03	mg/l	6.6E-06	mg/kg-day	---	(mg/kg-day)-1	---	1.9E-05	mg/kg-day	8.0E-05	mg/kg-day	2.3E-01
				Benz(a)anthracene	5.5E-05	mg/l	1.9E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.4E-07	5.4E-07	mg/kg-day	---	mg/kg-day	---
				Pentachlorophenol	4.7E-04	mg/l	1.6E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	6.6E-07	4.6E-06	mg/kg-day	5.0E-03	mg/kg-day	9.2E-04
			Ingestion Exp. Route Total								**5.7E-04**					**4.6E+00**
		Tap Water Exp. Point Total									**5.7E-04**					**4.6E+00**
	Groundwater Exp. Medium Total										**5.7E-04**					**4.6E+00**
Off-Site Exposure Area - STU Medium Total											**5.7E-04**					**4.6E+00**
Total of Receptor Risk Across All Media											**5.7E-04**	Total of Receptor Hazards Across All Media				**4.6E+00**

TABLE 7.11 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
Off-Site Exposure Area - Off-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Unit		Value	Units	Value	Unit	
Off-Site Exposure Area - UTU	Groundwater in Trench	Groundwater in Trench	Ingestion	Benzene	3.5E+00	mg/l	4.7E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.6E-06	3.3E-03	mg/kg-day	4.0E-03	mg/kg-day	8.2E-01
			Ingestion Exp. Route Total								**2.6E-06**					**8.2E-01**
Off-Site Exposure Area - UTU	Groundwater in Trench	Groundwater in Trench	Dermal Contact	Benzene	3.5E+00	mg/l	4.8E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.6E-06	3.3E-03	mg/kg-day	4.0E-03	mg/kg-day	8.4E-01
			Dermal Contact Exp. Route Total								**2.6E-06**					**8.4E-01**
		Trench Exp. Point Total									**5.2E-06**					**1.7E+00**
	Groundwater in Trench Exp. Medium Total										**5.2E-06**					**1.7E+00**
Off-Site Exposure Area - UTU	Outdoor Air Vapors	Outdoor Air	Inhalation	Benzene	3.5E+00	mg/l	1.1E-01	ug/m3	7.8E-06	(ug/m3)-1	8.9E-07	8.0E-03	mg/m3	3.0E-02	mg/m3	2.7E-01
			Inhalation Exp. Route Total								**8.9E-07**					**2.7E-01**
		Outdoor Vapors Exp. Point Total									**8.9E-07**					**2.7E-01**
	Outdoor Vapors Exp. Medium Total										**8.9E-07**					**2.7E-01**
Off-Site Exposure Area - UTU Medium Total											**6.1E-06**					**1.9E+00**

Total of Receptor Risks Across All Media	**6.1E-06**	Total of Receptor Hazards Across All Media	**1.9E+00**

TABLE 9.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
South Pit Exposure Area - UTU	Groundwater	Outdoor Air	Arsenic	---	---	---	---	---	---	---	---	---
			alpha-BHC	---	7 6E-10	---	7.6E-10	---	---	---	---	---
			Dieldrin	---	6 0E-10	---	6.0E-10	---	---	---	---	---
			Benzene	---	1 8E-06	---	1.8E-06	Blood	---	2.1E-02	---	2.1E-02
			3&4-Methylphenol	---	---	---	---	---	---	1.5E-05	---	1 5E-05
			Chemical Total	0.0E+00	1 8E-06	0.0E+00	**1.8E-06**		0.0E+00	2.1E-02	0.0E+00	**2.1E-02**
		Vapors Exposure Point Total					**1.8E-06**					**2.1E-02**
	Groundwater Exposure Medium Total						**1.8E-06**					**2.1E-02**
South Pit Exposure Area -UTU Medium Total							**1.8E-06**					**2.1E-02**
South Pit Exposure Area - STU	Groundwater	Tap Water	Arsenic	9.3E-05	---	---	9.3E-05	Vascular system/Skin	5.8E-01	---	---	5 8E-01
			Cobalt	---	---	---	---	Thyroid	2.6E-01	---	---	2 6E-01
			Manganese	---	---	---	---	Nervous system	4.0E-02	---	---	4 0E-02
			4,4 -DDD	6.7E-08	---	---	6.7E-08	---	---	---	---	---
			alpha-BHC	2.4E-07	---	---	2.4E-07	Liver	1.3E-05	---	---	1 3E-05
			beta-BHC	4.9E-07	---	---	4.9E-07	---	---	---	---	---
			Dieldrin	2.7E-07	---	---	2.7E-07	Liver	9.4E-04	---	---	9.4E-04
			Heptachlor	3.8E-08	---	---	3.8E-08	Liver	4.7E-05	---	---	4.7E-05
			Benzene	8.1E-08	---	---	8.1E-08	Blood	1.0E-03	---	---	1 0E-03
			Chemical Total	9.4E-05	0.0E+00	0.0E+00	**9.4E-05**		8.8E-01	0.0E+00	0.0E+00	**8.8E-01**
		Tap Water Exposure Point Total					**9.4E-05**					**8.8E-01**
	Groundwater Exposure Medium Total						**9.4E-05**					**8.8E-01**
South Pit Exposure Area - STU Medium Total							**9.4E-05**					**8.8E-01**
Surface Soil	Surface Soil	Surface Soil	Arsenic	1.4E-06	3 9E-09	5.5E-07	1.9E-06	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	8.6E-03	1.7E-04	3.4E-03	1 2E-02
			Mercury	---	---	---	---	Immune system/Nervous System	4.7E-03	4.6E-06	8 8E-03	1.4E-02
			Heptachlor epoxide	5.2E-07	1 5E-10	6.9E-07	1.2E-06	Liver	1.2E-02	---	1 6E-02	2 9E-02
			Total PCBs	5.0E-08	1.4E-11	9.3E-08	1.4E-07	Immune system/Occular	3.5E-03	---	6 5E-03	1 0E-02
			Benz(a)anthracene	6.4E-08	9 2E-12	1.1E-07	1.7E-07	---	---	---	---	---
			Benzo(a)pyrene	6.7E-07	9.7E-11	1.2E-06	1.8E-06	---	---	---	---	---
			Benzo(b)fluoranthene	7.8E-08	1.1E-11	1.3E-07	2.1E-07	---	---	---	---	---
			Dibenz(a,h)anthracene	2.2E-07	3.4E-11	3.8E-07	6.0E-07	---	---	---	---	---
			Indeno(1 2 3-cd)pyrene	4.7E-08	6 5E-12	8.1E-08	1.3E-07	---	---	---	---	---
			Chemical Total	3.0E-06	4 2E-09	3.2E-06	**6.2E-06**		2.9E-02	1.7E-04	3 5E-02	**6.5E-02**
		Surface Soil Exposure Point Total					**6.2E-06**					**6.5E-02**
	Surface Soil Exposure Medium Total						**6.2E-06**					**6.5E-02**
Surface Soil Medium Total							**6.2E-06**					**6.5E-02**
Subsurface Soil	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	6.8E-03	---	6 8E-03
			Total PCBs	---	5.7E-08	---	5.7E-08	---	---	---	---	---
			Chemical Total	0.0E+00	5.7E-08	0.0E+00	**5.7E-08**		0.0E+00	6.8E-03	0.0E+00	**6.8E-03**
		Outdoor Air Exposure Point Total					**5.7E-08**					**6.8E-03**
	Vapors Exposure Medium Total						**5.7E-08**					**6.8E-03**
Subsurface Soil Medium Total							**5.7E-08**					**6.8E-03**
Waste	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	1.5E-02	---	1 5E-02
			Heptachlor epoxide	---	1 8E-07	---	1.8E-07	---	---	---	---	---
			1,3,5-Trimethylbenzene	---	---	---	---		---	---	---	---
			Benzene	---	9 8E-06	---	9.8E-06	Blood	---	1.2E-01	---	1 2E-01
			Chemical Total	0.0E+00	1 0E-05	0.0E+00	**1.0E-05**		0.0E+00	1.3E-01	0.0E+00	**1.3E-01**
		Outdoor Air Exposure Point Total					**1.0E-05**					**1.3E-01**
	Vapors Exposure Medium Total						**1.0E-05**					**1.3E-01**
Waste Medium Total							**1.0E-05**					**1.3E-01**
							Receptor Risk Total	**1.1E-04**				**Receptor HI Total**	**1.1E+00**

Total Blood HI Across All Media	**1.4E-01**
Total Nervous System HI Across All Media	**8.7E-02**
Total Developmental HI Across All Media	**1.2E-02**
Total Eyes HI Across All Media	**1.0E-02**
Total Liver HI Across All Media	**3.0E-02**
Total Thyroid HI Across All Media	**2.6E-01**
Total Vascular System HI Across All Media	**5.9E-01**
Total Skin HI Across All Media	**5.9E-01**
Total Cardiovascular System HI Across All Media	**1.2E-02**
Total Immune System HI Across All Media	**2.4E-02**

TABLE 9.2a RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Indoor Worker (Adult Video Store, Sample SG-22)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Indoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil Gas	Indoor Air	Adult Video Store SG-22	Benzene	---	1.9E-05	---	1.9E-05	Blood	---	2.2E-01	---	2.2E-01
			Ethylbenzene	---	7.0E-07	---	7.0E-07	Developmental	---	7.8E-04	---	7.8E-04
			TPH (C5-C8 Aliphatics)	---	---	---	---	Nervous system	---	1.9E-01	---	1.9E-01
			Chemical Total	0.0E+00	1.9E-05	0.0E+00	**1.9E-05**		0.0E+00	4.2E-01	0.0E+00	**4.2E-01**
		SG-22 Exposure Point Total					**1.9E-05**					**4.2E-01**
	Indoor Air Exposure Medium Total						**1.9E-05**					**4.2E-01**
Soil Gas Medium Total							**1.9E-05**					**4.2E-01**
						Receptor Risk Total	**1.9E-05**				**Receptor HI Total**	**4.2E-01**

Total Blood HI Across All Media	**2.2E-01**
Total CNS HI Across All Media	**1.9E-01**
Total Developmental HI Across All Media	**7.8E-04**

TABLE 9.2b RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Indoor Worker (Adult Video Store, Sample SG-13)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Indoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil Gas	Indoor Air	Adult Video Store	TPH (C5-C8 Aliphatics)	---	---	---	---	Nervous system	---	1.5E-02	---	1.5E-02
		SG-13	Chemical Total	0.0E+00	0.0E+00	0.0E+00	**0.0E+00**		0.0E+00	1.5E-02	0.0E+00	**1.5E-02**
		SG-13 Exposure Point Total					**0.0E+00**					**1.5E-02**
	Indoor Air Exposure Medium Total						**0.0E+00**					**1.5E-02**
Soil Gas Medium Total							**0.0E+00**					**1.5E-02**
						Receptor Risk Total	**0.0E+00**				**Receptor HI Total**	**1.5E-02**

Total CNS HI Across All Media **1.5E-02**

TABLE 9.2c RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Indoor Worker (Robert's Equipment, Sample SG-33)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Indoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil Gas	Indoor Air	Robert's Equipment Building SG-33	Benzene	---	2.8E-05	---	2.8E-05	Blood	---	3.4E-01	---	3.4E-01
			Ethylbenzene	---	5.3E-07	---	5.3E-07	Developmental	---	6.0E-04	---	6.0E-04
			TPH (C5-C8 Aliphatics)	---	---	---	---	Nervous system	---	2.6E-01	---	2.6E-01
			Chemical Total	0.0E+00	2.9E-05	0.0E+00	**2.9E-05**		0.0E+00	6.0E-01	0.0E+00	**6.0E-01**
		SG-33 Exposure Point Total					**2.9E-05**					**6.0E-01**
	Indoor Air Exposure Medium Total						**2.9E-05**					**6.0E-01**
Soil Gas Medium Total							**2.9E-05**					**6.0E-01**

Receptor Risk Total	**2.9E-05**	**Receptor HI Total**	**6.0E-01**

Total Blood HI Across All Media	**3.4E-01**
Total Nervous System HI Across All Media	**2.6E-01**
Total Developmental HI Across All Media	**6.0E-04**

TABLE 9.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAX MUM EXPOSURE
South Pit Exposure Area - On-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Inges ion	Inhalation	Dermal	Exposure Routes Total
South Pit Exposure Area - UTU	Groundwater in Trench	Groundwater in Trench	Arsenic	4.8E-05	---	3.2E-06	5.1E-05	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	7.5E+00	---	5.0E-01	8.0E+00
			alpha-BHC	6.3E-07	4.1E-08	2.1E-06	2.8E-06	Liver	8.8E-04	---	2.9E-03	3.8E-03
			Dieldrin	1.1E-06	8.1E-08	2.5E-06	3.6E-06	Liver	9.2E-02	---	2.2E-01	3.1E-01
			Benzene	4.3E-06	1.5E-06	4.4E-06	1.0E-05	Blood	1.4E+00	4.4E-01	1.4E+00	3.2E+00
			3&4-Methylphenol	---	---	---	---	CNS/Respiratory/Whole body	1.1E+01	2.5E-03	5.9E+00	1.7E+01
			Chemical Total	5.4E-05	1.6E-06	1.2E-05	**6.8E-05**		2.0E+01	4.4E-01	8.0E+00	**2.8E+01**
		Sou h Pit Exposure Area - UTU Exposure Point Total					**6.8E-05**					**2.8E+01**
	Groundwater in Trench Exposure Medium Total						**6.8E-05**					**2.8E+01**
Groundwater Medium Total							**6.8E-05**					**2.8E+01**
Surface and Subsurface Soil	Surface and Subsurface Soil	Surface and Subsurface Soil	Arsenic	1.9E-07	8.2E-11	1.7E-08	2.1E-07	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	3.0E-02	8.9E-05	2.7E-03	3.3E-02
			Mercury	---	---	---	---	Immune system/Nervous System	4.4E-03	6.5E-07	1.9E-03	6.2E-03
			Heptachlor epoxide	8.0E-08	3.4E-12	2.4E-08	1.0E-07	Liver	4.7E-02	---	1.4E-02	6.1E-02
			Total PCBs	2.6E-08	1.1E-12	1.1E-08	3.7E-08	Immune system/Occular	4.6E-02	---	1.9E-02	6.5E-02
			Benzene	3.7E-09	7.7E-14	---	3.7E-09	Blood	1.2E-03	2.3E-08	---	1.2E-03
			Benz(a)anthracene	3.3E-09	7.3E-14	1.3E-09	4.6E-09	---	---	---	---	---
			Benzo(a)pyrene	6.3E-08	1.4E-12	2.5E-08	8.8E-08	---	---	---	---	---
			Benzo(b)fluoranthene	2.8E-09	6.1E-14	1.1E-09	3.9E-09	---	---	---	---	---
			Dibenz(a,h)anthracene	1.2E-07	2.8E-12	4.7E-08	1.7E-07	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	1.6E-09	3.5E-14	6.4E-10	2.3E-09	---	---	---	---	---
			Chemical Total	4.9E-07	9.1E-11	1.3E-07	**6.2E-07**		1.3E-01	8.9E-05	3.8E-02	**1.7E-01**
		Surface and Subsurface Soil Exposure Point Total					**6.2E-07**					**1.7E-01**
	Surface and Subsurface Soil Exposure Medium Total						**6.2E-07**					**1.7E-01**
Surface and Subsurface Soil Medium Total							**6.2E-07**					**1.7E-01**
Waste	Waste	Waste	Arsenic	1.1E-07	4.9E-11	1.0E-08	1.2E-07	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	1.8E-02	5.3E-05	1.6E-03	1.9E-02
			Mercury	---	---	---	---	Immune system/Nervous System	8.2E-03	1.2E-06	3.5E-03	1.2E-02
			alpha-BHC	3.8E-08	1.6E-12	4.6E-09		Liver	5.3E-05	---	6.4E-06	6.0E-05
			Heptachlor epoxide	1.4E-07	6.0E-12	4.3E-08	1.9E-07	Liver	8.5E-02	---	2.5E-02	1.1E-01
			1,3,5-Trimethylbenzene	---	---	---		Liver	1.1E-02	---	---	1.1E-02
			Benzene	1.1E-07	2.3E-12	---	1.1E-07	Blood	3.5E-02	6.8E-07	---	3.5E-02
			Ethylbenzene	1.6E-08	5.4E-13	---	1.6E-08	Developmental/Liver/Kidney	1.0E-03	1.5E-08	---	1.0E-03
			Naphthalene	---	4.6E-12	---	4.6E-12	Nasal/Body Weight	3.2E-03	3.2E-06	1.3E-03	4.5E-03
			1-Methylnaph halene	6.6E-08	---	2.6E-08	9.1E-08	Lung	2.3E-03	---	8.8E-04	3.1E-03
			Benz(a)anthracene	3.9E-08	8.6E-13	1.5E-08	5.4E-08	---	---	---	---	---
			Benzo(a)pyrene	3.8E-07	8.4E-12	1.5E-07	5.4E-07	---	---	---	---	---
			Benzo(b)fluoranthene	2.6E-08	5.6E-13	1.0E-08	3.6E-08	---	---	---	---	---
			Dibenz(a,h)anthracene	1.0E-07	2.4E-12	4.0E-08	1.4E-07	---	---	---	---	---
			Chemical Total	1.0E-06	7.6E-11	3.0E-07	**1.3E-06**		1.6E-01	5.8E-05	3.3E-02	**2.0E-01**
		Waste Exposure Point Total					**1.3E-06**					**2.0E-01**
	Waste Exposure Medium Total						**1.3E-06**					**2.0E-01**
Waste Medium Total							**1.3E-06**					**2.0E-01**
						Receptor Risk Total	**7.0E-05**				**Receptor HI Total**	**2.8E+01**

Total Blood HI Across All Media	**3.2E+00**
Total Nervous System HI Across All Media	**2.5E+01**
Total Developmental HI Across All Media	**8.1E+00**
Total Eyes HI Across All Media	**6.5E-02**
Total Kidney HI Across All Media	**1.0E-03**
Total Liver HI Across All Media	**4.8E-01**
Total Lungs/Respiratory/Nasal HI Across All Media	**1.7E+01**
Total Vascular System HI Across All Media	**8.1E+00**
Total Weight HI Across All Media	**1.7E+01**
Total Skin HI Across All Media	**8.1E+00**
Total Cardiovascular System HI Across All Media	**8.1E+00**
Total Immune System HI Across All Media	**8.3E-02**

TABLE 9.4 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAX MUM EXPOSURE
South Pit Exposure Area - On-Site Maintenance Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Maintenance Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
South Pit Exposure Area - UTU	Vapors	Outdoor Air	Arsenic	---	---	---	---	---	---	---	---	---
			alpha-BHC	---	3.6E-12	---	3.6E-12	---	---	---	---	---
			Dieldrin	---	2.9E-12	---	2.9E-12	---	---	---	---	---
			Benzene	---	8.5E-09	---	8.5E-09	Blood	---	2.5E-04	---	2.5E-04
			3&4-Methylphenol	---	---	---	---	---	---	1.8E-07	---	1.8E-07
			Chemical Total	0.0E+00	8.5E-09	0.0E+00	**8.5E-09**		0.0E+00	2.5E-04	0 0E+00	**2.5E-04**
		Outdoor Air Exposure Point Total					**8.5E-09**					**2.5E-04**
	Vapors Exposure Medium Total						**8.5E-09**					**2.5E-04**
South Pit Expsoure Area-UTU Medium Total							**8.5E-09**					**2.5E-04**
Surface Water	Surface Water	East Ditch	Arsenic	1 6E-07	---	5.7E-08	2.1E-07	Vascular system/Skin	2.4E-03	---	8.8E-04	3.3E-03
			Aldrin	3 3E-09	---	1.1E-08	1.4E-08	Liver	4.5E-05	---	1.5E-04	2.0E-04
			Chemical Total	1 6E-07	0.0E+00	6.8E-08	**2.3E-07**		2.5E-03	0.0E+00	1.0E-03	**3.5E-03**
		East Ditch Exposure Point Total					**2.3E-07**					**3.5E-03**
	Surface Water Exposure Medium Total						**2.3E-07**					**3.5E-03**
Surface Water Medium Total							**2.3E-07**					**3.5E-03**
Surface Soil	Surface Soil	Surface Soil	Arsenic	2.7E-08	1.9E-11	1.1E-08	3.7E-08	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	4.1E-04	2.0E-06	1.6E-04	5.8E-04
			Mercury	---	---	---	---	Immune system/Nervous System	2.2E-04	5.5E-08	4.2E-04	6.5E-04
			Heptachlor epoxide	1 0E-08	7.0E-13	1.3E-08	2.3E-08	Liver	6.0E-04	---	7.9E-04	1.4E-03
			Total PCBs	9.7E-10	6.7E-14	1.8E-09	2.8E-09	Immune system/Occular	1.7E-04	---	3.1E-04	4.8E-04
			Benz(a)anthracene	1 2E-09	4.4E-14	2.1E-09	3.3E-09	---	---	---	---	---
			Benzo(a)pyrene	1 3E-08	4.6E-13	2.2E-08	3.5E-08	---	---	---	---	---
			Benzo(b)fluoranthene	1 5E-09	5.4E-14	2.6E-09	4.1E-09	---	---	---	---	---
			Dibenz(a,h)anthracene	4 3E-09	1.6E-13	7.3E-09	1.2E-08	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	9.1E-10	3.1E-14	1.6E-09	2.5E-09	---	---	---	---	---
			Chemical Total	5 9E-08	2.0E-11	6.1E-08	**1.2E-07**		1.4E-03	2.1E-06	1.7E-03	**3.1E-03**
		Surface Soil Exposure Point Total					**1.2E-07**					**3.1E-03**
	Surface Soil Exposure Medium Total						**1.2E-07**					**3.1E-03**
Surface Soil Medium Total							**1.2E-07**					**3.1E-03**
Subsurface Soil	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	8.1E-05	---	8.1E-05
			Total PCBs	---	2.7E-10	---	2.7E-10	---	---	---	---	---
			Chemical Total	0.0E+00	2.7E-10	0.0E+00	**2.7E-10**		0.0E+00	8.1E-05	0 0E+00	**8.1E-05**
		Outdoor Air Exposure Point Total					**2.7E-10**					**8.1E-05**
	Vapors Exposure Medium Total						**2.7E-10**					**8.1E-05**
Subsurface Soil Medium Total							**2.7E-10**					**8.1E-05**
Waste	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	1.8E-04	---	1.8E-04
			Heptachlor epoxide	---	8.6E-10	---	8.6E-10	---	---	---	---	---
			1,3,5-Trimethylbenzene	---	---	---	---	---	---	---	---	---
			Benzene	---	4.7E-08	---	4.7E-08	Blood	---	1.4E-03	---	1.4E-03
			Chemical Total	0.0E+00	4.8E-08	0.0E+00	**4.8E-08**		0.0E+00	1.6E-03	0 0E+00	**1.6E-03**
		Outdoor Air Exposure Point Total					**4.8E-08**					**1.6E-03**
	Vapors Exposure Medium Total						**4.8E-08**					**1.6E-03**
Waste Medium Total							**4.8E-08**					**1.6E-03**
Sediment	Sediment	East Ditch	Benz(a)anthracene	1.4E-08	---	2.4E-08	3.9E-08	---	---	---	---	---
			Benzo(a)pyrene	1 2E-07	---	2.1E-07	3.3E-07	---	---	---	---	---
			Benzo(b)fluoranthene	1.1E-08	---	1.9E-08	3.1E-08	---	---	---	---	---
			Dibenz(a,h)anthracene	2.7E-08	---	4.6E-08	7.3E-08	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	8 6E-09	---	1.5E-08	2.3E-08	---	---	---	---	---
			Chemical Total	1 8E-07	0.0E+00	3.1E-07	**5.0E-07**		0.0E+00	0.0E+00	0 0E+00	**0.0E+00**
		East Ditch Exposure Point Total					**5.0E-07**					**0.0E+00**
	Sediment Exposure Medium Total						**5.0E-07**					**0.0E+00**
Sediment Medium Total							**5.0E-07**					**0.0E+00**
						Receptor Risk Total	**9.0E-07**				**Receptor HI Total**	**8.5E-03**

Total Blood HI Across All Media	**1.7E-03**
Total Nervous System HI Across All Media	**1.5E-03**
Total Developmental HI Across All Media	**5.8E-04**
Total Eyes HI Across All Media	**4.8E-04**
Total Liver HI Across All Media	**1.6E-03**
Total Vascular System HI Across All Media	**3.9E-03**
Total Skin HI Across All Media	**3.9E-03**
Total Cardiovascular System HI Across All Media	**5.8E-04**
Total Immune System HI Across All Media	**1.1E-03**

TABLE 9.5 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area - On-Site Adolescent Trespasser
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
South Pit Exposure Area - UTU	Vapors	Outdoor Air	Arsenic	---	---	---	---	---	---	---	---	---
			alpha-BHC	---	3.2E-11	---	3 2E-11	---	---	---	---	---
			Dieldrin	---	2.5E-11	---	2 5E-11	---	---	---	---	---
			Benzene	---	7.3E-08	---	7 3E-08	Blood	---	2.2E-03	---	2.2E-03
			3&4-Methylphenol	---	---	---	---	---	---	1.6E-06	---	1.6E-06
			Chemical Total	0 0E+00	7.3E-08	0.0E+00	**7.3E-08**		0.0E+00	2.2E-03	0.0E+00	**2.2E-03**
		Outdoor Air Exposure Point Total					**7.3E-08**					**2.2E-03**
	Vapors Exposure Medium Total						**7.3E-08**					**2.2E-03**
South Pit Expsoure Area-UTU Medium Total							**7.3E-08**					**2.2E-03**
Surface Water	Surface Water	East Ditch	Arsenic	2.1E-06	---	5.5E-07	2.7E-06	Vascular system/Skin	3.3E-02	---	8 6E-03	4.2E-02
			Aldrin	4.5E-08	---	7.7E-08	1 2E-07	Liver	6.1E-04	---	1.1E-03	1.7E-03
			Chemical Total	2.2E-06	0.0E+00	6.3E-07	**2.8E-06**		3.4E-02	0.0E+00	9.7E-03	**4.3E-02**
		East Ditch Exposure Point Total					**2.8E-06**					**4.3E-02**
	Surface Water Exposure Medium Total						**2.8E-06**					**4.3E-02**
Surface Water Medium Total							**2.8E-06**					**4.3E-02**
Surface Soil	Surface Soil	Surface Soil	Arsenic	3.6E-07	1.6E-10	1.8E-07	5.4E-07	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	5.6E-03	1.8E-05	2 9E-03	8.5E-03
			Mercury	---	---	---	---	Immune system/Nervous System	3.0E-03	4.8E-07	7.4E-03	1.0E-02
			Heptachlor epoxide	1.4E-07	6.1E-12	2.3E-07	3.7E-07	Liver	8.0E-03	---	1.4E-02	2.2E-02
			Total PCBs	1.3E-08	5.8E-13	3.1E-08	4.4E-08	Immune system/Occular	2.3E-03	---	5 5E-03	7.7E-03
			Benz(a)anthracene	1.6E-08	3.8E-13	3.7E-08	5 3E-08	---	---	---	---	---
			Benzo(a)pyrene	1.7E-07	4.0E-12	3.9E-07	5 6E-07	---	---	---	---	---
			Benzo(b)fluoranthene	2.0E-08	4.7E-13	4.5E-08	6 5E-08	---	---	---	---	---
			Dibenz(a,h)anthracene	5.7E-08	1.4E-12	1.3E-07	1 9E-07	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	1.2E-08	2.7E-13	2.7E-08	3 9E-08	---	---	---	---	---
			Chemical Total	7.9E-07	1.8E-10	1.1E-06	**1.9E-06**		1.9E-02	1.8E-05	2 9E-02	**4.8E-02**
		Surface Soil Exposure Point Total					**1.9E-06**					**4.8E-02**
	Surface Soil Exposure Medium Total						**1.9E-06**					**4.8E-02**
Surface Soil Medium Total							**1.9E-06**					**4.8E-02**
Subsurface Soil	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	7.0E-04	---	7.0E-04
			Total PCBs	---	2.4E-09	---	2.4E-09	---	---	---	---	---
			Chemical Total	0 0E+00	2.4E-09	0.0E+00	**2.4E-09**		0.0E+00	7.0E-04	0.0E+00	**7.0E-04**
		Outdoor Air Exposure Point Total					**2.4E-09**					**7.0E-04**
	Vapors Exposure Medium Total						**2.4E-09**					**7.0E-04**
Subsurface Soil Medium Total							**2.4E-09**					**7.0E-04**
Waste	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	1.5E-03	---	1.5E-03
			Heptachlor epoxide	---	7.4E-09	---	7.4E-09	---	---	---	---	---
			1,3,5-Trimethylbenzene	---	---	---	---	---	---	---	---	---
			Benzene	---	4.1E-07	---	4.1E-07	Blood	---	1.2E-02	---	1.2E-02
			Chemical Total	0 0E+00	4.1E-07	0.0E+00	**4.1E-07**		0.0E+00	1.4E-02	0.0E+00	**1.4E-02**
		Outdoor Air Exposure Point Total					**4.1E-07**					**1.4E-02**
	Vapors Exposure Medium Total						**4.1E-07**					**1.4E-02**
Waste Medium Total							**4.1E-07**					**1.4E-02**
Sediment	Sediment	East Ditch	Benz(a)anthracene	1.9E-07	---	4.3E-07	6 2E-07	---	---	---	---	---
			Benzo(a)pyrene	1.7E-06	---	3.7E-06	5 3E-06	---	---	---	---	---
			Benzo(b)fluoranthene	1.5E-07	---	3.4E-07	4 9E-07	---	---	---	---	---
			Dibenz(a,h)anthracene	3.6E-07	---	8.1E-07	1 2E-06	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	1.2E-07	---	2.6E-07	3.7E-07	---	---	---	---	---
			Chemical Total	2.5E-06	0.0E+00	5.5E-06	**8.0E-06**		0.0E+00	0.0E+00	0.0E+00	**0.0E+00**
		East Ditch Exposure Point Total					**8.0E-06**					**0.0E+00**
	Sediment Exposure Medium Total						**8.0E-06**					**0.0E+00**
Sediment Medium Total							**8.0E-06**					**0.0E+00**
						Receptor Risk Total	**1.3E-05**				**Receptor HI Total**	**1.1E-01**

Total Blood HI Across All Media	**1.4E-02**
Total Nervous System HI Across All Media	**2.1E-02**
Total Developmental HI Across All Media	**8.5E-03**
Total Eyes HI Across All Media	**7.7E-03**
Total Liver HI Across All Media	**2.3E-02**
Total Vascular Syst. HI Across All Media	**5.0E-02**
Total Skin HI Across All Media	**5.0E-02**
Total Cardiovascular System HI Across All Media	**8.5E-03**
Total Immune System HI Across All Media	**1.8E-02**

TABLE 9.6 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
North Pit Exposure Area - On-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
North Pit Exposure Area - STU	Groundwater	Tap Water	Arsenic	4.9E-05	---	---	4.9E-05	Vascular system/Skin	3.0E-01	---	---	3.0E-01
			alpha-BHC	1.5E-07	---	---	1.5E-07	Liver	8.2E-06	---	---	8.2E-06
			Heptachlor	3.0E-08	---	---	3.0E-08	Liver	3.7E-05	---	---	3.7E-05
			Chemical Total	4.9E-05	0.0E+00	0.0E+00	**4.9E-05**		3.0E-01	0.0E+00	0.0E+00	**3.0E-01**
		Tap Water Exposure Point Total					**4.9E-05**					**3.0E-01**
	Groundwater Exposure Medium Total						**4.9E-05**					**3.0E-01**
North Pit Exposure Area -STU Medium Total							**4.9E-05**					**3.0E-01**
Surface Soil	Surface Soil	Surface Soil	Arsenic	1.8E-06	5.0E-09	7.1E-07	2.5E-06	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	1.1E-02	2.2E-04	4.4E-03	1.6E-02
			Lead	---	---	---	---	---	---	---	---	---
			Mercury	---	---	---	---	Immune system/Nervous System	1.4E-02	1.4E-05	2.7E-02	4.1E-02
			Benzo(a)pyrene	1.1E-07	1.6E-11	1.9E-07	3.1E-07	---	---	---	---	---
			Bis(2-ethylhexyl)phthalate	2.2E-08	3.6E-12	1.5E-07	1.8E-07	Liver	2.2E-04	---	1.5E-03	1.8E-03
			Chemical Total	1.9E-06	5.0E-09	1.1E-06	**3.0E-06**		2.6E-02	2.3E-04	3.3E-02	**5.9E-02**
		South Area Exposure Point Total					**3.0E-06**					**5.9E-02**
	Surface Soil Exposure Medium Total						**3.0E-06**					**5.9E-02**
Surface Soil Medium Total							**3.0E-06**					**5.9E-02**
Subsurface Soil	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	2.7E-02	---	2.7E-02
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	**0.0E+00**		0.0E+00	2.7E-02	0.0E+00	**2.7E-02**
		South Area Exposure Point Total					**0.0E+00**					**2.7E-02**
	Vapors Exposure Medium Total						**0.0E+00**					**2.7E-02**
Subsurface Soil Medium Total							**0.0E+00**					**2.7E-02**

Receptor Risk Total	**5.2E-05**	**Receptor HI Total**	**3.9E-01**

Total Nervous System HI Across All Media	**8.4E-02**
Total Developmental HI Across All Media	**1.6E-02**
Total Liver HI Across All Media	**1.8E-03**
Total Vascular System HI Across All Media	**3.2E-01**
Total Skin HI Across All Media	**3.2E-01**
Total Cardiovascular System HI Across All Media	**1.6E-02**
Total Immune System HI Across All Media	**4.1E-02**

TABLE 9.7 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
North Pit Exposure Area - On-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface and Subsurface Soil	Surface and Subsurface Soil	Surface and Subsurface Soil	Arsenic	1.1E-07	4.8E-11	1.0E-08	1.2E-07	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	1.8E-02	5.3E-05	1.6E-03	1.9E-02
			Lead	---	---	---	---	---	---	---	---	---
			Mercury	---	---	---	---	Immune system/Nervous System	1.5E-02	2.2E-06	6.3E-03	2.1E-02
			Benzo(a)pyrene	4.6E-09	1.0E-13	1.8E-09	6.4E-09	---	---	---	---	---
			Bis(2-ethylhexyl)phthalate	7.6E-10	1.9E-14	1.2E-09	2.0E-09	Liver	1.9E-04	---	3.0E-04	4.9E-04
			Chemical Total	1.2E-07	4.9E-11	1.3E-08	**1.3E-07**		3.3E-02	5.5E-05	8.2E-03	**4.1E-02**
		Surface and Suburface Soil Exposure Point Total					**1.3E-07**					**4.1E-02**
	Surface and Subsurface Soil Exposure Medium Total						**1.3E-07**					**4.1E-02**
Surface and Subsurface Soil Medium Total							**1.3E-07**					**4.1E-02**

Receptor Risk Total	**1.3E-07**	**Receptor HI Total**	**4.1E-02**

Total Nervous System HI Across All Media	**4.0E-02**
Total Developmental HI Across All Media	**1.9E-02**
Total Liver HI Across All Media	**4.9E-04**
Total Vascular System HI Across All Media	**1.9E-02**
Total Skin HI Across All Media	**1.9E-02**
Total Cardiovascular System HI Across All Media	**1.9E-02**
Total Immune System HI Across All Media	**2.1E-02**

TABLE 9.8 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
North Pit Exposure Area - On-Site Maintenance Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Maintenance Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhala ion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	East Ditch	Arsenic	1.6E-07	---	5.7E-08	2.1E-07	Vascular system/Skin	2.4E-03	---	8.8E-04	3.3E-03
			Aldrin	3.3E-09	---	1.1E-08	1.4E-08	Liver	4.5E-05	---	1.5E-04	2.0E-04
			Chemical Total	1.6E-07	0.0E+00	6.8E-08	**2.3E-07**		2.5E-03	0.0E+00	1.0E-03	**3.5E-03**
		East Ditch Exposure Point Total					**2.3E-07**					**3.5E-03**
	Surface Water Exposure Medium Total						**2.3E-07**					**3.5E-03**
Surface Water Medium Total							**2.3E-07**					**3.5E-03**
Surface Soil	Surface Soil	Surface Soil	Arsenic	3.4E-08	2.4E-11	1.4E-08	4.8E-08	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	5.3E-04	2.6E-06	2.1E-04	7.5E-04
			Lead	---	---	---	---	---	---	---	---	---
			Mercury	---	---	---	---	Immune system/Nervous System	6.8E-04	1.7E-07	1.3E-03	2.0E-03
			Benzo(a)pyrene	2.2E-09	7.8E-14	3.7E-09	5.9E-09	---	---	---	---	---
			Bis(2-ethylhexyl)phthalate	4.2E-10	1.7E-14	2.9E-09	3.4E-09	Liver	1.1E-05	---	7.4E-05	8.4E-05
			Chemical Total	3.7E-08	2.4E-11	2.0E-08	**5.7E-08**		1.2E-03	2.8E-06	1.6E-03	**2.8E-03**
		Surface Soil Exposure Point Total					**5.7E-08**					**2.8E-03**
	Surface Soil Exposure Medium Total						**5.7E-08**					**2.8E-03**
Surface Soil Medium Total							**5.7E-08**					**2.8E-03**
Subsurface Soil	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	3.2E-04	---	3.2E-04
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	**0.0E+00**		0.0E+00	3.2E-04	0.0E+00	**3.2E-04**
		Outdoor Air Exposure Point Total					**0.0E+00**					**3.2E-04**
	Vapors Exposure Medium Total						**0.0E+00**					**3.2E-04**
Subsurface Soil Medium Total							**0.0E+00**					**3.2E-04**
Sediment	Sediment	East Ditch	Benz(a)anthracene	1.4E-08	---	2.4E-08	3.9E-08	---	---	---	---	---
			Benzo(a)pyrene	1.2E-07	---	2.1E-07	3.3E-07	---	---	---	---	---
			Benzo(b)fluoranthene	1.1E-08	---	1.9E-08	3.1E-08	---	---	---	---	---
			Dibenz(a,h)anthracene	2.7E-08	---	4.6E-08	7.3E-08	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	8.6E-09	---	1.5E-08	2.3E-08	---	---	---	---	---
			Chemical Total	1.8E-07	0.0E+00	3.1E-07	**5.0E-07**		0.0E+00	0.0E+00	0.0E+00	**0.0E+00**
		East Ditch Exposure Point Total					**5.0E-07**					**0.0E+00**
	Sediment Exposure Medium Total						**5.0E-07**					**0.0E+00**
Sediment Medium Total							**5.0E-07**					**0.0E+00**

Receptor Risk Total	**7.8E-07**	**Receptor HI Total**	**6.7E-03**

Total Nervous System HI Across All Media	**3.0E-03**
Total Developmental HI Across All Media	**7.5E-04**
Total Liver HI Across All Media	**2.8E-04**
Total Vascular System HI Across All Media	**4.1E-03**
Total Skin HI Across All Media	**4.1E-03**
Total Cardiovascular System HI Across All Media	**7.5E-04**
Total Immune System HI Across All Media	**2.0E-03**

TABLE 9.9 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
North Pit Exposure Area - On-Site Adolescent Trespasser
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhala ion	Dermal	Exposure Routes Total
Surface Water	Surface Water	East Ditch	Arsenic	2.1E-06	---	5.5E-07	2.7E-06	Vascular system/Skin	3.3E-02	---	8.6E-03	4.2E-02
			Aldrin	4.5E-08	---	7.7E-08	1.2E-07	Liver	6.1E-04	---	1.1E-03	1.7E-03
			Chemical Total	2.2E-06	0.0E+00	6.3E-07	**2.8E-06**		3.4E-02	0.0E+00	9.7E-03	**4.3E-02**
		East Ditch Exposure Point Total					**2.8E-06**					**4.3E-02**
	Surface Water Exposure Medium Total						**2.8E-06**					**4.3E-02**
Surface Water Medium Total							**2.8E-06**					**4.3E-02**
Surface Soil	Surface Soil	Surface Soil	Arsenic	4.6E-07	2.1E-10	2.4E-07	7.0E-07	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	7.2E-03	2.3E-05	3.7E-03	1.1E-02
			Lead	---	---	---	---	---	---	---	---	---
			Mercury	---	---	---	---	Immune system/Nervous System	9.2E-03	1.4E-06	2.3E-02	3.2E-02
			Benzo(a)pyrene	2.9E-08	6.7E-13	6.5E-08	9.4E-08	---	---	---	---	---
			Bis(2-ethylhexyl)phthalate	5.7E-09	1.5E-13	5.1E-08	5.7E-08	Liver	1.4E-04	---	1.3E-03	1.4E-03
			Chemical Total	5.0E-07	2.1E-10	3.5E-07	**8.5E-07**		1.7E-02	2.4E-05	2.8E-02	**4.4E-02**
		Surface Soil Exposure Point Total					**8.5E-07**					**4.4E-02**
	Surface Soil Exposure Medium Total						**8.5E-07**					**4.4E-02**
Surface Soil Medium Total							**8.5E-07**					**4.4E-02**
Subsurface Soil	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	2.8E-03	---	2.8E-03
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	**0.0E+00**		0.0E+00	2.8E-03	0.0E+00	**2.8E-03**
		Outdoor Air Exposure Point Total					**0.0E+00**					**2.8E-03**
	Vapors Exposure Medium Total						**0.0E+00**					**2.8E-03**
Subsurface Soil Medium Total							**0.0E+00**					**2.8E-03**
Sediment	Sediment	East Ditch	Benz(a)anthracene	1.9E-07	---	4.3E-07	6.2E-07	---	---	---	---	---
			Benzo(a)pyrene	1.7E-06	---	3.7E-06	5.3E-06	---	---	---	---	---
			Benzo(b)fluoranthene	1.5E-07	---	3.4E-07	4.9E-07	---	---	---	---	---
			Dibenz(a,h)anthracene	3.6E-07	---	8.1E-07	1.2E-06	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	1.2E-07	---	2.6E-07	3.7E-07	---	---	---	---	---
			Chemical Total	2.5E-06	0.0E+00	5.5E-06	**8.0E-06**		0.0E+00	0.0E+00	0.0E+00	**0.0E+00**
		East Ditch Exposure Point Total					**8.0E-06**					**0.0E+00**
	Sediment Exposure Medium Total						**8.0E-06**					**0.0E+00**
Sediment Medium Total							**8.0E-06**					**0.0E+00**
						Receptor Risk Total	**1.2E-05**				**Receptor HI Total**	**9.0E-02**

Total Nervous System HI Across All Media	**4.5E-02**
Total Developmental HI Across All Media	**1.1E-02**
Total Liver HI Across All Media	**3.1E-03**
Total Vascular System HI Across All Media	**5.2E-02**
Total Skin HI Across All Media	**5.2E-02**
Total Cardiovascular System HI Across All Media	**1.1E-02**
Total Immune System HI Across All Media	**3.2E-02**

TABLE 9.10 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Off-Site Exposure Area - Off-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Off-Site Exposure Area-UTU	Vapors	Outdoor Air	Benzene	---	1.1E-06	---	1.1E-06	Blood	---	1.3E-02	---	1.3E-02
			Chemical Total	0.0E+00	1.1E-06	0.0E+00	**1.1E-06**		0.0E+00	1.3E-02	0.0E+00	**1.3E-02**
		Outdoor Air Exposure Point Total					**1.1E-06**					**1.3E-02**
	Groundwater Exposure Medium Total						**1.1E-06**					**1.3E-02**
Off-Site Exposure Area - UTU Medium Total							**1.1E-06**					**1.3E-02**
Off-Site Exposure Area-STU	Groundwater	Tap Water	Arsenic	5.6E-04	---	---	5.6E-04	Vascular system/Skin	3.5E+00	---	---	3.5E+00
			Cobalt	---	---	---	---	Thyroid	2.0E-01	---	---	2.0E-01
			Manganese	---	---	---	---	Nervous system	2.5E-01	---	---	2.5E-01
			4,4´-DDE	3.4E-07	---	---	3.4E-07	---	---	---	---	---
			beta-BHC	4.8E-07	---	---	4.8E-07	---	---	---	---	---
			Dieldrin	2.7E-07	---	---	2.7E-07	Liver	9.6E-04	---	---	9.6E-04
			gamma-BHC	1.6E-07	---	---	1.6E-07	Liver/Kidney	1.4E-03	---	---	1.4E-03
			Heptachlor	1.4E-07	---	---	1.4E-07	Liver	1.8E-04	---	---	1.8E-04
			Heptachlor epoxide	6.0E-06	---	---	6.0E-06	Liver	1.4E-01	---	---	1.4E-01
			1,2,4-Trimethylbenzene	---	---	---	---	---	---	---	---	---
			Benzene	3.7E-06	---	---	3.7E-06	Blood	4.6E-02	---	---	4.6E-02
			Dibromochloromethane	1.1E-07	---	---	1.1E-07	Liver	1.9E-04	---	---	1.9E-04
			Ethylbenzene	2.2E-06	---	---	2.2E-06	Liver/Kidney	5.7E-03	---	---	5.7E-03
			Naphthalene	---	---	---	---	Body weight	9.8E-03	---	---	9.8E-03
			1-Methylnaphthalene	5.8E-07	---	---	5.8E-07	Lung	8.0E-04	---	---	8.0E-04
			2,4-Dimethylphenol	---	---	---	---	Nervous System/Blood	2.3E-01	---	---	2.3E-01
			4,6-Dinitro-2-methylphenol	---	---	---	---	Body weight/Occular	2.3E-01	---	---	2.3E-01
			Benz(a)anthracene	1.4E-07	---	---	1.4E-07	---	---	---	---	---
			Pentachlorophenol	6.6E-07	---	---	6.6E-07	Liver	9.2E-04	---	---	9.2E-04
			Chemical Total	5.7E-04	0.0E+00	0.0E+00	**5.7E-04**		4.6E+00	0.0E+00	0.0E+00	**4.6E+00**
		Tap Water Exposure Point Total					**5.7E-04**					**4.6E+00**
	Groundwater Exposure Medium Total						**5.7E-04**					**4.6E+00**
Off-Site Exposure Area - STU Medium Total							**5.7E-04**					**4.6E+00**
							Receptor Risk Total	**5.7E-04**				**Receptor HI Total**	**4.6E+00**

Total Blood HI Across All Media	**2.8E-01**
Total Nervous System HI Across All Media	**4.7E-01**
Total Eyes HI Across All Media	**2.3E-01**
Total Liver HI Across All Media	**1.5E-01**
Total Thyroid HI Across All Media	**2.0E-01**
Total Vascular System HI Across All Media	**3.5E+00**
Total Skin HI Across All Media	**3.5E+00**
Total Respiratory, Lungs, Nasal HI Across All Media	**8.0E-04**

TABLE 9.11 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Off-Site Exposure Area - Off-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Off-Site Exposure Area-UTU	Groundwater in Trench	Groundwater in Trench	Benzene	2.6E-06	8.9E-07	2.6E-06	6.1E-06	Blood	8.2E-01	2.7E-01	8.4E-01	1.9E+00
			Chemical Total	2.6E-06	8.9E-07	2.6E-06	**6.1E-06**		8.2E-01	2.7E-01	8.4E-01	**1.9E+00**
		Trench Exposure Point Total					**6.1E-06**					**1.9E+00**
	Groundwater in Trench Exposure Medium Total						**6.1E-06**					**1.9E+00**
Groundwater Medium Total							**6.1E-06**					**1.9E+00**
						Receptor Risk Total	**6.1E-06**				**Receptor HI Total**	**1.9E+00**

Total Blood HI Across All Media **1.9E+00**

TABLE 10.1 RME
RISK SUMMARY: OUTDOOR WORKER
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
South Pit Exposure Area - UTU	Groundwater		Benzene	---	1.8E-06	---	1.8E-06	Blood	---	2.1E-02	---	2.1E-02
			Chemical Total	0.0E+00	1.8E-06	0.0E+00	**1.8E-06**		0.0E+00	2.1E-02	0.0E+00	**2.1E-02**
		Vapors Exposure Point Total					**1.8E-06**					**2.1E-02**
	Groundwater Exposure Medium Total						**1.8E-06**					**2.1E-02**
South Pit Exposure Area - UTU Medium Total							**1.8E-06**					**2.1E-02**
South Pit Exposure Area - STU	Groundwater	Tap Water	Arsenic	9.3E-05	---	---	9.3E-05	Vascular system/Skin	5.8E-01	---	---	5.8E-01
			Cobalt	---	---	---	---	Thyroid	2.6E-01	---	---	2.6E-01
			Chemical Total	9.3E-05	0.0E+00	0.0E+00	**9.3E-05**		8.3E-01	0.0E+00	0.0E+00	**8.3E-01**
		Tap Water Exposure Point Total					**9.3E-05**					**8.3E-01**
	Groundwater Exposure Medium Total						**9.3E-05**					**8.3E-01**
South Pit Exposure Area - STU Medium Total							**9.3E-05**					**8.3E-01**
Surface Soil	Surface Soil	South Area	Arsenic	1.4E-06	3.9E-09	5.5E-07	1.9E-06	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	8.6E-03	1.7E-04	3.4E-03	1.2E-02
			Heptachlor epoxide	5.2E-07	1.5E-10	6.9E-07	1.2E-06	Liver	1.2E-02	---	1.6E-02	2.9E-02
			Benzo(a)pyrene	6.7E-07	9.7E-11	1.2E-06	1.8E-06	---	---	---	---	---
			Chemical Total	2.6E-06	4.1E-09	2.4E-06	**5.0E-06**		2.1E-02	1.7E-04	2.0E-02	**4.1E-02**
		South Area Exposure Point Total					**5.0E-06**					**4.1E-02**
	Surface Soil Exposure Medium Total						**5.0E-06**					**4.1E-02**
Surface Soil Medium Total							**5.0E-06**					**4.1E-02**
Waste Medium Total			Benzene	---	9.8E-06	---	9.8E-06	Blood	---	1.2E-01	---	1.2E-01
			Chemical Total	0.0E+00	9.8E-06	0.0E+00	**9.8E-06**		0.0E+00	1.2E-01	0.0E+00	**1.2E-01**
		South Area Exposure Point Total					**9.8E-06**					**1.2E-01**
	Vapors Exposure Medium Total						**9.8E-06**					**1.2E-01**
Waste Medium Total							**9.8E-06**					**1.2E-01**

Receptor Total	**Receptor Risk Total**	**1.1E-04**	**Receptor HI Total**	**1.0E+00**

Total Risk Across All Media	**1.1E-04**

Total Hazard Across All Media	**1.0E+00**
Total Blood HI Across All Media	**1.4E-01**
Total Nervous System HI Across All Media	**1.2E-02**
Total Developmental HI Across All Media	**1.2E-02**
Total Liver HI Across All Media	**2.9E-02**
Total Thyroid HI Across All Media	**2.6E-01**
Total Vascular System HI Across All Media	**5.9E-01**
Total Skin HI Across All Media	**5.9E-01**
Total Cardiovascular System HI Across All Media	**1.2E-02**

TABLE 10.2 RME
RISK SUMMARY: CONSTRUCTION WORKER
REASONABLE MAXIMUM EXPOSURE
South Pit Exposure Area
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
South Pit Exposure Area - UTU	Groundwater in Trench	Groundwater in Trench	Arsenic	4.8E-05	---	3.2E-06	5.1E-05	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	7.5E+00	---	5.0E-01	8.0E+00
			Benzene	4.3E-06	1.5E-06	4.4E-06	1.0E-05	Blood	1.4E+00	4.4E-01	1.4E+00	3.2E+00
			3&4-Me hylphenol	---	---	---	---	CNS/Respiratory/Whole body	1.1E+01	2.5E-03	5.9E+00	1.7E+01
			Chemical Total	5.3E-05	1.5E-06	7.5E-06	**6.2E-05**		2.0E+01	4.4E-01	7.8E+00	**2.8E+01**
		South Pit Exposure Area -UTU Exposure Point Total					**6.2E-05**					**2.8E+01**
	Groundwater in Trench Exposure Medium Total						**6.2E-05**					**2.8E+01**
South Pit Exposure Area - UTU Medium Total							**6.2E-05**					**2.8E+01**
						Receptor Risk Total	**6.2E-05**				**Receptor HI Total**	**2.8E+01**

Total Risk Across All Media	**6.2E-05**
Total Hazard Across All Media	**2.8E+01**
Total Blood HI Across All Media	**3.2E+00**
Total Nervous System HI Across All Media	**2.5E+01**
Total Developmental HI Across All Media	**8.0E+00**
Total Lungs/Respiratory/Nasal HI Across All Media	**1.7E+01**
Total Vascular System HI Across All Media	**8.0E+00**
Total Weight HI Across All Media	**1.7E+01**
Total Skin HI Across All Media	**8.0E+00**
Total Cardiovascular System HI Across All Media	**8.0E+00**

TABLE 10.2 RME
RISK SUMMARY: OUTDOORWORKER
REASONABLE MAXIMUM EXPOSURE
Off-Site Exposure Area
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Off-Site Exposure Area - STU	Groundwater	Tap Water	Arsenic	5.6E-04	---	---	5.6E-04	Vascular system/Skin	3.5E+00	---	---	3.5E+00
			Chemical Total	5.6E-04	0.0E+00	0.0E+00	**5.6E-04**		3.5E+00	0.0E+00	0.0E+00	**3.5E+00**
		Tap Water Exposure Point Total					**5.6E-04**					**3.5E+00**
	Groundwater Exposure Medium Total						**5.6E-04**					**3.5E+00**
Off-Site Exposure Area - STU Medium Total							**5.6E-04**					**3.5E+00**
						Receptor Risk Total	**5.6E-04**				**Receptor HI Total**	**3.5E+00**

Total Risk Across All Media **5.6E-04**

Total Hazard Across All Media **3.5E+00**

Total Vascular System HI Across All Media **3.5E+00**
Total Skin HI Across All Media **3.5E+00**

TABLE 10.3 RME
RISK SUMMARY: CONSTRUCTION WORKER
REASONABLE MAXIMUM EXPOSURE
Off-Site Exposure Area
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Off-Site Exposure Area - UTU	Groundwater in Trench	Groundwater in Trench	Benzene	2.6E-06	8.9E-07	2.6E-06	6.1E-06	Blood	8.2E-01	2.7E-01	8.4E-01	1.9E+00
			Chemical Total	2.6E-06	8.9E-07	2.6E-06	**6.1E-06**		8.2E-01	2.7E-01	8.4E-01	**1.9E+00**
		Trench Exposure Point Total					**6.1E-06**					**1.9E+00**
	Groundwater in Trench Exposure Medium Total						**6.1E-06**					**1.9E+00**
Off-Site Exposure Area - UTU Medium Total							**6.1E-06**					**1.9E+00**
Receptor Risk Total							**6.1E-06**	**Receptor HI Total**				**1.9E+00**

Total Risk Across All Media	**6.1E-06**
Total Hazard Across All Media	**1.9E+00**
Total Blood HI Across All Media	**1.9E+00**

TABLE 7.1 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Popula ion:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calcula ions					Non-Cancer Risk Calculations				
					Value	Units	Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
							Value	Units	Value	Unit		Value	Units	Value	Unit	
South Pit Exposure Area -UTU	Vapors	Outdoor Air	Inhalation	Arsenic	2.4E+00	mg/l	---	ug/m3	4.3E-03	(ug/m3)-1	---	---	mg/m3	1.5E-05	mg/m3	---
				alpha-BHC	7.5E-03	mg/l	1.5E-07	ug/m3	1.8E-03	(ug/m3)-1	2.7E-10	1.2E-09	mg/m3	---	mg/m3	---
				Dieldrin	4.9E-03	mg/l	4.7E-08	ug/m3	4.6E-03	(ug/m3)-1	2 2E-10	3.7E-10	mg/m3	---	mg/m3	---
				Benzene	5.8E+00	mg/l	8.1E-02	ug/m3	7.8E-06	(ug/m3)-1	6 3E-07	6.3E-04	mg/m3	3.0E-02	mg/m3	2.1E-02
				3&4-Methylphenol	5.7E+01	mg/l	1.2E-03	ug/m3	---	(ug/m3)-1	---	9.0E-06	mg/m3	6.0E-01	mg/m3	1.5E-05
			Inhalation Exp. Route Total								**6.3E-07**					**2.1E-02**
		Outdoor Air Exp. Point Total									**6.3E-07**					**2.1E-02**
	Groundwater Exp. Medium Total										**6.3E-07**					**2.1E-02**
South Pit Exposure Area -UTU Medium Total											**6.3E-07**					**2.1E-02**
South Pit Exposure Area -STU	Groundwater	Tap Water	Ingestion	Arsenic	1.8E-02	mg/l	2.2E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	3 3E-05	1.7E-04	mg/kg-day	3.0E-04	mg/kg-day	5.8E-01
				Cobalt	7.9E-03	mg/l	9.9E-06	mg/kg-day	---	(mg/kg-day)-1	---	7.7E-05	mg/kg-day	3.0E-04	mg/kg-day	2.6E-01
				Manganese	5.8E-01	mg/l	7.2E-04	mg/kg-day	---	(mg/kg-day)-1	---	5.6E-03	mg/kg-day	1.4E-01	mg/kg-day	4.0E-02
				4,4´-DDD	8.0E-05	mg/l	1.0E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.4E-08	7.8E-07	mg/kg-day	---	mg/kg-day	---
				alpha-BHC	1.1E-05	mg/l	1.4E-08	mg/kg-day	6.3E+00	(mg/kg-day)-1	8.7E-08	1.1E-07	mg/kg-day	8.0E-03	mg/kg-day	1.3E-05
				beta-BHC	7.8E-05	mg/l	9.8E-08	mg/kg-day	1.8E+00	(mg/kg-day)-1	1 8E-07	7.6E-07	mg/kg-day	---	mg/kg-day	---
				Dieldrin	4.8E-06	mg/l	6.0E-09	mg/kg-day	1.6E+01	(mg/kg-day)-1	9.7E-08	4.7E-08	mg/kg-day	5.0E-05	mg/kg-day	9.4E-04
				Heptachlor	2.4E-06	mg/l	3.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-08	2.3E-08	mg/kg-day	5.0E-04	mg/kg-day	4.7E-05
				Benzene	4.2E-04	mg/l	5.3E-07	mg/kg-day	5.5E-02	(mg/kg-day)-1	2 9E-08	4.1E-06	mg/kg-day	4.0E-03	mg/kg-day	1.0E-03
			Ingestion Exp. Route Total								**3.4E-05**					**8.8E-01**
		Tap Water Exp. Point Total									**3.4E-05**					**8.8E-01**
	Groundwater Exp. Medium Total										**3.4E-05**					**8.8E-01**
South Pit Exposure Area -STU Medium Total											**3.4E-05**					**8.8E-01**
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	5.3E+00	mg/kg	3.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5 0E-07	2.6E-06	mg/kg-day	3.0E-04	mg/kg-day	8.6E-03
				Mercury	2.9E+00	mg/kg	1.8E-07	mg/kg-day	---	(mg/kg-day)-1	---	1.4E-06	mg/kg-day	3.0E-04	mg/kg-day	4.7E-03
				Heptachlor epoxide	3.3E-01	mg/kg	2.1E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1 9E-07	1.6E-07	mg/kg-day	1.3E-05	mg/kg-day	1.2E-02
				Total PCBs	1.4E-01	mg/kg	9.1E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1 8E-08	7.0E-08	mg/kg-day	2.0E-05	mg/kg-day	3.5E-03
				Benz(a)an hracene	5.0E-01	mg/kg	3.1E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2 3E-08	2.4E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.3E-01	mg/kg	3.3E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.4E-07	2.6E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	3.8E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2 8E-08	3.0E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	1.1E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	8 0E-08	8.5E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	2.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.7E-08	1.8E-07	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**1.1E-06**					**2.9E-02**
Surface Soil	Surface Soil	Surface Soil	Dermal Contact	Arsenic	5.3E+00	mg/kg	1.3E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2 0E-08	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.4E-04
				Mercury	2.9E+00	mg/kg	2.4E-09	mg/kg-day	---	(mg/kg-day)-1	---	1.9E-08	mg/kg-day	2.1E-05	mg/kg-day	8.8E-04
				Heptachlor epoxide	3.3E-01	mg/kg	2.7E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	2 5E-08	2.1E-08	mg/kg-day	1.3E-05	mg/kg-day	1.6E-03
				Total PCBs	1.4E-01	mg/kg	1.7E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	3 3E-09	1.3E-08	mg/kg-day	2.0E-05	mg/kg-day	6.5E-04
				Benz(a)an hracene	5.0E-01	mg/kg	5.4E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	3 9E-09	4.2E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.3E-01	mg/kg	5.7E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	4 2E-08	4.4E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	6.6E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	4 8E-09	5.1E-08	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	1.9E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.4E-08	1.5E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	4.0E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2 9E-09	3.1E-08	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**1.2E-07**					**3.5E-03**
		Surface Soil Exp. Point Total									**1.2E-06**					**3.3E-02**
	Surface Soil Exp. Medium Total										**1.2E-06**					**3.3E-02**
Surface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	5.3E+00	mg/kg	3.3E-07	ug/m3	4.3E-03	(ug/m3)-1	1.4E-09	2.5E-09	mg/m3	1.5E-05	mg/m3	1.7E-04
				Mercury	2.9E+00	mg/kg	1.8E-07	ug/m3	---	(ug/m3)-1	---	1.4E-09	mg/m3	3.0E-04	mg/m3	4.6E-06
				Heptachlor epoxide	3.3E-01	mg/kg	2.0E-08	ug/m3	2.6E-03	(ug/m3)-1	5 3E-11	1.6E-10	mg/m3	---	mg/m3	---
				Total PCBs	1.4E-01	mg/kg	8.8E-09	ug/m3	5.7E-04	(ug/m3)-1	5 0E-12	6.9E-11	mg/m3	---	mg/m3	---
				Benz(a)an hracene	5.0E-01	mg/kg	3.0E-08	ug/m3	1.1E-04	(ug/m3)-1	3 3E-12	2.3E-10	mg/m3	---	mg/m3	---
				Benzo(a)pyrene	5.3E-01	mg/kg	3.2E-08	ug/m3	1.1E-03	(ug/m3)-1	3 5E-11	2.5E-10	mg/m3	---	mg/m3	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	3.7E-08	ug/m3	1.1E-04	(ug/m3)-1	4 0E-12	2.8E-10	mg/m3	---	mg/m3	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	1.0E-08	ug/m3	1.2E-03	(ug/m3)-1	1 2E-11	7.9E-11	mg/m3	---	mg/m3	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	2.1E-08	ug/m3	1.1E-04	(ug/m3)-1	2.4E-12	1.7E-10	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**1.5E-09**					**1.7E-04**
		Outdoor Air Exp. Point Total									**1.5E-09**					**1.7E-04**
	Vapors & Particulates Exp. Medium Total										**1.5E-09**					**1.7E-04**
Surface Soil Medium Total											**1.2E-06**					**3.3E-02**

TABLE 7.1 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Popula ion:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calcula ions					Non-Cancer Risk Calculations				
					Value	Units	Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
							Value	Units	Value	Unit		Value	Units	Value	Unit	
Subsurface Soil	Vapors	Outdoor Air	Inhalation	Mercury	7.0E-01	mg/kg	2.6E-04	ug/m3	---	(ug/m3)-1	---	2.0E-06	mg/m3	3.0E-04	mg/m3	6.8E-03
				Total PCBs	1.3E+00	mg/kg	3.6E-05	ug/m3	5.7E-04	(ug/m3)-1	2.1E-08	2.8E-07	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**2.1E-08**					**6.8E-03**
		Outdoor Air Exp. Point Total									**2.1E-08**					**6.8E-03**
	Vapors Exp. Medium Total										**2.1E-08**					**6.8E-03**
Subsurface Soil Medium Total											**2.1E-08**					**6.8E-03**
Waste	Vapors	Outdoor Air	Inhalation	Mercury	1.5E+00	mg/kg	5.7E-04	ug/m3	---	(ug/m3)-1	---	4.4E-06	mg/m3	3.0E-04	mg/m3	1.5E-02
				Heptachlor epoxide	1.1E+00	mg/kg	2.5E-05	ug/m3	2.6E-03	(ug/m3)-1	6.4E-08	1.9E-07	mg/m3	---	mg/m3	---
				1,3,5-Trimethylbenzene	4.0E+01	mg/kg	7.8E-02	ug/m3	---	(ug/m3)-1	---	6.1E-04	mg/m3	---	mg/m3	---
				Benzene	6.0E+01	mg/kg	4.5E-01	ug/m3	7.8E-06	(ug/m3)-1	3 5E-06	3.5E-03	mg/m3	3.0E-02	mg/m3	1.2E-01
			Inhalation Exp. Route Total								**3.6E-06**					**1.3E-01**
		Outdoor Air Exp. Point Total									**3.6E-06**					**1.3E-01**
	Vapors Exp. Medium Total										**3.6E-06**					**1.3E-01**
Waste Medium Total											**3.6E-06**					**1.3E-01**
										Total of Receptor Risk Across All Media	**3.9E-05**			Total of Receptor Hazards Across All Media		**1.1E+00**

TABLE 7.2a CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Indoor Worker (Adult Video Store, Sample SG-22)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Indoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quo ient
					Value	Units	Value	Units	Value	Unit		Value	Units	Value	Unit	
Soil Gas	Indoor Air	Adult Video Store SG-22	Inhalation	Benzene	3.0E+01	ug/m3	8.7E-01	ug/m3	7 8E-06	(ug/m3)-1	6.8E-06	6.7E-03	mg/m3	3.0E-02	mg/m3	2 2E-01
				Ethylbenzene	3.4E+00	ug/m3	1.0E-01	ug/m3	2 5E-06	(ug/m3)-1	2.5E-07	7.8E-04	mg/m3	1 0E+00	mg/m3	7 8E-04
				TPH (C5-C8 Aliphatics)	5.9E+02	ug/m3	1.7E+01	ug/m3	---	(ug/m3)-1	---	1.3E-01	mg/m3	7.0E-01	mg/m3	1 9E-01
			Inhalation Exp. Route Total								**7.0E-06**					**4.2E-01**
		Adult Video Store SG-22 Exp. Point Total									**7.0E-06**					**4.2E-01**
	Indoor Air Exp. Medium Total										**7.0E-06**					**4.2E-01**
Soil Gas Medium Total											**7.0E-06**					**4.2E-01**
Total of Receptor Risk Across All Media											**7.0E-06**	Total of Receptor Hazards Across All Media				**4.2E-01**

TABLE 7.2b CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Indoor Worker (Adult Video Store, Sample SG-13)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Indoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quo ient
					Value	Units	Value	Units	Value	Unit		Value	Units	Value	Unit	
Soil Gas	Indoor Air	Adult Video Store SG-13	Inhalation	TPH (C5-C8 Aliphatics)	4.7E+01	ug/m3	1.4E+00	ug/m3	---	(ug/m3)-1	---	1.1E-02	mg/m3	7.0E-01	mg/m3	1 5E-02
			Inhalation Exp. Route Total								**---**					**1.5E-02**
		Adult Video Store SG-13 Exp. Point Total									**---**					**1.5E-02**
	Indoor Air Exp. Medium Total										**---**					**1.5E-02**
Soil Gas Medium Total											**---**					**1.5E-02**
Total of Receptor Risk Across All Media											**---**	Total of Receptor Hazards Across All Media				**1.5E-02**

TABLE 7.2c CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Indoor Worker (Robert's Equipment, Sample SG-33)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Indoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calcula ions					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk			Intake/Exposure		RfD/RfC		Hazard
					Value	Units	Value	Units	Value	Unit	Cancer Risk	Value	Units	Value	Unit	Quotient
Soil Gas	Indoor Air	Robert's Equipment Building SG-33	Inhalation	Benzene	4.4E+01	ug/m3	1.3E+00	ug/m3	7.8E-06	(ug/m3)-1	1.0E-05	1 0E-02	mg/m3	3.0E-02	mg/m3	3.4E-01
				E hylbenzene	2.6E+00	ug/m3	7.7E-02	ug/m3	2.5E-06	(ug/m3)-1	1.9E-07	6 0E-04	mg/m3	1.0E+00	mg/m3	6.0E-04
				TPH (C5-C8 Alipha ics)	7.9E+02	ug/m3	2.3E+01	ug/m3	---	(ug/m3)-1	---	1 8E-01	mg/m3	7.0E-01	mg/m3	2.6E-01
			Inhalation Exp. Route Total								**1.0E-05**					**6.0E-01**
		Robert's Equipment Building SG-33 Exp. Point Total									**1.0E-05**					**6.0E-01**
	Indoor Air Exp. Medium Total										**1.0E-05**					**6.0E-01**
Soil Gas Medium Total											**1.0E-05**					**6.0E-01**
Total of Receptor Risk Across All Media											**1.0E-05**	Total of Receptor Hazards Across All Media				**6.0E-01**

TABLE 7.3 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calcula ions					Non-Cancer Risk Calculations				
					Value	Units	Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
							Value	Units	Value	Unit		Value	Units	Value	Unit	
South Pit Exposure Area -UTU	Groundwater in Trench	Groundwater in Trench	Ingestion	Arsenic	2.4E+00	mg/l	3.2E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.8E-05	2.3E-03	mg/kg-day	3.0E-04	mg/kg-day	7.5E+00
				alpha-BHC	7.5E-03	mg/l	1.0E-07	mg/kg-day	6.3E+00	(mg/kg-day)-1	6.3E-07	7.0E-06	mg/kg-day	8.0E-03	mg/kg-day	8 8E-04
				Dieldrin	4.9E-03	mg/l	6.6E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.1E-06	4.6E-06	mg/kg-day	5.0E-05	mg/kg-day	9 2E-02
				Benzene	5.8E+00	mg/l	7.8E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	4.3E-06	5.4E-03	mg/kg-day	4.0E-03	mg/kg-day	1.4E+00
				3&4-Methylphenol	5.7E+01	mg/l	7.6E-04	mg/kg-day	---	(mg/kg-day)-1	---	5.4E-02	mg/kg-day	5.0E-03	mg/kg-day	1.1E+01
			Ingestion Exp. Route Total								**5.4E-05**					**2.0E+01**
South Pit Expoure Area - UTU	Groundwater in Trench	Groundwater in Trench	Dermal Contact	Arsenic	2.4E+00	mg/l	2.1E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.2E-06	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	5 0E-01
				alpha-BHC	7.5E-03	mg/l	3.3E-07	mg/kg-day	6.3E+00	(mg/kg-day)-1	2.1E-06	2.3E-05	mg/kg-day	8.0E-03	mg/kg-day	2 9E-03
				Dieldrin	4.9E-03	mg/l	1.5E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.5E-06	1.1E-05	mg/kg-day	5.0E-05	mg/kg-day	2 2E-01
				Benzene	5.8E+00	mg/l	7.9E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	4.4E-06	5.5E-03	mg/kg-day	4.0E-03	mg/kg-day	1.4E+00
				3&4-Methylphenol	5.7E+01	mg/l	4.2E-04	mg/kg-day	---	(mg/kg-day)-1	---	2.9E-02	mg/kg-day	5.0E-03	mg/kg-day	5.9E+00
			Dermal Contact Exp. Route Total								**1.2E-05**					**8.0E+00**
		Trench Exp. Point Total									**6.6E-05**					**2.8E+01**
	Groundwater in Trench Exp. Medium Total										**6.6E-05**					**2.8E+01**
South Pit Expoure Area - UTU	Vapors	Outdoor Air (Trench)	Inhala ion	Arsenic	2.4E+00	mg/l	---	ug/m3	4.3E-03	(ug/m3)-1	---	---	mg/m3	1.5E-05	mg/m3	---
				alpha-BHC	7.5E-03	mg/l	2.3E-05	ug/m3	1.8E-03	(ug/m3)-1	4.1E-08	1.6E-06	mg/m3	---	mg/m3	---
				Dieldrin	4.9E-03	mg/l	1.8E-05	ug/m3	4.6E-03	(ug/m3)-1	8.1E-08	1.2E-06	mg/m3	---	mg/m3	---
				Benzene	5.8E+00	mg/l	1.9E-01	ug/m3	7.8E-06	(ug/m3)-1	1.5E-06	1.3E-02	mg/m3	3.0E-02	mg/m3	4.4E-01
				3&4-Methylphenol	5.7E+01	mg/l	2.1E-02	ug/m3	---	(ug/m3)-1	---	1.5E-03	mg/m3	6.0E-01	mg/m3	2 5E-03
			Inhala ion Exp. Route Total								**1.6E-06**					**4.4E-01**
		Outdoor Air Exp. Point Total									**1.6E-06**					**4.4E-01**
	Outdoor Vapors Exp. Medium Total										**1.6E-06**					**4.4E-01**
South Pit Exposure Area -UTU Medium Total											**6.8E-05**					**2.8E+01**
Surface and Subsurface Soil	Surface and Subsurface Soil	Surface and Subsurface Soil	Ingestion	Arsenic	1.2E+01	mg/kg	3.9E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.8E-08	2.7E-06	mg/kg-day	3.0E-04	mg/kg-day	9.1E-03
				Mercury	1.7E+00	mg/kg	5.7E-09	mg/kg-day	---	(mg/kg-day)-1	---	4.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1 3E-03
				Heptachlor epoxide	7 9E-01	mg/kg	2.7E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.4E-08	1.9E-07	mg/kg-day	1.3E-05	mg/kg-day	1.4E-02
				Total PCBs	1.2E+00	mg/kg	4.0E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	7.9E-09	2.8E-07	mg/kg-day	2.0E-05	mg/kg-day	1.4E-02
				Benzene	6.0E+00	mg/kg	2.0E-08	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.1E-09	1.4E-06	mg/kg-day	4.0E-03	mg/kg-day	3 5E-04
				Benz(a)an hracene	4.1E-01	mg/kg	1.4E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.0E-09	9.6E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	7 8E-01	mg/kg	2.6E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.9E-08	1.8E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoran hene	3 5E-01	mg/kg	1.2E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	8.4E-10	8.1E-08	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.5E+00	mg/kg	5.0E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.7E-08	3.5E-07	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	2 0E-01	mg/kg	6.8E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.0E-10	4.8E-08	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**1.5E-07**					**3.9E-02**
Surface and Subsurface Soil	Surface and Subsurface Soil	Surface and Subsurface Soil	Dermal Contact	Arsenic	1.2E+01	mg/kg	3.8E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.8E-09	2.7E-07	mg/kg-day	3.0E-04	mg/kg-day	9 0E-04
				Mercury	1.7E+00	mg/kg	1.9E-10	mg/kg-day	---	(mg/kg-day)-1	---	1.3E-08	mg/kg-day	2.1E-05	mg/kg-day	6 2E-04
				Heptachlor epoxide	7 9E-01	mg/kg	8.7E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	8.0E-09	6.1E-08	mg/kg-day	1.3E-05	mg/kg-day	4.7E-03
				Total PCBs	1.2E+00	mg/kg	1.8E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.7E-09	1.3E-07	mg/kg-day	2.0E-05	mg/kg-day	6.4E-03
				Benzene	6.0E+00	mg/kg	---	mg/kg-day	5.5E-02	(mg/kg-day)-1	---	---	mg/kg-day	4.0E-03	mg/kg-day	---
				Benz(a)an hracene	4.1E-01	mg/kg	5.9E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.3E-10	4.1E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	7 8E-01	mg/kg	1.1E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	8.2E-09	7.8E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoran hene	3 5E-01	mg/kg	5.0E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.6E-10	3.5E-08	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.5E+00	mg/kg	2.2E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.6E-08	1.5E-07	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	2 0E-01	mg/kg	2.9E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.1E-10	2.1E-08	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**4.2E-08**					**1.3E-02**
		Surface and Subsurface Soil Exp. Point Total									**1.9E-07**					**5.2E-02**
	Surface and Subsurface Soil Exp. Medium Total										**1.9E-07**					**5.2E-02**

TABLE 7.3 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calcula ions					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk			Intake/Exposure		RfD/RfC		
					Value	Units	Value	Units	Value	Unit	Cancer Risk	Value	Units	Value	Unit	Hazard Quotient
Surface and Subsurface Soil	Vapors & Particulates	Outdoor Air	Inhala ion	Arsenic	1.2E+01	mg/kg	1.9E-08	ug/m3	4.3E-03	(ug/m3)-1	8.2E-11	1.3E-09	mg/m3	1.5E-05	mg/m3	8 9E-05
				Mercury	1.7E+00	mg/kg	2.8E-09	ug/m3	---	(ug/m3)-1	---	1.9E-10	mg/m3	3.0E-04	mg/m3	6 5E-07
				Heptachlor epoxide	7 9E-01	mg/kg	1.3E-09	ug/m3	2.6E-03	(ug/m3)-1	3.4E-12	9.0E-11	mg/m3	---	mg/m3	---
				Total PCBs	1.2E+00	mg/kg	1.9E-09	ug/m3	5.7E-04	(ug/m3)-1	1.1E-12	1.4E-10	mg/m3	---	mg/m3	---
				Benzene	6.0E+00	mg/kg	9.8E-09	ug/m3	7.8E-06	(ug/m3)-1	7.7E-14	6.9E-10	mg/m3	3.0E-02	mg/m3	2 3E-08
				Benz(a)an hracene	4.1E-01	mg/kg	6.6E-10	ug/m3	1.1E-04	(ug/m3)-1	7.3E-14	4.6E-11	mg/m3	---	mg/m3	---
				Benzo(a)pyrene	7 8E-01	mg/kg	1.2E-09	ug/m3	1.1E-03	(ug/m3)-1	1.4E-12	8.7E-11	mg/m3	---	mg/m3	---
				Benzo(b)fluoran hene	3 5E-01	mg/kg	5.5E-10	ug/m3	1.1E-04	(ug/m3)-1	6.1E-14	3.9E-11	mg/m3	---	mg/m3	---
				Dibenz(a,h)anthracene	1.5E+00	mg/kg	2.3E-09	ug/m3	1.2E-03	(ug/m3)-1	2.8E-12	1.6E-10	mg/m3	---	mg/m3	---
				Indeno(1,2,3-cd)pyrene	2 0E-01	mg/kg	3.1E-10	ug/m3	1.1E-04	(ug/m3)-1	3.5E-14	2.2E-11	mg/m3	---	mg/m3	---
			Inhala ion Exp. Route Total								**9.1E-11**					**8.9E-05**
		Outdoor Air Exp. Point Total									**9.1E-11**					**8.9E-05**
	Vapors & Particulates Exp. Medium Total										**9.1E-11**					**8.9E-05**
Surface and Subsurface Soil Medium Total											**1.9E-07**					**5.2E-02**
Waste	Waste	Waste	Ingestion	Arsenic	6.9E+00	mg/kg	2.3E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.5E-08	1.6E-06	mg/kg-day	3.0E-04	mg/kg-day	5.4E-03
				Mercury	3.2E+00	mg/kg	1.1E-08	mg/kg-day	---	(mg/kg-day)-1	---	7.5E-07	mg/kg-day	3.0E-04	mg/kg-day	2 5E-03
				alpha-BHC	5.5E-01	mg/kg	1.8E-09	mg/kg-day	6.3E+00	(mg/kg-day)-1	1.2E-08	1.3E-07	mg/kg-day	8.0E-03	mg/kg-day	1.6E-05
				Heptachlor epoxide	1.4E+00	mg/kg	4.8E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.3E-08	3.3E-07	mg/kg-day	1.3E-05	mg/kg-day	2.6E-02
				1,3,5-Trimethylbenzene	1.4E+02	mg/kg	4.6E-07	mg/kg-day	---	(mg/kg-day)-1	---	3.2E-05	mg/kg-day	1.0E-02	mg/kg-day	3 2E-03
				Benzene	1.8E+02	mg/kg	6.0E-07	mg/kg-day	5.5E-02	(mg/kg-day)-1	3.3E-08	4.2E-05	mg/kg-day	4.0E-03	mg/kg-day	1.1E-02
				E hylbenzene	1.3E+02	mg/kg	4.4E-07	mg/kg-day	1.1E-02	(mg/kg-day)-1	4.9E-09	3.1E-05	mg/kg-day	1.0E-01	mg/kg-day	3.1E-04
				Naphthalene	8.3E+01	mg/kg	2.8E-07	mg/kg-day	---	(mg/kg-day)-1	---	2.0E-05	mg/kg-day	2.0E-02	mg/kg-day	9 8E-04
				1-Me hylnaphthalene	2.0E+02	mg/kg	6.8E-07	mg/kg-day	2.9E-02	(mg/kg-day)-1	2.0E-08	4.8E-05	mg/kg-day	7.0E-02	mg/kg-day	6 8E-04
				Benz(a)an hracene	4.8E+00	mg/kg	1.6E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-08	1.1E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	4.8E+00	mg/kg	1.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-07	1.1E-06	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoran hene	3.2E+00	mg/kg	1.1E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	7.8E-09	7.5E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.3E+00	mg/kg	4.3E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.1E-08	3.0E-07	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**3.1E-07**					**4.9E-02**
		Waste	Dermal Contact	Arsenic	6.9E+00	mg/kg	2.3E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.4E-09	1.6E-07	mg/kg-day	3.0E-04	mg/kg-day	5 3E-04
				Mercury	3.2E+00	mg/kg	3.5E-10	mg/kg-day	---	(mg/kg-day)-1	---	2.5E-08	mg/kg-day	2.1E-05	mg/kg-day	1 2E-03
				alpha-BHC	5.5E-01	mg/kg	2.4E-10	mg/kg-day	6.3E+00	(mg/kg-day)-1	1.5E-09	1.7E-08	mg/kg-day	8.0E-03	mg/kg-day	2.1E-06
				Heptachlor epoxide	1.4E+00	mg/kg	1.6E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.4E-08	1.1E-07	mg/kg-day	1.3E-05	mg/kg-day	8 5E-03
				1,3,5-Trimethylbenzene	1.4E+02	mg/kg	---	mg/kg-day	---	(mg/kg-day)-1	---	---	mg/kg-day	1.0E-02	mg/kg-day	---
				Benzene	1.8E+02	mg/kg	---	mg/kg-day	5.5E-02	(mg/kg-day)-1	---	---	mg/kg-day	4.0E-03	mg/kg-day	---
				E hylbenzene	1.3E+02	mg/kg	---	mg/kg-day	1.1E-02	(mg/kg-day)-1	---	---	mg/kg-day	1.0E-01	mg/kg-day	---
				Naphthalene	8.3E+01	mg/kg	1.2E-07	mg/kg-day	---	(mg/kg-day)-1	---	8.4E-06	mg/kg-day	2.0E-02	mg/kg-day	4 2E-04
				1-Me hylnaphthalene	2.0E+02	mg/kg	2.9E-07	mg/kg-day	2.9E-02	(mg/kg-day)-1	8.5E-09	2.1E-05	mg/kg-day	7.0E-02	mg/kg-day	2 9E-04
				Benz(a)an hracene	4.8E+00	mg/kg	7.0E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.1E-09	4.9E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	4.8E+00	mg/kg	6.9E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.0E-08	4.8E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoran hene	3.2E+00	mg/kg	4.6E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.3E-09	3.2E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.3E+00	mg/kg	1.8E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.3E-08	1.3E-07	mg/kg-day	---	mg/kg-day	---
			Dermal ContactExp. Route Total								**1.0E-07**					**1.1E-02**
		Waste Exp. Point Total									**4.1E-07**					**6.0E-02**
	Waste Exp. Medium Total										**4.1E-07**					**6.0E-02**
Waste	Vapors & Particulates	Outdoor Air	Inhala ion	Arsenic	6.9E+00	mg/kg	1.1E-08	ug/m3	4.3E-03	(ug/m3)-1	4.9E-11	7.9E-10	mg/m3	1.5E-05	mg/m3	5 3E-05
				Mercury	3.2E+00	mg/kg	5.2E-09	ug/m3	---	(ug/m3)-1	---	3.7E-10	mg/m3	3.0E-04	mg/m3	1 2E-06
				alpha-BHC	5.5E-01	mg/kg	9.0E-10	ug/m3	1.8E-03	(ug/m3)-1	1.6E-12	6.3E-11	mg/m3	---	mg/m3	---
				Heptachlor epoxide	1.4E+00	mg/kg	2.3E-09	ug/m3	2.6E-03	(ug/m3)-1	6.0E-12	1.6E-10	mg/m3	---	mg/m3	---
				1,3,5-Trimethylbenzene	1.4E+02	mg/kg	2.2E-07	ug/m3	---	(ug/m3)-1	---	1.6E-08	mg/m3	---	mg/m3	---
				Benzene	1.8E+02	mg/kg	2.9E-07	ug/m3	7.8E-06	(ug/m3)-1	2.3E-12	2.1E-08	mg/m3	3.0E-02	mg/m3	6 8E-07
				E hylbenzene	1.3E+02	mg/kg	2.2E-07	ug/m3	2.5E-06	(ug/m3)-1	5.4E-13	1.5E-08	mg/m3	1.0E+00	mg/m3	1 5E-08
				Naphthalene	8.3E+01	mg/kg	1.4E-07	ug/m3	3.4E-05	(ug/m3)-1	4.6E-12	9.5E-09	mg/m3	3.0E-03	mg/m3	3 2E-06
				1-Me hylnaphthalene	2.0E+02	mg/kg	3.3E-07	ug/m3	---	(ug/m3)-1	---	2.3E-08	mg/m3	---	mg/m3	---
				Benz(a)an hracene	4.8E+00	mg/kg	7.8E-09	ug/m3	1.1E-04	(ug/m3)-1	8.6E-13	5.5E-10	mg/m3	---	mg/m3	---
				Benzo(a)pyrene	4.8E+00	mg/kg	7.6E-09	ug/m3	1.1E-03	(ug/m3)-1	8.4E-12	5.3E-10	mg/m3	---	mg/m3	---
				Benzo(b)fluoran hene	3.2E+00	mg/kg	5.1E-09	ug/m3	1.1E-04	(ug/m3)-1	5.6E-13	3.5E-10	mg/m3	---	mg/m3	---
				Dibenz(a,h)anthracene	1.3E+00	mg/kg	2.0E-09	ug/m3	1.2E-03	(ug/m3)-1	2.4E-12	1.4E-10	mg/m3	---	mg/m3	---
			Inhala ion Exp. Route Total								**7.6E-11**					**5.8E-05**
		Outdoor Air Exp. Point Total									**7.6E-11**					**5.8E-05**
	Vapors & Particulates Exp. Medium Total										**7.6E-11**					**5.8E-05**
Waste Medium Total											**4.1E-07**					**6.0E-02**

Total of Receptor Risks Across All Media	**6.9E-05**	Total of Receptor Hazards Across All Media	**2.8E+01**

TABLE 7.4 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Maintenance Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Maintenance Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Unit		Value	Units	Value	Unit	
South Pit Exposure Area -UTU	Vapors	Outdoor Air	Inhalation	Arsenic	2.4E+00	mg/l	---	ug/m3	4.3E-03	(ug/m3)-1	---	---	mg/m3	1.5E-05	mg/m3	---
				alpha-BHC	7.5E-03	mg/l	2.0E-09	ug/m3	1.8E-03	(ug/m3)-1	3.6E-12	1.4E-11	mg/m3	---	mg/m3	---
				Dieldrin	4.9E-03	mg/l	6.3E-10	ug/m3	4.6E-03	(ug/m3)-1	2.9E-12	4.4E-12	mg/m3	---	mg/m3	---
				Benzene	5.8E+00	mg/l	1.1E-03	ug/m3	7.8E-06	(ug/m3)-1	8.5E-09	7.6E-06	mg/m3	3.0E-02	mg/m3	2.5E-04
				3&4-Methylphenol	5.7E+01	mg/l	1.5E-05	ug/m3	---	(ug/m3)-1	---	1.1E-07	mg/m3	6.0E-01	mg/m3	1.8E-07
			Inhalation Exp. Route Total								**8.5E-09**					**2.5E-04**
		Outdoor Air Exp. Point Total									**8.5E-09**					**2.5E-04**
	Vapors Exp. Medium Total										**8.5E-09**					**2.5E-04**
South Pit Exposure Area -UTU Medium Total											**8.5E-09**					**2.5E-04**
Surface Water	Surface Water	East Ditch	Ingestion	Arsenic	1.6E-02	mg/l	1.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-07	7.3E-07	mg/kg-day	3.0E-04	mg/kg-day	2.4E-03
				Aldrin	2.9E-05	mg/l	1.9E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	3.3E-09	1.4E-09	mg/kg-day	3.0E-05	mg/kg-day	4.5E-05
			Ingestion Exp. Route Total								**1.6E-07**					**2.5E-03**
Surface Water	Surface Water	East Ditch	Dermal Contact	Arsenic	1.6E-02	mg/l	3.8E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.7E-08	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	8.8E-04
				Aldrin	2.9E-05	mg/l	6.5E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	1.1E-08	4.6E-09	mg/kg-day	3.0E-05	mg/kg-day	1.5E-04
			Dermal Contact Exp. Route Total								**6.8E-08**					**1.0E-03**
		East Ditch Exp. Point Total									**2.3E-07**					**3.5E-03**
	Surface Water Exp. Medium Total										**2.3E-07**					**3.5E-03**
Surface Water Medium Total											**2.3E-07**					**3.5E-03**
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	5.3E+00	mg/kg	1.8E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.7E-08	1.2E-07	mg/kg-day	3.0E-04	mg/kg-day	4.1E-04
				Mercury	2.9E+00	mg/kg	9.6E-09	mg/kg-day	---	(mg/kg-day)-1	---	6.7E-08	mg/kg-day	3.0E-04	mg/kg-day	2.2E-04
				Heptachlor epoxide	3.3E-01	mg/kg	1.1E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.0E-08	7.7E-09	mg/kg-day	1.3E-05	mg/kg-day	6.0E-04
				Total PCBs	1.4E-01	mg/kg	4.8E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	9.7E-10	3.4E-09	mg/kg-day	2.0E-05	mg/kg-day	1.7E-04
				Benz(a)anthracene	5.0E-01	mg/kg	1.7E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-09	1.2E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.3E-01	mg/kg	1.8E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.3E-08	1.2E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	2.1E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.5E-09	1.4E-08	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	5.8E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.3E-09	4.1E-09	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	1.2E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	9.1E-10	8.7E-09	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**5.9E-08**					**1.4E-03**
Surface Soil	Surface Soil	Surface Soil	Dermal Contact	Arsenic	5.3E+00	mg/kg	7.0E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-09	4.9E-09	mg/kg-day	3.0E-04	mg/kg-day	1.6E-05
				Mercury	2.9E+00	mg/kg	1.3E-10	mg/kg-day	---	(mg/kg-day)-1	---	8.9E-10	mg/kg-day	2.1E-05	mg/kg-day	4.2E-05
				Heptachlor epoxide	3.3E-01	mg/kg	1.5E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.3E-09	1.0E-09	mg/kg-day	1.3E-05	mg/kg-day	7.9E-05
				Total PCBs	1.4E-01	mg/kg	8.9E-11	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.8E-10	6.2E-10	mg/kg-day	2.0E-05	mg/kg-day	3.1E-05
				Benz(a)anthracene	5.0E-01	mg/kg	2.9E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.1E-10	2.0E-09	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.3E-01	mg/kg	3.0E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.2E-09	2.1E-09	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	3.5E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.6E-10	2.5E-09	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	1.0E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	7.3E-10	7.0E-10	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	2.1E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.6E-10	1.5E-09	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**6.1E-09**					**1.7E-04**
		Surface Soil Exp. Point Total									**6.5E-08**					**1.6E-03**
	Surface Soil Exp. Medium Total										**6.5E-08**					**1.6E-03**

TABLE 7.4 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Maintenance Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Maintenance Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk			Intake/Exposure		RfD/RfC		
					Value	Units	Value	Units	Value	Unit	Cancer Risk	Value	Units	Value	Unit	Hazard Quotient
Surface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	5.3E+00	mg/kg	4.3E-09	ug/m3	4.3E-03	(ug/m3)-1	1.9E-11	3.0E-11	mg/m3	1.5E-05	mg/m3	2.0E-06
				Mercury	2.9E+00	mg/kg	2.4E-09	ug/m3	---	(ug/m3)-1	---	1.6E-11	mg/m3	3.0E-04	mg/m3	5.5E-08
				Heptachlor epoxide	3.3E-01	mg/kg	2.7E-10	ug/m3	2.6E-03	(ug/m3)-1	7.0E-13	1.9E-12	mg/m3	---	mg/m3	---
				Total PCBs	1.4E-01	mg/kg	1.2E-10	ug/m3	5.7E-04	(ug/m3)-1	6.7E-14	8.2E-13	mg/m3	---	mg/m3	---
				Benz(a)anthracene	5.0E-01	mg/kg	4.0E-10	ug/m3	1.1E-04	(ug/m3)-1	4.4E-14	2.8E-12	mg/m3	---	mg/m3	---
				Benzo(a)pyrene	5.3E-01	mg/kg	4.2E-10	ug/m3	1.1E-03	(ug/m3)-1	4.6E-13	3.0E-12	mg/m3	---	mg/m3	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	4.9E-10	ug/m3	1.1E-04	(ug/m3)-1	5.4E-14	3.4E-12	mg/m3	---	mg/m3	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	1.4E-10	ug/m3	1.2E-03	(ug/m3)-1	1.6E-13	9.5E-13	mg/m3	---	mg/m3	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	2.9E-10	ug/m3	1.1E-04	(ug/m3)-1	3.1E-14	2.0E-12	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**2.0E-11**					**2.1E-06**
		Outdoor Air Exp. Point Total									**2.0E-11**					**2.1E-06**
	Vapors & Particulates Exp. Medium Total										**2.0E-11**					**2.1E-06**
Surface Soil Medium Total											**6.5E-08**					**1.6E-03**
Subsurface Soil	Vapors	Outdoor Air	Inhalation	Mercury	7.0E-01	mg/kg	3.5E-06	ug/m3	---	(ug/m3)-1	---	2.4E-08	mg/m3	3.0E-04	mg/m3	8.1E-05
				Total PCBs	1.3E+00	mg/kg	4.8E-07	ug/m3	5.7E-04	(ug/m3)-1	2.7E-10	3.4E-09	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**2.7E-10**					**8.1E-05**
		Outdoor Air Exp. Point Total									**2.7E-10**					**8.1E-05**
	Vapors Exp. Medium Total										**2.7E-10**					**8.1E-05**
Subsurface Soil Medium Total											**2.7E-10**					**8.1E-05**
Waste	Vapors	Outdoor Air	Inhalation	Mercury	1.5E+00	mg/kg	7.6E-06	ug/m3	---	(ug/m3)-1	---	5.3E-08	mg/m3	3.0E-04	mg/m3	1.8E-04
				Heptachlor epoxide	1.1E+00	mg/kg	3.3E-07	ug/m3	2.6E-03	(ug/m3)-1	8.6E-10	2.3E-09	mg/m3	---	mg/m3	---
				1,3,5-Trimethylbenzene	4.0E+01	mg/kg	1.0E-03	ug/m3	---	(ug/m3)-1	---	7.3E-06	mg/m3	---	mg/m3	---
				Benzene	6.0E+01	mg/kg	6.0E-03	ug/m3	7.8E-06	(ug/m3)-1	4.7E-08	4.2E-05	mg/m3	3.0E-02	mg/m3	1.4E-03
			Inhalation Exp. Route Total								**4.8E-08**					**1.6E-03**
		Outdoor Air Exp. Point Total									**4.8E-08**					**1.6E-03**
	Vapors Exp. Medium Total										**4.8E-08**					**1.6E-03**
Waste Medium Total											**4.8E-08**					**1.6E-03**
Sediment	Sediment	East Ditch	Ingestion	Benz(a)anthracene	5.8E+00	mg/kg	1.9E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.4E-08	1.4E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	1.7E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-07	1.2E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	1.5E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.1E-08	1.1E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	3.7E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.7E-08	2.6E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	1.2E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	8.6E-09	8.2E-08	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**1.8E-07**					**---**
Sediment	Sediment	East Ditch	Dermal Contact	Benz(a)anthracene	5.8E+00	mg/kg	3.3E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.4E-09	2.3E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	2.9E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.1E-08	2.0E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	2.6E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.9E-09	1.9E-08	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	6.3E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.6E-09	4.4E-09	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	2.0E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.5E-09	1.4E-08	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**3.1E-08**					**---**
		East Ditch Exp. Point Total									**2.1E-07**					**---**
	Sediment Exp. Medium Total										**2.1E-07**					**---**
Sediment Medium Total											**2.1E-07**					**---**
											Total of Receptor Risk Across All Media	**5.6E-07**		Total of Receptor Hazards Across All Media		**7.0E-03**

TABLE 7.5 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
Sou h Pit Exposure Area - On-Site Adolescent Trespasser
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
					Value	Units	Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
							Value	Units	Value	Unit		Value	Units	Value	Unit	
South Pit Exposure Area -UTU	Vapors	Outdoor Air	Inhalation	Arsenic	2.4E+00	mg/l	---	mg/m3	4.3E-03	(ug/m3)-1	---	---	mg/m3	1.5E-05	mg/m3	---
				alpha-BHC	7.5E-03	mg/l	1.0E-09	mg/m3	1.8E-03	(ug/m3)-1	1.8E-12	1.4E-11	mg/m3	---	mg/m3	---
				Dieldrin	4.9E-03	mg/l	3.1E-10	mg/m3	4.6E-03	(ug/m3)-1	1.4E-12	4.4E-12	mg/m3	---	mg/m3	---
				Benzene	5.8E+00	mg/l	5.4E-04	mg/m3	7.8E-06	(ug/m3)-1	4.2E-09	7.6E-06	mg/m3	3.0E-02	mg/m3	2 5E-04
				3&4-Me hylphenol	5.7E+01	mg/l	7.7E-06	mg/m3	---	(ug/m3)-1	---	1.1E-07	mg/m3	6.0E-01	mg/m3	1 8E-07
			Inhalation Exp. Route Total								**4.2E-09**					**2.5E-04**
		Outdoor Air Exp. Point Total									**4.2E-09**					**2.5E-04**
	Vapors Exp. Medium Total										**4.2E-09**					**2.5E-04**
South Pit Exposure Area -UTU Medium Total											**4.2E-09**					**2.5E-04**
Surface Water	Surface Water	East Ditch	Ingestion	Arsenic	1.6E-02	mg/l	8.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.2E-07	1.1E-06	mg/kg-day	3.0E-04	mg/kg-day	3 8E-03
				Aldrin	2.9E-05	mg/l	1.5E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	2.6E-09	2.1E-09	mg/kg-day	3.0E-05	mg/kg-day	7.1E-05
			Ingestion Exp. Route Total								**1.2E-07**					**3.9E-03**
Surface Water	Surface Water	East Ditch	Dermal Contact	Arsenic	1.6E-02	mg/l	2.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.2E-08	3.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1 0E-03
				Aldrin	2.9E-05	mg/l	3.7E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	6.3E-09	5.2E-09	mg/kg-day	3.0E-05	mg/kg-day	1.7E-04
			Dermal Contact Exp. Route Total								**3.8E-08**					**1.2E-03**
		East Ditch Exp. Point Total									**1.6E-07**					**5.0E-03**
	Surface Water Exp. Medium Total										**1.6E-07**					**5.0E-03**
Surface Water Medium Total											**1.6E-07**					**5.0E-03**
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	5.3E+00	mg/kg	2.8E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.1E-08	3.9E-07	mg/kg-day	3.0E-04	mg/kg-day	1 3E-03
				Mercury	2.9E+00	mg/kg	1.5E-08	mg/kg-day	---	(mg/kg-day)-1	---	2.1E-07	mg/kg-day	3.0E-04	mg/kg-day	7 0E-04
				Heptachlor epoxide	3.3E-01	mg/kg	1.7E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.6E-08	2.4E-08	mg/kg-day	1.3E-05	mg/kg-day	1 9E-03
				Total PCBs	1.4E-01	mg/kg	7.5E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.5E-09	1.1E-08	mg/kg-day	2.0E-05	mg/kg-day	5 3E-04
				Benz(a)anthracene	5.0E-01	mg/kg	2.6E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.9E-09	3.6E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.3E-01	mg/kg	2.8E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.0E-08	3.9E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	3.2E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.3E-09	4.5E-08	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	9.1E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.6E-09	1.3E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	1.9E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.4E-09	2.7E-08	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**9.1E-08**					**4.4E-03**
Surface Soil	Surface Soil	Surface Soil	Dermal Contact	Arsenic	5.3E+00	mg/kg	1.9E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.8E-09	2.6E-08	mg/kg-day	3.0E-04	mg/kg-day	8 8E-05
				Mercury	2.9E+00	mg/kg	3.4E-10	mg/kg-day	---	(mg/kg-day)-1	---	4.8E-09	mg/kg-day	2.1E-05	mg/kg-day	2 3E-04
				Heptachlor epoxide	3.3E-01	mg/kg	3.9E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.6E-09	5.5E-09	mg/kg-day	1.3E-05	mg/kg-day	4 2E-04
				Total PCBs	1.4E-01	mg/kg	2.4E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.8E-10	3.4E-09	mg/kg-day	2.0E-05	mg/kg-day	1.7E-04
				Benz(a)anthracene	5.0E-01	mg/kg	7.7E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.6E-10	1.1E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.3E-01	mg/kg	8.2E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.0E-09	1.1E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	9.5E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.9E-10	1.3E-08	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	2.7E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.0E-09	3.8E-09	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	5.7E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.2E-10	8.0E-09	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**1.6E-08**					**9.1E-04**
		Surface Soil Exp. Point Total									**1.1E-07**					**5.3E-03**
	Surface Soil Exp. Medium Total										**1.1E-07**					**5.3E-03**
Surface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	5.3E+00	mg/kg	2.2E-09	ug/m3	4.3E-03	(ug/m3)-1	9.3E-12	3.0E-11	mg/m3	1.5E-05	mg/m3	2 0E-06
				Mercury	2.9E+00	mg/kg	1.2E-09	ug/m3	---	(ug/m3)-1	---	1.6E-11	mg/m3	3.0E-04	mg/m3	5 5E-08
				Heptachlor epoxide	3.3E-01	mg/kg	1.3E-10	ug/m3	2.6E-03	(ug/m3)-1	3.5E-13	1.9E-12	mg/m3	---	mg/m3	---
				Total PCBs	1.4E-01	mg/kg	5.9E-11	ug/m3	5.7E-04	(ug/m3)-1	3.4E-14	8.2E-13	mg/m3	---	mg/m3	---
				Benz(a)anthracene	5.0E-01	mg/kg	2.0E-10	ug/m3	1.1E-04	(ug/m3)-1	2.2E-14	2.8E-12	mg/m3	---	mg/m3	---
				Benzo(a)pyrene	5.3E-01	mg/kg	2.1E-10	ug/m3	1.1E-03	(ug/m3)-1	2.3E-13	3.0E-12	mg/m3	---	mg/m3	---
				Benzo(b)fluoranthene	6.1E-01	mg/kg	2.4E-10	ug/m3	1.1E-04	(ug/m3)-1	2.7E-14	3.4E-12	mg/m3	---	mg/m3	---
				Dibenz(a,h)anthracene	1.7E-01	mg/kg	6.8E-11	ug/m3	1.2E-03	(ug/m3)-1	8.2E-14	9.5E-13	mg/m3	---	mg/m3	---
				Indeno(1,2,3-cd)pyrene	3.7E-01	mg/kg	1.4E-10	ug/m3	1.1E-04	(ug/m3)-1	1.6E-14	2.0E-12	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**1.0E-11**					**2.1E-06**
		Outdoor Air Exp. Point Total									**1.0E-11**					**2.1E-06**
	Vapors & Particulates Exp. Medium Total										**1.0E-11**					**2.1E-06**
Surface Soil Medium Total											**1.1E-07**					**5.3E-03**

TABLE 7.5 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
Sou h Pit Exposure Area - On-Site Adolescent Trespasser
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
					Value	Units	Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
							Value	Units	Value	Unit		Value	Units	Value	Unit	
Subsurface Soil	Vapors	Outdoor Air	Inhalation	Mercury	7.0E-01	mg/kg	1.7E-06	ug/m3	---	(ug/m3)-1	---	2.4E-08	mg/m3	3.0E-04	mg/m3	8.1E-05
				Total PCBs	1.3E+00	mg/kg	2.4E-07	ug/m3	5.7E-04	(ug/m3)-1	1.4E-10	3.4E-09	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**1.4E-10**					**8.1E-05**
		Outdoor Air Exp. Point Total									**1.4E-10**					**8.1E-05**
	Vapors Exp. Medium Total										**1.4E-10**					**8.1E-05**
Subsurface Soil Medium Total											**1.4E-10**					**8.1E-05**
Waste	Vapors	Outdoor Air	Inhalation	Mercury	1.5E+00	mg/kg	3.8E-06	ug/m3	---	(ug/m3)-1	---	5.3E-08	mg/m3	3.0E-04	mg/m3	1 8E-04
				Heptachlor epoxide	1.1E+00	mg/kg	1.6E-07	ug/m3	2.6E-03	(ug/m3)-1	4.3E-10	2.3E-09	mg/m3	---	mg/m3	---
				1,3,5-Trime hylbenzene	4.0E+01	mg/kg	5.2E-04	ug/m3	---	(ug/m3)-1	---	7.3E-06	mg/m3	---	mg/m3	---
				Benzene	6.0E+01	mg/kg	3.0E-03	ug/m3	7.8E-06	(ug/m3)-1	2.3E-08	4.2E-05	mg/m3	3.0E-02	mg/m3	1.4E-03
			Inhalation Exp. Route Total								**2.4E-08**					**1.6E-03**
		Outdoor Air Exp. Point Total									**2.4E-08**					**1.6E-03**
	Vapors Exp. Medium Total										**2.4E-08**					**1.6E-03**
Waste Medium Total											**2.4E-08**					**1.6E-03**
Sediment	Sediment	East Ditch	Ingestion	Benz(a)anthracene	5.8E+00	mg/kg	3.0E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.2E-08	4.2E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	2.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.9E-07	3.7E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	2.4E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.8E-08	3.4E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	5.7E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.2E-08	8.0E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	1.8E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.3E-08	2.6E-07	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**2.9E-07**					**---**
Sediment	Sediment	East Ditch	Dermal Contact	Benz(a)anthracene	5.8E+00	mg/kg	9.0E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.5E-09	1.3E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	7.7E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.6E-08	1.1E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	7.1E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.2E-09	1.0E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	1.7E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-08	2.4E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1 2,3-cd)pyrene	3.5E+00	mg/kg	5.4E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.0E-09	7.6E-08	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**8.5E-08**					**---**
		East Ditch Exp. Point Total									**3.7E-07**					**---**
	Sediment Exp. Medium Total										**3.7E-07**					**---**
Sediment Medium Total											**3.7E-07**					**---**
											Total of Receptor Risk Across All Media	**6.7E-07**		Total of Receptor Hazards Across All Media			**1.2E-02**

TABLE 7.6 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
North Pit Exposure Area - On-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Unit		Value	Units	Value	Unit	
North Pit Exposure Area -STU	Groundwater	Tap Water	Ingestion	Arsenic	9.3E-03	mg/l	1.2E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.8E-05	9.1E-05	mg/kg-day	3.0E-04	mg/kg-day	3.0E-01
				alpha-BHC	6.7E-06	mg/l	8.4E-09	mg/kg-day	6.3E+00	(mg/kg-day)-1	5.3E-08	6.6E-08	mg/kg-day	8.0E-03	mg/kg-day	8.2E-06
				Heptachlor	1.9E-06	mg/l	2.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-08	1.9E-08	mg/kg-day	5.0E-04	mg/kg-day	3.7E-05
			Ingestion Exp. Route Total								**1.8E-05**					**3.0E-01**
		Tap Water Exp. Point Total									**1.8E-05**					**3.0E-01**
	Groundwater Exp. Medium Total										**1.8E-05**					**3.0E-01**
North Pit Exposure Area -STU Medium Total											**1.8E-05**					**3.0E-01**
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	6.8E+00	mg/kg	4.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.4E-07	3.3E-06	mg/kg-day	3.0E-04	mg/kg-day	1.1E-02
				Lead	2.9E+02	mg/kg	1.8E-05	mg/kg-day	---	(mg/kg-day)-1	---	1.4E-04	mg/kg-day	---	mg/kg-day	---
				Mercury	8.7E+00	mg/kg	5.5E-07	mg/kg-day	---	(mg/kg-day)-1	---	4.3E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Benzo(a)pyrene	8.8E-02	mg/kg	5.6E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.1E-08	4.3E-08	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	5.7E-07	mg/kg-day	1.4E-02	(mg/kg-day)-1	8.0E-09	4.4E-06	mg/kg-day	2.0E-02	mg/kg-day	2.2E-04
			Ingestion Exp. Route Total								**6.9E-07**					**2.6E-02**
Surface Soil	Surface Soil	Surface Soil	Dermal Contact	Arsenic	6.8E+00	mg/kg	1.7E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.6E-08	1.3E-07	mg/kg-day	3.0E-04	mg/kg-day	4.4E-04
				Lead	2.9E+02	mg/kg	2.4E-07	mg/kg-day	---	(mg/kg-day)-1	---	1.9E-06	mg/kg-day	---	mg/kg-day	---
				Mercury	8.7E+00	mg/kg	7.3E-09	mg/kg-day	---	(mg/kg-day)-1	---	5.6E-08	mg/kg-day	2.1E-05	mg/kg-day	2.7E-03
				Benzo(a)pyrene	8.8E-02	mg/kg	9.5E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	7.0E-09	7.4E-09	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	7.5E-08	mg/kg-day	7.4E-02	(mg/kg-day)-1	5.5E-09	5.8E-07	mg/kg-day	3.8E-03	mg/kg-day	1.5E-04
			Dermal Contact Exp. Route Total								**3.8E-08**					**3.3E-03**
		Surface Soil Exp. Point Total									**7.3E-07**					**2.9E-02**
	Surface Soil Exp. Medium Total										**7.3E-07**					**2.9E-02**
Surface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	6.8E+00	mg/kg	4.2E-07	ug/m3	4.3E-03	(ug/m3)-1	1.8E-09	3.3E-09	mg/m3	1.5E-05	mg/m3	2.2E-04
				Lead	2.9E+02	mg/kg	1.8E-05	ug/m3	---	(ug/m3)-1	---	1.4E-07	mg/m3	---	mg/m3	---
				Mercury	8.7E+00	mg/kg	5.4E-07	ug/m3	---	(ug/m3)-1	---	4.2E-09	mg/m3	3.0E-04	mg/m3	1.4E-05
				Benzo(a)pyrene	8.8E-02	mg/kg	5.3E-09	ug/m3	1.1E-03	(ug/m3)-1	5.8E-12	4.1E-11	mg/m3	---	mg/m3	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	5.4E-07	ug/m3	2.4E-06	(ug/m3)-1	1.3E-12	4.2E-09	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**1.8E-09**					**2.3E-04**
		Outdoor Air Exp. Point Total									**1.8E-09**					**2.3E-04**
	Vapors & Particulates Exp. Medium Total										**1.8E-09**					**2.3E-04**
Surface Soil Medium Total											**7.3E-07**					**2.9E-02**
Subsurface Soil	Vapors	Outdoor Air	Inhalation	Mercury	2.8E+00	mg/kg	1.0E-03	ug/m3	---	(ug/m3)-1	---	8.1E-06	mg/m3	3.0E-04	mg/m3	2.7E-02
			Inhalation Exp. Route Total								**---**					**2.7E-02**
		Outdoor Air Exp. Point Total									**---**					**2.7E-02**
	Vapors Exp. Medium Total										**---**					**2.7E-02**
Subsurface Soil Medium Total											**---**					**2.7E-02**
										Total of Receptor Risk Across All Media	**1.8E-05**			Total of Receptor Hazards Across All Media		**3.6E-01**

TABLE 7.7 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
North Pit Exposure Area - On-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
					Value	Units	Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
							Value	Units	Value	Unit		Value	Units	Value	Unit	
Surface and Subsurface Soil	Surface and Subsurface Soil	Surface and Subsurface Soil	Ingestion	Arsenic	6.9E+00	mg/kg	2.3E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.5E-08	1.6E-06	mg/kg-day	3.0E-04	mg/kg-day	5.4E-03
				Lead	1.8E+02	mg/kg	6.0E-07	mg/kg-day	---	(mg/kg-day)-1	---	4.2E-05	mg/kg-day	---	mg/kg-day	---
				Mercury	5.7E+00	mg/kg	1.9E-08	mg/kg-day	---	(mg/kg-day)-1	---	1.3E-06	mg/kg-day	3.0E-04	mg/kg-day	4.4E-03
				Benzo(a)pyrene	5.7E-02	mg/kg	1.9E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.4E-09	1.3E-08	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	4.9E+00	mg/kg	1.6E-08	mg/kg-day	1.4E-02	(mg/kg-day)-1	2.3E-10	1.1E-06	mg/kg-day	2.0E-02	mg/kg-day	5.7E-05
			Ingestion Exp. Route Total								**3.6E-08**					**9.9E-03**
Surface and Subsurface Soil	Surface and Subsurface Soil	Surface and Subsurface Soil	Dermal Contact	Arsenic	6.9E+00	mg/kg	2.3E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.4E-09	1.6E-07	mg/kg-day	3.0E-04	mg/kg-day	5.3E-04
				Lead	1.8E+02	mg/kg	2.0E-08	mg/kg-day	---	(mg/kg-day)-1	---	1.4E-06	mg/kg-day	---	mg/kg-day	---
				Mercury	5.7E+00	mg/kg	6.3E-10	mg/kg-day	---	(mg/kg-day)-1	---	4.4E-08	mg/kg-day	2.1E-05	mg/kg-day	2.1E-03
				Benzo(a)pyrene	5.7E-02	mg/kg	8.2E-11	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.0E-10	5.7E-09	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	4.9E+00	mg/kg	5.4E-09	mg/kg-day	7.4E-02	(mg/kg-day)-1	4.0E-10	3.8E-07	mg/kg-day	3.8E-03	mg/kg-day	1.0E-04
			Dermal Contact Exp. Route Total								**4.4E-09**					**2.7E-03**
		Surface and Subsurface Soil Exp. Point Total									**4.1E-08**					**1.3E-02**
	Surface and Subsurface Soil Exp. Medium Total										**4.1E-08**					**1.3E-02**
Surface and Subsurface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	6.9E+00	mg/kg	1.1E-08	ug/m3	4.3E-03	(ug/m3)-1	4.8E-11	7.9E-10	mg/m3	1.5E-05	mg/m3	5.3E-05
				Lead	1.8E+02	mg/kg	2.9E-07	ug/m3	---	(ug/m3)-1	---	2.0E-08	mg/m3	---	mg/m3	---
				Mercury	5.7E+00	mg/kg	9.3E-09	ug/m3	---	(ug/m3)-1	---	6.5E-10	mg/m3	3.0E-04	mg/m3	2.2E-06
				Benzo(a)pyrene	5.7E-02	mg/kg	9.1E-11	ug/m3	1.1E-03	(ug/m3)-1	1.0E-13	6.4E-12	mg/m3	---	mg/m3	---
				Bis(2-ethylhexyl)phthalate	4.9E+00	mg/kg	7.9E-09	ug/m3	2.4E-06	(ug/m3)-1	1.9E-14	5.5E-10	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**4.9E-11**					**5.5E-05**
		Outdoor Air Exp. Point Total									**4.9E-11**					**5.5E-05**
	Vapors & Particulates Exp. Medium Total										**4.9E-11**					**5.5E-05**
Surface and Subsurface Soil Medium Total											**4.1E-08**					**1.3E-02**

Total of Receptor Risks Across All Media	**4.1E-08**	Total of Receptor Hazards Across All Media	**1.3E-02**

TABLE 7.8 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
North Pit Exposure Area - On-Site Maintenance Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Maintenance Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
					Value	Units	Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
							Value	Units	Value	Unit		Value	Units	Value	Unit	
Surface Water	Surface Water	East Ditch	Ingestion	Arsenic	1.6E-02	mg/l	1.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-07	7.3E-07	mg/kg-day	3.0E-04	mg/kg-day	2.4E-03
				Aldrin	2.9E-05	mg/l	1.9E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	3 3E-09	1.4E-09	mg/kg-day	3.0E-05	mg/kg-day	4.5E-05
			Ingestion Exp. Route Total								**1.6E-07**					**2.5E-03**
Surface Water	Surface Water	East Ditch	Dermal Contact	Arsenic	1.6E-02	mg/l	3.8E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.7E-08	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	8.8E-04
				Aldrin	2.9E-05	mg/l	6.5E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	1.1E-08	4.6E-09	mg/kg-day	3.0E-05	mg/kg-day	1.5E-04
			Dermal Contact Exp. Route Total								**6.8E-08**					**1.0E-03**
		East Ditch Exp. Point Total									**2.3E-07**					**3.5E-03**
	Surface Water Exp. Medium Total										**2.3E-07**					**3.5E-03**
Surface Water Medium Total											**2.3E-07**					**3.5E-03**
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	6.8E+00	mg/kg	2.3E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.4E-08	1.6E-07	mg/kg-day	3.0E-04	mg/kg-day	5.3E-04
				Lead	2.9E+02	mg/kg	9.6E-07	mg/kg-day	---	(mg/kg-day)-1	---	6.8E-06	mg/kg-day	---	mg/kg-day	---
				Mercury	8.7E+00	mg/kg	2.9E-08	mg/kg-day	---	(mg/kg-day)-1	---	2.1E-07	mg/kg-day	3.0E-04	mg/kg-day	6.8E-04
				Benzo(a)pyrene	8.8E-02	mg/kg	3.0E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	2 2E-09	2.1E-09	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	3.0E-08	mg/kg-day	1.4E-02	(mg/kg-day)-1	4 2E-10	2.1E-07	mg/kg-day	2.0E-02	mg/kg-day	1.1E-05
			Ingestion Exp. Route Total								**3.7E-08**					**1.2E-03**
Surface Soil	Surface Soil	Surface Soil	Dermal Contact	Arsenic	6.8E+00	mg/kg	9.1E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.4E-09	6.4E-09	mg/kg-day	3.0E-04	mg/kg-day	2.1E-05
				Lead	2.9E+02	mg/kg	1.3E-08	mg/kg-day	---	(mg/kg-day)-1	---	8.9E-08	mg/kg-day	---	mg/kg-day	---
				Mercury	8.7E+00	mg/kg	3.9E-10	mg/kg-day	---	(mg/kg-day)-1	---	2.7E-09	mg/kg-day	2.1E-05	mg/kg-day	1.3E-04
				Benzo(a)pyrene	8.8E-02	mg/kg	5.1E-11	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.7E-10	3.6E-10	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	4.0E-09	mg/kg-day	7.4E-02	(mg/kg-day)-1	2 9E-10	2.8E-08	mg/kg-day	3.8E-03	mg/kg-day	7.4E-06
			Dermal Contact Exp. Route Total								**2.0E-09**					**1.6E-04**
		Surface Soil Exp. Point Total									**3.9E-08**					**1.4E-03**
	Surface Soil Exp. Medium Total										**3.9E-08**					**1.4E-03**
Surface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	6.8E+00	mg/kg	5.6E-09	ug/m3	4.3E-03	(ug/m3)-1	2.4E-11	3.9E-11	mg/m3	1.5E-05	mg/m3	2.6E-06
				Lead	2.9E+02	mg/kg	2.4E-07	ug/m3	---	(ug/m3)-1	---	1.7E-09	mg/m3	---	mg/m3	---
				Mercury	8.7E+00	mg/kg	7.2E-09	ug/m3	---	(ug/m3)-1	---	5.0E-11	mg/m3	3.0E-04	mg/m3	1.7E-07
				Benzo(a)pyrene	8.8E-02	mg/kg	7.1E-11	ug/m3	1.1E-03	(ug/m3)-1	7 8E-14	4.9E-13	mg/m3	---	mg/m3	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	7.3E-09	ug/m3	2.4E-06	(ug/m3)-1	1.7E-14	5.1E-11	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**2.4E-11**					**2.8E-06**
		Outdoor Air Exp. Point Total									**2.4E-11**					**2.8E-06**
	Vapors & Particulates Exp. Medium Total										**2.4E-11**					**2.8E-06**
Surface Soil Medium Total											**3.9E-08**					**1.4E-03**
Subsurface Soil	Vapors	Outdoor Air	Inhalation	Mercury	2.8E+00	mg/kg	1.4E-05	ug/m3	---	(ug/m3)-1	---	9.7E-08	mg/m3	3.0E-04	mg/m3	3.2E-04
			Inhalation Exp. Route Total								**---**					**3.2E-04**
		Outdoor Air Exp. Point Total									**---**					**3.2E-04**
	Vapors Exp. Medium Total										**---**					**3.2E-04**
Subsurface Soil Medium Total											**---**					**3.2E-04**
Sediment	Sediment	East Ditch	Ingestion	Benz(a)an hracene	5.8E+00	mg/kg	1.9E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.4E-08	1.4E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	1.7E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1 2E-07	1.2E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	1.5E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.1E-08	1.1E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	3.7E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.7E-08	2.6E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	1.2E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	8.6E-09	8.2E-08	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**1.8E-07**					**---**
Sediment	Sediment	East Ditch	Dermal Contact	Benz(a)an hracene	5.8E+00	mg/kg	3.3E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.4E-09	2.3E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	2.9E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.1E-08	2.0E-08	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	2.6E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1 9E-09	1.9E-08	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	6.3E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.6E-09	4.4E-09	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	2.0E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1 5E-09	1.4E-08	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**3.1E-08**					**---**
		East Ditch Exp. Point Total									**2.1E-07**					**---**
	Sediment Exp. Medium Total										**2.1E-07**					**---**
Sediment Medium Total											**2.1E-07**					**---**
											Total of Receptor Risk Across All Media	**4.8E-07**		Total of Receptor Hazards Across All Media		**5.2E-03**

TABLE 7.9 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
North Pit Exposure Area - On-Site Adolescent Trespasser
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Value	Intake/Exposure Units	CSF/Unit Risk Value	CSF/Unit Risk Unit	Cancer Risk	Non-Cancer Risk Calculations: Intake/Exposure Value	Intake/Exposure Units	RfD/RfC Value	RfD/RfC Unit	Hazard Quotient
Surface Water	Surface Water	East Ditch	Ingestion	Arsenic	1.6E-02	mg/l	8.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1 2E-07	1.1E-06	mg/kg-day	3.0E-04	mg/kg-day	3.8E-03
				Aldrin	2.9E-05	mg/l	1.5E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	2.6E-09	2.1E-09	mg/kg-day	3.0E-05	mg/kg-day	7.1E-05
			Ingestion Exp. Route Total								**1.2E-07**					**3.9E-03**
Surface Water	Surface Water	East Ditch	Dermal Contact	Arsenic	1.6E-02	mg/l	2.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	3 2E-08	3.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1.0E-03
				Aldrin	2.9E-05	mg/l	3.7E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	6 3E-09	5.2E-09	mg/kg-day	3.0E-05	mg/kg-day	1.7E-04
			Dermal Contact Exp. Route Total								**3.8E-08**					**1.2E-03**
		East Ditch Exp. Point Total									**1.6E-07**					**5.0E-03**
	Surface Water Exp. Medium Total										**1.6E-07**					**5.0E-03**
Surface Water Medium Total											**1.6E-07**					**5.0E-03**
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	6.8E+00	mg/kg	3.6E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	5 3E-08	5.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1.7E-03
				Lead	2.9E+02	mg/kg	1.5E-06	mg/kg-day	---	(mg/kg-day)-1	---	2.1E-05	mg/kg-day	---	mg/kg-day	---
				Mercury	8.7E+00	mg/kg	4.6E-08	mg/kg-day	---	(mg/kg-day)-1	---	6.4E-07	mg/kg-day	3.0E-04	mg/kg-day	2.1E-03
				Benzo(a)pyrene	8.8E-02	mg/kg	4.6E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.4E-09	6.5E-09	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	4.7E-08	mg/kg-day	1.4E-02	(mg/kg-day)-1	6.6E-10	6.6E-07	mg/kg-day	2.0E-02	mg/kg-day	3.3E-05
			Ingestion Exp. Route Total								**5.7E-08**					**3.8E-03**
Surface Soil	Surface Soil	Surface Soil	Dermal Contact	Arsenic	6.8E+00	mg/kg	2.4E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.7E-09	3.4E-08	mg/kg-day	3.0E-04	mg/kg-day	1.1E-04
				Lead	2.9E+02	mg/kg	3.4E-08	mg/kg-day	---	(mg/kg-day)-1	---	4.8E-07	mg/kg-day	---	mg/kg-day	---
				Mercury	8.7E+00	mg/kg	1.0E-09	mg/kg-day	---	(mg/kg-day)-1	---	1.5E-08	mg/kg-day	2.1E-05	mg/kg-day	6.9E-04
				Benzo(a)pyrene	8.8E-02	mg/kg	1.4E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	1 0E-09	1.9E-09	mg/kg-day	---	mg/kg-day	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	1.1E-08	mg/kg-day	7.4E-02	(mg/kg-day)-1	7 9E-10	1.5E-07	mg/kg-day	3.8E-03	mg/kg-day	4.0E-05
			Dermal Contact Exp. Route Total								**5.4E-09**					**8.5E-04**
		Surface Soil Exp. Point Total									**6.3E-08**					**4.7E-03**
	Surface Soil Exp. Medium Total										**6.3E-08**					**4.7E-03**
Surface Soil	Vapors & Particulates	Outdoor Air	Inhalation	Arsenic	6.8E+00	mg/kg	2.8E-09	ug/m3	4.3E-03	(ug/m3)-1	1 2E-11	3.9E-11	mg/m3	1.5E-05	mg/m3	2.6E-06
				Lead	2.9E+02	mg/kg	1.2E-07	ug/m3	---	(ug/m3)-1	---	1.7E-09	mg/m3	---	mg/m3	---
				Mercury	8.7E+00	mg/kg	3.6E-09	ug/m3	---	(ug/m3)-1	---	5.0E-11	mg/m3	3.0E-04	mg/m3	1.7E-07
				Benzo(a)pyrene	8.8E-02	mg/kg	3.5E-11	ug/m3	1.1E-03	(ug/m3)-1	3 9E-14	4.9E-13	mg/m3	---	mg/m3	---
				Bis(2-ethylhexyl)phthalate	9.0E+00	mg/kg	3.6E-09	ug/m3	2.4E-06	(ug/m3)-1	8.7E-15	5.1E-11	mg/m3	---	mg/m3	---
			Inhalation Exp. Route Total								**1.2E-11**					**2.8E-06**
		Outdoor Air Exp. Point Total									**1.2E-11**					**2.8E-06**
	Vapors & Particulates Exp. Medium Total										**1.2E-11**					**2.8E-06**
Surface Soil Medium Total											**6.3E-08**					**4.7E-03**
Subsurface Soil	Vapors	Outdoor Air	Inhalation	Mercury	2.8E+00	mg/kg	7.0E-06	ug/m3	---	(ug/m3)-1	---	9.7E-08	mg/m3	3.0E-04	mg/m3	3.2E-04
			Inhalation Exp. Route Total								**---**					**3.2E-04**
		Outdoor Air Exp. Point Total									**---**					**3.2E-04**
	Vapors Exp. Medium Total										**---**					**3.2E-04**
Subsurface Soil Medium Total											**---**					**3.2E-04**
Sediment	Sediment	East Ditch	Ingestion	Benz(a)an hracene	5.8E+00	mg/kg	3.0E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2 2E-08	4.2E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	2.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1 9E-07	3.7E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	2.4E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1 8E-08	3.4E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	5.7E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	4 2E-08	8.0E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	1.8E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1 3E-08	2.6E-07	mg/kg-day	---	mg/kg-day	---
			Ingestion Exp. Route Total								**2.9E-07**					**---**
Sediment	Sediment	East Ditch	Dermal Contact	Benz(a)an hracene	5.8E+00	mg/kg	9.0E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	6 5E-09	1.3E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(a)pyrene	5.0E+00	mg/kg	7.7E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.6E-08	1.1E-07	mg/kg-day	---	mg/kg-day	---
				Benzo(b)fluoranthene	4.6E+00	mg/kg	7.1E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	5 2E-09	1.0E-07	mg/kg-day	---	mg/kg-day	---
				Dibenz(a,h)anthracene	1.1E+00	mg/kg	1.7E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1 2E-08	2.4E-08	mg/kg-day	---	mg/kg-day	---
				Indeno(1,2,3-cd)pyrene	3.5E+00	mg/kg	5.4E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	4 0E-09	7.6E-08	mg/kg-day	---	mg/kg-day	---
			Dermal Contact Exp. Route Total								**8.5E-08**					**---**
		East Ditch Exp. Point Total									**3.7E-07**					**---**
	Sediment Exp. Medium Total										**3.7E-07**					**---**
Sediment Medium Total											**3.7E-07**					**---**
										Total of Receptor Risk Across All Media	**6.0E-07**			Total of Receptor Hazards Across All Media		**1.0E-02**

TABLE 7.10 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
Off-Site Exposure Area - Off-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Unit		Value	Units	Value	Unit	
Off-Site Exposure Area - UTU	Vapors	Outdoor Air	Inhalation	Benzene	3.5E+00	mg/l	4.9E-02	ug/m3	7.8E-06	(ug/m3)-1	3.8E-07	3.8E-04	mg/m3	3.0E-02	mg/m3	1.3E-02
			Inhalation Exp. Route Total								**3.8E-07**					**1.3E-02**
		Outdoor Air Exp. Point Total									**3.8E-07**					**1.3E-02**
	Off-Site Exposure Area -UTU Exp. Medium Total										**3.8E-07**					**1.3E-02**
Off-Site Exposure Area - UTU Medium Total											**3.8E-07**					**1.3E-02**
Off-Site Exposure Area -STU	Groundwater	Tap Water	Ingestion	Arsenic	1.1E-01	mg/l	1.3E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.0E-04	1.0E-03	mg/kg-day	3.0E-04	mg/kg-day	3.5E+00
				Cobalt	6.0E-03	mg/l	7.6E-06	mg/kg-day	---	(mg/kg-day)-1	---	5.9E-05	mg/kg-day	3.0E-04	mg/kg-day	2.0E-01
				Manganese	3.6E+00	mg/l	4.5E-03	mg/kg-day	---	(mg/kg-day)-1	---	3.5E-02	mg/kg-day	1.4E-01	mg/kg-day	2.5E-01
				4,4´-DDE	2.9E-04	mg/l	3.6E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-07	2.8E-06	mg/kg-day	---	mg/kg-day	---
				beta-BHC	7.6E-05	mg/l	9.6E-08	mg/kg-day	1.8E+00	(mg/kg-day)-1	1.7E-07	7.4E-07	mg/kg-day	---	mg/kg-day	---
				Dieldrin	4.9E-06	mg/l	6.2E-09	mg/kg-day	1.6E+01	(mg/kg-day)-1	9.9E-08	4.8E-08	mg/kg-day	5.0E-05	mg/kg-day	9.6E-04
				gamma-BHC	4.2E-05	mg/l	5.3E-08	mg/kg-day	1.1E+00	(mg/kg-day)-1	5.8E-08	4.1E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				Heptachlor	9.2E-06	mg/l	1.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-08	9.0E-08	mg/kg-day	5.0E-04	mg/kg-day	1.8E-04
				Heptachlor epoxide	1.9E-04	mg/l	2.4E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.2E-06	1.9E-06	mg/kg-day	1.3E-05	mg/kg-day	1.4E-01
				1,2,4-Trimethylbenzene	2.2E-02	mg/l	2.8E-05	mg/kg-day	---	(mg/kg-day)-1	---	2.2E-04	mg/kg-day	---	mg/kg-day	---
				Benzene	1.9E-02	mg/l	2.4E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.3E-06	1.9E-04	mg/kg-day	4.0E-03	mg/kg-day	4.6E-02
				Dibromochloromethane	3.8E-04	mg/l	4.8E-07	mg/kg-day	8.4E-02	(mg/kg-day)-1	4.0E-08	3.7E-06	mg/kg-day	2.0E-02	mg/kg-day	1.9E-04
				Ethylbenzene	5.8E-02	mg/l	7.3E-05	mg/kg-day	1.1E-02	(mg/kg-day)-1	8.0E-07	5.7E-04	mg/kg-day	1.0E-01	mg/kg-day	5.7E-03
				Naphthalene	2.0E-02	mg/l	2.5E-05	mg/kg-day	---	(mg/kg-day)-1	---	2.0E-04	mg/kg-day	2.0E-02	mg/kg-day	9.8E-03
				1-Methylnaphthalene	5.7E-03	mg/l	7.2E-06	mg/kg-day	2.9E-02	(mg/kg-day)-1	2.1E-07	5.6E-05	mg/kg-day	7.0E-02	mg/kg-day	8.0E-04
				2,4-Dimethylphenol	4.6E-01	mg/l	5.8E-04	mg/kg-day	---	(mg/kg-day)-1	---	4.5E-03	mg/kg-day	2.0E-02	mg/kg-day	2.3E-01
				4,6-Dinitro-2-methylphenol	1.9E-03	mg/l	2.4E-06	mg/kg-day	---	(mg/kg-day)-1	---	1.9E-05	mg/kg-day	8.0E-05	mg/kg-day	2.3E-01
				Benz(a)anthracene	5.5E-05	mg/l	6.9E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.1E-08	5.4E-07	mg/kg-day	---	mg/kg-day	---
				Pentachlorophenol	4.7E-04	mg/l	5.9E-07	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.4E-07	4.6E-06	mg/kg-day	5.0E-03	mg/kg-day	9.2E-04
			Ingestion Exp. Route Total								**2.1E-04**					**4.6E+00**
		Tap Water Exp. Point Total									**2.1E-04**					**4.6E+00**
	Off-Site Exposure Area - STU Exp. Medium Total										**2.1E-04**					**4.6E+00**
Off-Site Exposure Area - STU Medium Total											**2.1E-04**					**4.6E+00**
											Total of Receptor Risk Across All Media	**2.1E-04**		Total of Receptor Hazards Across All Media		**4.6E+00**

TABLE 7.11 CT
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY
Off-Site Exposure Area - Off-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Risk Calculations				
							Intake/Exposure		CSF/Unit Risk		Cancer Risk	Intake/Exposure		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Unit		Value	Units	Value	Unit	
Off-Site Exposure Area - UTU	Groundwater in Trench	Groundwater in Trench	Ingestion	Benzene	3.5E+00	mg/l	4.7E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.6E-06	3.3E-03	mg/kg-day	4.0E-03	mg/kg-day	8.2E-01
			Ingestion Exp. Route Total								**2.6E-06**					**8.2E-01**
Off-Site Exposure Area - UTU	Groundwater in Trench	Groundwater in Trench	Dermal Contact	Benzene	3.5E+00	mg/l	4.8E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.6E-06	3.3E-03	mg/kg-day	4.0E-03	mg/kg-day	8.4E-01
			Dermal Contact Exp. Route Total								**2.6E-06**					**8.4E-01**
		Trench Exp. Point Total									**5.2E-06**					**1.7E+00**
	Groundwater in Trench Exp. Medium Total										**5.2E-06**					**1.7E+00**
Off-Site Exposure Area - UTU	Outdoor Air Vapors	Outdoor Air	Inhalation	Benzene	3.5E+00	mg/l	1.1E-01	ug/m3	7.8E-06	(ug/m3)-1	8.9E-07	8.0E-03	mg/m3	3.0E-02	mg/m3	2.7E-01
			Inhalation Exp. Route Total								**8.9E-07**					**2.7E-01**
		Outdoor Air Exp. Point Total									**8.9E-07**					**2.7E-01**
	Outdoor Vapors Exp. Point Total										**8.9E-07**					**2.7E-01**
Off-Site Exposure Area - UTU Medium Total											**6.1E-06**					**1.9E+00**

Total of Receptor Risks Across All Media	**6.1E-06**	Total of Receptor Hazards Across All Media	**1.9E+00**

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T-9.4 Maint South

T-9.5 Trespasser South

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T-9.7 Const North

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T-9.9 Trespasser North

T-9.10 Ind Outdoor Offsite

T-9.11 Const Offsite

TABLE 9.1 CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
South Pit Exposure Area - UTU	Vapors	Outdoor Air	Arsenic	---	---	---	---	---	---	---	---	---
			alpha-BHC	---	2.7E-10	---	2.7E-10	---	---	---	---	---
			Dieldrin	---	2.2E-10	---	2.2E-10	---	---	---	---	---
			Benzene	---	6.3E-07	---	6.3E-07	Blood	---	2.1E-02	---	2.1E-02
			3&4-Me hylphenol	---	---	---	---	---	---	1.5E-05	---	1.5E-05
			Chemical Total	0.0E+00	6.3E-07	0.0E+00	**6.3E-07**		0.0E+00	2.1E-02	0.0E+00	**2.1E-02**
		Outdoor Air Exposure Point Total					**6.3E-07**					**2.1E-02**
	South Pit Exposure Area -UTU Medium Total						**6.3E-07**					**2.1E-02**
South Pit Exposure Area -UTU Medium Total							**6.3E-07**					**2.1E-02**
South Pit Exposure Area - STU	Groundwater	Tap Water	Arsenic	3.3E-05	---	---	3.3E-05	Vascular system/Skin	5.8E-01	---	---	5.8E-01
			Cobalt	---	---	---	---	Thyroid	2.6E-01	---	---	2.6E-01
			Manganese	---	---	---	---	Nervous system	4.0E-02	---	---	4.0E-02
			4,4´-DDD	2.4E-08	---	---	2.4E-08	---	---	---	---	---
			alpha-BHC	8.7E-08	---	---	8.7E-08	Liver	1.3E-05	---	---	1.3E-05
			beta-BHC	1.8E-07	---		1.8E-07	---	---	---	---	---
			Dieldrin	9.7E-08	---		9.7E-08	Liver	9.4E-04	---	---	9.4E-04
			Heptachlor	1.4E-08	---		1.4E-08	Liver	4.7E-05	---	---	4.7E-05
			Benzene	2.9E-08	---		2.9E-08	Blood	1.0E-03	---	---	1.0E-03
			Chemical Total	3.4E-05	0.0E+00	0.0E+00	**3.4E-05**		8.8E-01	0.0E+00	0.0E+00	**8.8E-01**
		Tap Water Exposure Point Total					**3.4E-05**					**8.8E-01**
	South Pit Exposure Area -STU Medium Total						**3.4E-05**					**8.8E-01**
South Pit Exposure Area - STU Medium Total							**3.4E-05**					**8.8E-01**
Surface Soil	Surface Soil	Surface Soil	Arsenic	5.0E-07	1.4E-09	2.0E-08	5.2E-07	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	8.6E-03	1.7E-04	3.4E-04	9.2E-03
			Mercury	---	---	---	---	Immune system/Nervous System	4.7E-03	4.6E-06	8.8E-04	5.6E-03
			Heptachlor epoxide	1.9E-07	5.3E-11	2.5E-08	2.1E-07	Liver	1.2E-02	---	1.6E-03	1.4E-02
			Total PCBs	1.8E-08	5.0E-12	3.3E-09	2.1E-08	Immune system/Occular	3.5E-03	---	6.5E-04	4.2E-03
			Benz(a)anthracene	2.3E-08	3.3E-12	3.9E-09	2.7E-08	---	---	---	---	---
			Benzo(a)pyrene	2.4E-07	3.5E-11	4.2E-08	2.8E-07	---	---	---	---	---
			Benzo(b)fluoranthene	2.8E-08	4.0E-12	4.8E-09	3.3E-08	---	---	---	---	---
			Dibenz(a,h)anthracene	8.0E-08	1.2E-11	1.4E-08	9.4E-08	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	1.7E-08	2.4E-12	2.9E-09	2.0E-08	---	---	---	---	---
			Chemical Total	1.1E-06	1.5E-09	1.2E-07	**1.2E-06**		2.9E-02	1.7E-04	3.5E-03	**3.3E-02**
		Surface Soil Exposure Point Total					**1.2E-06**					**3.3E-02**
	Surface Soil Exposure Medium Total						**1.2E-06**					**3.3E-02**
Surface Soil Medium Total							**1.2E-06**					**3.3E-02**

TABLE 9.1 CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	6.8E-03	---	6.8E-03
			Total PCBs	---	2.1E-08	---	2.1E-08	---	---	---	---	---
			Chemical Total	0.0E+00	2.1E-08	0.0E+00	**2.1E-08**		0.0E+00	6.8E-03	0.0E+00	**6.8E-03**
		Outdoor Air Exposure Point Total					**2.1E-08**					**6.8E-03**
	Vapors Exposure Medium Total						**2.1E-08**					**6.8E-03**
Subsurface Soil Medium Total							**2.1E-08**					**6.8E-03**
Waste	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	1.5E-02	---	1.5E-02
			Heptachlor epoxide	---	6.4E-08	---	6.4E-08	---	---	---	---	---
			1,3,5-Trimethylbenzene	---	---	---	---		---	---	---	---
			Benzene	---	3.5E-06	---	3.5E-06	Blood	---	1.2E-01	---	1.2E-01
			Chemical Total	0.0E+00	3.6E-06	0.0E+00	**3.6E-06**		0.0E+00	1.3E-01	0.0E+00	**1.3E-01**
		Outdoor Air Exposure Point Total					**3.6E-06**					**1.3E-01**
	Vapors Exposure Medium Total						**3.6E-06**					**1.3E-01**
Waste Medium Total							**3.6E-06**					**1.3E-01**
			Receptor Risk Total				**3.9E-05**	**Receptor HI Total**				**1.1E+00**

Total Blood HI Across All Media	**1.2E-01**
Total Nervous System HI Across All Media	**7.6E-02**
Total Developmental HI Across All Media	**9.2E-03**
Total Eyes HI Across All Media	**4.2E-03**
Total Liver HI Across All Media	**1.5E-02**
Total Thyroid HI Across All Media	**2.6E-01**
Total Vascular System HI Across All Media	**5.9E-01**
Total Skin HI Across All Media	**5.9E-01**
Total Cardiovascular System HI Across All Media	**9.2E-03**
Total Immune System HI Across All Media	**9.7E-03**

TABLE 9.2a CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Indoor Worker (Adult Video Store, Sample SG-22)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Indoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil Gas	Indoor Air	Adult Video Store SG-22	Benzene	---	6.8E-06	---	6.8E-06	Blood	---	2.2E-01	---	2.2E-01
			Ethylbenzene	---	2.5E-07	---	2.5E-07	Developmental	---	7.8E-04	---	7.8E-04
			TPH (C5-C8 Aliphatics)	---	---	---	---	Nervous system	---	1.9E-01	---	1.9E-01
			Chemical Total	0.0E+00	7.0E-06	0.0E+00	**7.0E-06**		0.0E+00	4.2E-01	0.0E+00	**4.2E-01**
		SG-22 Exposure Point Total					**7.0E-06**					**4.2E-01**
	Indoor Air Exposure Medium Total						**7.0E-06**					**4.2E-01**
Soil Gas Medium Total							**7.0E-06**					**4.2E-01**
						Receptor Risk Total	**7.0E-06**				**Receptor HI Total**	**4.2E-01**

Total Blood HI Across All Media	**2.2E-01**
Total Nervous System HI Across All Media	**1.9E-01**
Total Developmental HI Across All Media	**7.8E-04**

TABLE 9.2b CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Indoor Worker (Adult Video Store, Sample SG-13)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Indoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil Gas	Indoor Air	Adult Video Store	TPH (C5-C8 Aliphatics)	---	---	---	---	Nervous system	---	1.5E-02	---	1.5E-02
		SG-13	Chemical Total	0.0E+00	0.0E+00	0.0E+00	**0.0E+00**		0.0E+00	1.5E-02	0.0E+00	**1.5E-02**
		SG-13 Exposure Point Total					**0.0E+00**					**1.5E-02**
	Indoor Air Exposure Medium Total						**0.0E+00**					**1.5E-02**
Soil Gas Medium Total							**0.0E+00**					**1.5E-02**
						Receptor Risk Total	**0.0E+00**				**Receptor HI Total**	**1.5E-02**

Total Nervous System HI Across All Media **1.5E-02**

TABLE 9.2c CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Indoor Worker (Robert's Equipment, Sample SG-33)
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Indoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil Gas	Indoor Air	Robert's Equipment Building SG-33	Benzene	---	1.0E-05	---	1.0E-05	Blood	---	3.4E-01	---	3.4E-01
			Ethylbenzene	---	1.9E-07	---	1.9E-07	Developmental	---	6.0E-04	---	6.0E-04
			TPH (C5-C8 Aliphatics)	---	---	---	---	Nervous system	---	2.6E-01	---	2.6E-01
			Chemical Total	0.0E+00	1.0E-05	0.0E+00	**1.0E-05**		0.0E+00	6.0E-01	0.0E+00	**6.0E-01**
		SG-33 Exposure Point Total					**1.0E-05**					**6.0E-01**
	Indoor Air Exposure Medium Total						**1.0E-05**					**6.0E-01**
Soil Gas Medium Total							**1.0E-05**					**6.0E-01**
						Receptor Risk Total	**1.0E-05**				**Receptor HI Total**	**6.0E-01**

Total Blood HI Across All Media	**3.4E-01**
Total Nervous System HI Across All Media	**2.6E-01**
Total Developmental HI Across All Media	**6.0E-04**

TABLE 9.3 CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
South Pit Exposure Area - UTU	Groundwater in Trench	Groundwater in Trench	Arsenic	4.8E-05	---	3.2E-06	5.1E-05	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	7.5E+00	---	5.0E-01	8.0E+00
			alpha-BHC	6.3E-07	4.1E-08	2.1E-06	2.8E-06	Liver	8.8E-04	---	2.9E-03	3.8E-03
			Dieldrin	1.1E-06	8.1E-08	2.5E-06	3.6E-06	Liver	9.2E-02	---	2.2E-01	3.1E-01
			Benzene	4.3E-06	1.5E-06	4.4E-06	1.0E-05	Blood	1.4E+00	4.4E-01	1.4E+00	3.2E+00
			3&4-Me hylphenol	---	---	---	---	CNS/Respiratory/Whole body	1.1E+01	2.5E-03	5.9E+00	1.7E+01
			Chemical Total	5.4E-05	1.6E-06	1.2E-05	**6.8E-05**		2.0E+01	4.4E-01	8.0E+00	**2.8E+01**
		South Pit Exposure Area - UTU Exposure Point Total					**6.8E-05**					**2.8E+01**
	Groundwater in Trench Exposure Medium Total						**6.8E-05**					**2.8E+01**
South Pit Exposure Area - UTU Medium Total							**6.8E-05**					**2.8E+01**
Surface and Subsurface Soil	Surface and Subsurface Soil	Surface and Subsurface Soil	Arsenic	5.8E-08	8.2E-11	5.8E-09	6.4E-08	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	9.1E-03	8.9E-05	9.0E-04	1.0E-02
			Mercury	---	---	---	---	Immune system/Nervous System	1.3E-03	6.5E-07	6.2E-04	1.9E-03
			Heptachlor epoxide	2.4E-08	3.4E-12	8.0E-09	3.2E-08	Liver	1.4E-02	---	4.7E-03	1.9E-02
			Total PCBs	7.9E-09	1.1E-12	3.7E-09	1.2E-08	Immune system/Occular	1.4E-02	---	6.4E-03	2.0E-02
			Benzene	1.1E-09	7.7E-14	---	1.1E-09	Blood	3.5E-04	2.3E-08	---	3.5E-04
			Benz(a)anthracene	1.0E-09	7.3E-14	4.3E-10	1.4E-09	---	---	---	---	---
			Benzo(a)pyrene	1.9E-08	1.4E-12	8.2E-09	2.7E-08	---	---	---	---	---
			Benzo(b)fluoranthene	8.4E-10	6.1E-14	3.6E-10	1.2E-09	---	---	---	---	---
			Dibenz(a,h)anthracene	3.7E-08	2.8E-12	1.6E-08	5.2E-08	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	5.0E-10	3.5E-14	2.1E-10	7.1E-10	---	---	---	---	---
			Chemical Total	1.5E-07	9.1E-11	4.2E-08	**1.9E-07**		3.9E-02	8.9E-05	1.3E-02	**5.2E-02**
		Surface and Subsurface Soil Exposure Point Total					**1.9E-07**					**5.2E-02**
	Surface and Subsurface Soil Exposure Medium Total						**1.9E-07**					**5.2E-02**
Surface and Subsurface Soil Medium Total							**1.9E-07**					**5.2E-02**
Waste	Waste	Waste	Arsenic	3.5E-08	4.9E-11	3.4E-09	3.8E-08	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	5.4E-03	5.3E-05	5.3E-04	6.0E-03
			Mercury	---	---	---	---	Immune system/Nervous System	2.5E-03	1.2E-06	1.2E-03	3.7E-03
			Heptachlor epoxide	4.3E-08	6.0E-12	1.4E-08	5.8E-08	Liver	2.6E-02	---	8.5E-03	3.4E-02
			1,3,5-Trimethylbenzene	---	---	---		Liver	3.2E-03	---	---	3.2E-03
			Benzene	3.3E-08	2.3E-12	---	3.3E-08	Blood	1.1E-02	6.8E-07	---	1.1E-02
			Ethylbenzene	4.9E-09	5.4E-13	---	4.9E-09	Developmental/Liver/Kidney	3.1E-04	1.5E-08	---	3.1E-04
			Naphthalene	---	4.6E-12	---	4.6E-12	Nasal/Body Weight	9.8E-04	3.2E-06	4.2E-04	1.4E-03
			1-Methylnaphthalene	2.0E-08	---	8.5E-09	2.8E-08	Lung	6.8E-04	---	2.9E-04	9.8E-04
			Benz(a)anthracene	1.2E-08	8.6E-13	5.1E-09	1.7E-08	---	---	---	---	---
			Benzo(a)pyrene	1.2E-07	8.4E-12	5.0E-08	1.7E-07	---	---	---	---	---
			Benzo(b)fluoranthene	7.8E-09	5.6E-13	3.3E-09	1.1E-08	---	---	---	---	---
			Dibenz(a,h)anthracene	3.1E-08	2.4E-12	1.3E-08	4.5E-08	---	---	---	---	---
			Chemical Total	3.0E-07	7.4E-11	9.8E-08	**4.0E-07**		4.9E-02	5.8E-05	1.1E-02	**6.0E-02**
		Waste Exposure Point Total					**4.0E-07**					**6.0E-02**
	Waste Exposure Medium Total						**4.0E-07**					**6.0E-02**
Waste Medium Total							**4.0E-07**					**6.0E-02**

Receptor Risk Total	**6.9E-05**	**Receptor HI Total**	**2.8E+01**

Total Blood HI Across All Media	**3.2E+00**
Total Nervous System HI Across All Media	**2.5E+01**
Total Developmental HI Across All Media	**8.0E+00**
Total Eyes HI Across All Media	**2.0E-02**
Total Kidney HI Across All Media	**3.1E-04**
Total Liver HI Across All Media	**3.6E-01**
Total Lungs/Respiratory/Nasal HI Across All Media	**1.7E+01**
Total Vascular System HI Across All Media	**8.0E+00**
Total Weight HI Across All Media	**1.7E+01**
Total Skin HI Across All Media	**8.0E+00**
Total Cardiovascular System HI Across All Media	**8.0E+00**
Total Immune System HI Across All Media	**2.6E-02**

TABLE 9.4 CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Maintenance Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Maintenance Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
South Pit Exposure Area - UTU	Vapors	Outdoor Air	Arsenic	---	---	---	---	---	---	---	---	---
			alpha-BHC	---	3.6E-12	---	3.6E-12	---	---	---	---	---
			Dieldrin	---	2.9E-12	---	2.9E-12	---	---	---	---	---
			Benzene	---	8.5E-09	---	8.5E-09	Blood	---	2.5E-04	---	2.5E-04
			3&4-Methylphenol	---	---	---	---	---	---	1.8E-07	---	1.8E-07
			Chemical Total	0 0E+00	8.5E-09	0.0E+00	**8.5E-09**		0.0E+00	2.5E-04	0.0E+00	**2.5E-04**
		Outdoor Air Exposure Point Total					**8.5E-09**					**2.5E-04**
	Vapors Exposure Medium Total						**8.5E-09**					**2.5E-04**
South Pit Expsoure Area-UTU Medium Total							**8.5E-09**					**2.5E-04**
Surface Water	Surface Water	East Ditch	Arsenic	1.6E-07	---	5.7E-08	2.1E-07	Vascular system/Skin	2.4E-03	---	8.8E-04	3.3E-03
			Aldrin	3.3E-09	---	1.1E-08	1.4E-08	Liver	4.5E-05	---	1.5E-04	2.0E-04
			Chemical Total	1.6E-07	0.0E+00	6.8E-08	**2.3E-07**		2.5E-03	0 0E+00	1.0E-03	**3.5E-03**
		East Ditch Exposure Point Total					**2.3E-07**					**3.5E-03**
	Surface Water Exposure Medium Total						**2.3E-07**					**3.5E-03**
Surface Water Medium Total							**2.3E-07**					**3.5E-03**
Surface Soil	Surface Soil	Surface Soil	Arsenic	2.7E-08	1.9E-11	1.1E-09	2.8E-08	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	4.1E-04	2.0E-06	1.6E-05	4.3E-04
			Mercury	---	---	---	---	Immune system/Nervous System	2.2E-04	5.5E-08	4.2E-05	2.7E-04
			Heptachlor epoxide	1.0E-08	7.0E-13	1.3E-09	1.1E-08	Liver	6.0E-04	---	7.9E-05	6.7E-04
			Total PCBs	9.7E-10	6.7E-14	1.8E-10	1.1E-09	Immune system/Occular	1.7E-04	---	3.1E-05	2.0E-04
			Benz(a)anthracene	1.2E-09	4.4E-14	2.1E-10	1.4E-09	---	---	---	---	---
			Benzo(a)pyrene	1.3E-08	4.6E-13	2.2E-09	1.5E-08	---	---	---	---	---
			Benzo(b)fluoranthene	1.5E-09	5.4E-14	2.6E-10	1.8E-09	---	---	---	---	---
			Dibenz(a,h)anthracene	4.3E-09	1.6E-13	7.3E-10	5.0E-09	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	9.1E-10	3.1E-14	1.6E-10	1.1E-09	---	---	---	---	---
			Chemical Total	5.9E-08	2.0E-11	6.1E-09	**6.5E-08**		1.4E-03	2.1E-06	1.7E-04	**1.6E-03**
		Surface Soil Exposure Point Total					**6.5E-08**					**1.6E-03**
	Surface Soil Exposure Medium Total						**6.5E-08**					**1.6E-03**
Surface Soil Medium Total							**6.5E-08**					**1.6E-03**
Subsurface Soil	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	8.1E-05	---	8.1E-05
			Total PCBs	---	2.7E-10	---	2.7E-10	---	---	---	---	---
			Chemical Total	0 0E+00	2.7E-10	0.0E+00	**2.7E-10**		0.0E+00	8.1E-05	0.0E+00	**8.1E-05**
		Outdoor Air Exposure Point Total					**2.7E-10**					**8.1E-05**
	Vapors Exposure Medium Total						**2.7E-10**					**8.1E-05**
Subsurface Soil Medium Total							**2.7E-10**					**8.1E-05**
Waste	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	1.8E-04	---	1.8E-04
			Heptachlor epoxide	---	8.6E-10	---	8.6E-10	---	---	---	---	---
			1,3,5-Trimethylbenzene	---	---	---	---	---	---	---	---	---
			Benzene	---	4.7E-08	---	4.7E-08	Blood	---	1.4E-03	---	1.4E-03
			Chemical Total	0 0E+00	4.8E-08	0.0E+00	**4.8E-08**		0.0E+00	1.6E-03	0.0E+00	**1.6E-03**
		Outdoor Air Exposure Point Total					**4.8E-08**					**1.6E-03**
	Vapors Exposure Medium Total						**4.8E-08**					**1.6E-03**
Waste Medium Total							**4.8E-08**					**1.6E-03**
Sediment	Sediment	East Ditch	Benz(a)anthracene	1.4E-08	---	2.4E-09	1.7E-08	---	---	---	---	---
			Benzo(a)pyrene	1.2E-07	---	2.1E-08	1.4E-07	---	---	---	---	---
			Benzo(b)fluoranthene	1.1E-08	---	1.9E-09	1.3E-08	---	---	---	---	---
			Dibenz(a,h)anthracene	2.7E-08	---	4.6E-09	3.2E-08	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	8.6E-09	---	1.5E-09	1.0E-08	---	---	---	---	---
			Chemical Total	1.8E-07	0.0E+00	3.1E-08	**2.1E-07**		0.0E+00	0 0E+00	0.0E+00	**0.0E+00**
		East Ditch Exposure Point Total					**2.1E-07**					**0.0E+00**
	Sediment Exposure Medium Total						**2.1E-07**					**0.0E+00**
Sediment Medium Total							**2.1E-07**					**0.0E+00**

Receptor Risk Total	**5.6E-07**	**Receptor HI Total**	**7.0E-03**

Total Blood HI Across All Media	**1.7E-03**
Total Nervous System HI Across All Media	**9.6E-04**
Total Developmental HI Across All Media	**4.3E-04**
Total Eyes HI Across All Media	**2.0E-04**
Total Liver HI Across All Media	**8.7E-04**
Total Vascular System HI Across All Media	**3.8E-03**
Total Skin HI Across All Media	**3.8E-03**
Total Cardiovascular System HI Across All Media	**4.3E-04**
Total Immune System HI Across All Media	**4.7E-04**

TABLE 9.5 CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
South Pit Exposure Area - On-Site Adolescent Trespasser
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
South Pit Exposure Area - UTU	Vapors	Outdoor Air	Arsenic	---	---	---	---	---	---	---	---	---
			alpha-BHC	---	1.8E-12	---	1.8E-12	---	---	---	---	---
			Dieldrin	---	1.4E-12	---	1.4E-12	---	---	---	---	---
			Benzene	---	4.2E-09	---	4.2E-09	Blood	---	2.5E-04	---	2.5E-04
			3&4-Methylphenol	---	---	---	---	---	---	1.8E-07	---	1.8E-07
			Chemical Total	0.0E+00	4.2E-09	0.0E+00	**4.2E-09**		0.0E+00	2.5E-04	0.0E+00	**2.5E-04**
		Outdoor Air Exposure Point Total					**4.2E-09**					**2.5E-04**
	Vapors Exposure Medium Total						**4.2E-09**					**2.5E-04**
South Pit Expsoure Area-UTU Medium Total							**4.2E-09**					**2.5E-04**
Surface Water	Surface Water	East Ditch	Arsenic	1.2E-07	---	3 2E-08	1.5E-07	Vascular system/Skin	3.8E-03	---	1 0E-03	4.8E-03
			Aldrin	2.6E-09	---	6 3E-09	8.9E-09	Liver	7.1E-05	---	1.7E-04	2.4E-04
			Chemical Total	1.2E-07	0.0E+00	3 8E-08	**1.6E-07**		3.9E-03	0.0E+00	1 2E-03	**5.0E-03**
		East Ditch Exposure Point Total					**1.6E-07**					**5.0E-03**
	Surface Water Exposure Medium Total						**1.6E-07**					**5.0E-03**
Surface Water Medium Total							**1.6E-07**					**5.0E-03**
Surface Soil	Surface Soil	Surface Soil	Arsenic	4.1E-08	9.3E-12	2 8E-09	4.4E-08	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	1.3E-03	2.0E-06	8 8E-05	1.4E-03
			Mercury	---	---	---	---	Immune system/Nervous System	7.0E-04	5.5E-08	2 3E-04	9.3E-04
			Heptachlor epoxide	1.6E-08	3.5E-13	3 6E-09	1.9E-08	Liver	1.9E-03	---	4 2E-04	2.3E-03
			Total PCBs	1.5E-09	3.4E-14	4 8E-10	2.0E-09	Immune system/Occular	5.3E-04	---	1.7E-04	6.9E-04
			Benz(a)anthracene	1.9E-09	2.2E-14	5 6E-10	2.5E-09	---	---	---	---	---
			Benzo(a)pyrene	2.0E-08	2.3E-13	6 0E-09	2.6E-08	---	---	---	---	---
			Benzo(b)fluoranthene	2.3E-09	2.7E-14	6 9E-10	3.0E-09	---	---	---	---	---
			Dibenz(a,h)anthracene	6.6E-09	8.2E-14	2 0E-09	8.6E-09	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	1.4E-09	1.6E-14	4 2E-10	1.8E-09	---	---	---	---	---
			Chemical Total	9.1E-08	1.0E-11	1 6E-08	**1.1E-07**		4.4E-03	2.1E-06	9.1E-04	**5.3E-03**
		Surface Soil Exposure Point Total					**1.1E-07**					**5.3E-03**
	Surface Soil Exposure Medium Total						**1.1E-07**					**5.3E-03**
Surface Soil Medium Total							**1.1E-07**					**5.3E-03**
Subsurface Soil	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	8.1E-05	---	8.1E-05
			Total PCBs	---	1.4E-10	---	1.4E-10	---	---	---	---	---
			Chemical Total	0.0E+00	1.4E-10	0.0E+00	**1.4E-10**		0.0E+00	8.1E-05	0.0E+00	**8.1E-05**
		Outdoor Air Exposure Point Total					**1.4E-10**					**8.1E-05**
	Vapors Exposure Medium Total						**1.4E-10**					**8.1E-05**
Subsurface Soil Medium Total							**1.4E-10**					**8.1E-05**
Waste	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	1.8E-04	---	1.8E-04
			Heptachlor epoxide	---	4.3E-10	---	4.3E-10	---	---	---	---	---
			1,3,5-Trimethylbenzene	---	---	---	---	---	---	---	---	---
			Benzene	---	2.3E-08	---	2.3E-08	Blood	---	1.4E-03	---	1.4E-03
			Chemical Total	0.0E+00	2.4E-08	0.0E+00	**2.4E-08**		0.0E+00	1.6E-03	0.0E+00	**1.6E-03**
		Outdoor Air Exposure Point Total					**2.4E-08**					**1.6E-03**
	Vapors Exposure Medium Total						**2.4E-08**					**1.6E-03**
Waste Medium Total							**2.4E-08**					**1.6E-03**
Sediment	Sediment	East Ditch	Benz(a)anthracene	2.2E-08	---	6 5E-09	2.9E-08	---	---	---	---	---
			Benzo(a)pyrene	1.9E-07	---	5 6E-08	2.5E-07	---	---	---	---	---
			Benzo(b)fluoranthene	1.8E-08	---	5 2E-09	2.3E-08	---	---	---	---	---
			Dibenz(a,h)anthracene	4.2E-08	---	1 2E-08	5.4E-08	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	1.3E-08	---	4 0E-09	1.7E-08	---	---	---	---	---
			Chemical Total	2.9E-07	0.0E+00	8 5E-08	**3.7E-07**		0.0E+00	0.0E+00	0.0E+00	**0.0E+00**
		East Ditch Exposure Point Total					**3.7E-07**					**0.0E+00**
	Sediment Exposure Medium Total						**3.7E-07**					**0.0E+00**
Sediment Medium Total							**3.7E-07**					**0.0E+00**
						Receptor Risk Total	**6.7E-07**				**Receptor HI Total**	**1.2E-02**

Total Blood HI Across All Media	**1.7E-03**
Total Nervous System HI Across All Media	**2.6E-03**
Total Developmental HI Across All Media	**1.4E-03**
Total Eyes HI Across All Media	**6.9E-04**
Total Liver HI Across All Media	**2.5E-03**
Total Vascular System HI Across All Media	**6.2E-03**
Total Skin HI Across All Media	**6.2E-03**
Total Cardiovascular System HI Across All Media	**1.4E-03**
Total Immune System HI Across All Media	**1.6E-03**

TABLE 9.6 CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
North Pit Exposure Area - On-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
North Pit Exposure Area - STU	Groundwater	Tap Water	Arsenic	1.8E-05	---	---	1.8E-05	Vascular system/Skin	3.0E-01	---	---	3.0E-01
			alpha-BHC	5.3E-08	---	---	5.3E-08	Liver	8.2E-06	---	---	8.2E-06
			Heptachlor	1.1E-08	---	---	1.1E-08	Liver	3.7E-05	---	---	3.7E-05
			Chemical Total	1.8E-05	0.0E+00	0.0E+00	**1.8E-05**		3.0E-01	0.0E+00	0.0E+00	**3.0E-01**
		Tap Water Exposure Point Total					**1.8E-05**					**3.0E-01**
	Groundwater Exposure Medium Total						**1.8E-05**					**3.0E-01**
North Pit Exposure Area -STU Medium Total							**1.8E-05**					**3.0E-01**
Surface Soil	Surface Soil	Surface Soil	Arsenic	6.4E-07	1.8E-09	2.6E-08	6.7E-07	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	1.1E-02	2.2E-04	4.4E-04	1.2E-02
			Lead	---	---	---	---	---	---	---	---	---
			Mercury	---	---	---	---	Immune system/Nervous System	1.4E-02	1.4E-05	2.7E-03	1.7E-02
			Benzo(a)pyrene	4.1E-08	5.8E-12	7.0E-09	4.8E-08	---	---	---	---	---
			Bis(2-ethylhexyl)phthalate	8.0E-09	1.3E-12	5.5E-09	1.3E-08	Liver	2.2E-04	---	1.5E-04	3.7E-04
			Chemical Total	6.9E-07	1.8E-09	3.8E-08	**7.3E-07**		2.6E-02	2.3E-04	3.3E-03	**2.9E-02**
		Surface Soil Exposure Point Total					**7.3E-07**					**2.9E-02**
	Surface Soil Exposure Medium Total						**7.3E-07**					**2.9E-02**
Surface Soil Medium Total							**7.3E-07**					**2.9E-02**
Subsurface Soil	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	2.7E-02	---	2.7E-02
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	**0.0E+00**		0.0E+00	2.7E-02	0.0E+00	**2.7E-02**
		Outdoor Air Exposure Point Total					**0.0E+00**					**2.7E-02**
	Vapors Exposure Medium Total						**0.0E+00**					**2.7E-02**
Subsurface Soil Medium Total							**0.0E+00**					**2.7E-02**

Receptor Risk Total	**1.8E-05**	**Receptor HI Total**	**3.6E-01**

Total CNS HI Across All Media	**5.6E-02**
Total Developmental HI Across All Media	**1.2E-02**
Total Liver HI Across All Media	**4.2E-04**
Total Vascular System HI Across All Media	**3.2E-01**
Total Skin HI Across All Media	**3.2E-01**
Total Cardiovascular System HI Across All Media	**1.2E-02**
Total Immune System HI Across All Media	**1.7E-02**

TABLE 9.7 CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
North Pit Exposure Area - On-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Inges ion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Inges ion	Inhalation	Dermal	Exposure Routes Total
Surface and Subsurface Soil	Surface and Subsurface Soil	Surface and Subsurface Soil	Arsenic	3.5E-08	4.8E-11	3.4E-09	3.8E-08	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	5.4E-03	5.3E-05	5.3E-04	6.0E-03
			Lead	---	---	---	---	---	---	---	---	---
			Mercury	---	---	---	---	Immune system/Nervous System	4.4E-03	2.2E-06	2.1E-03	6.5E-03
			Benzo(a)pyrene	1.4E-09	1.0E-13	6 0E-10	2.0E-09	---	---	---	---	---
			Bis(2-ethylhexyl)phthalate	2.3E-10	1.9E-14	4 0E-10	6.3E-10	Liver	5.7E-05	---	1.0E-04	1.6E-04
			Chemical Total	3.6E-08	4.9E-11	4.4E-09	**4.1E-08**		9.9E-03	5.5E-05	2.7E-03	**1.3E-02**
		Surface and Suburface Soil Exposure Point Total					**4.1E-08**					**1.3E-02**
	Surface and Subsurface Soil Exposure Medium Total						**4.1E-08**					**1.3E-02**
Surface and Subsurface Soil Medium Total							**4.1E-08**					**1.3E-02**

Receptor Risk Total	**4.1E-08**	**Receptor HI Total**	**1.3E-02**

Total Nervous System HI Across All Media	**1.3E-02**
Total Developmental HI Across All Media	**6.0E-03**
Total Liver HI Across All Media	**1.6E-04**
Total Vascular System HI Across All Media	**6.0E-03**
Total Skin HI Across All Media	**6.0E-03**
Total Cardiovascular System HI Across All Media	**6.0E-03**
Total Immune System HI Across All Media	**1.3E-02**

TABLE 9 8 CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
North Pit Exposure Area - On-Site Maintenance Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Maintenance Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	East Ditch	Arsenic	1.6E-07	---	5.7E-08	2.1E-07	Vascular system/Skin	2.4E-03	---	8.8E-04	3.3E-03
			Aldrin	3.3E-09	---	1.1E-08	1.4E-08	Liver	4.5E-05	---	1.5E-04	2.0E-04
			Chemical Total	1.6E-07	0.0E+00	6.8E-08	**2.3E-07**		2.5E-03	0.0E+00	1.0E-03	**3.5E-03**
		East Ditch Exposure Point Total					**2.3E-07**					**3.5E-03**
	Surface Water Exposure Medium Total						**2.3E-07**					**3.5E-03**
Surface Water Medium Total							**2.3E-07**					**3.5E-03**
Surface Soil	Surface Soil	Surface Soil	Arsenic	3.4E-08	2.4E-11	1.4E-09	3.6E-08	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	5.3E-04	2.6E-06	2.1E-05	5.6E-04
			Lead	---	---	---	---	---	---	---	---	---
			Mercury	---	---	---	---	Immune system/Nervous System	6.8E-04	1.7E-07	1.3E-04	8.1E-04
			Benzo(a)pyrene	2.2E-09	7.8E-14	3.7E-10	2.5E-09	---	---	---	---	---
			Bis(2-ethylhexyl)phthalate	4.2E-10	1.7E-14	2.9E-10	7.2E-10	Liver	1.1E-05	---	7.4E-06	1.8E-05
			Chemical Total	3.7E-08	2.4E-11	2.0E-09	**3.9E-08**		1.2E-03	2.8E-06	1.6E-04	**1.4E-03**
		Surface Soil Exposure Point Total					**3.9E-08**					**1.4E-03**
	Surface Soil Exposure Medium Total						**3.9E-08**					**1.4E-03**
Surface Soil Medium Total							**3.9E-08**					**1.4E-03**
Subsurface Soil	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	3.2E-04	---	3.2E-04
			Chemical Total	0 0E+00	0.0E+00	0.0E+00	**0.0E+00**		0.0E+00	3.2E-04	0.0E+00	**3.2E-04**
		Outdoor Air Exposure Point Total					**0.0E+00**					**3.2E-04**
	Vapors Exposure Medium Total						**0.0E+00**					**3.2E-04**
Subsurface Soil Medium Total							**0.0E+00**					**3.2E-04**
Sediment	Sediment	East Ditch	Benz(a)anthracene	1.4E-08	---	2.4E-09	1.7E-08	---	---	---	---	---
			Benzo(a)pyrene	1.2E-07	---	2.1E-08	1.4E-07	---	---	---	---	---
			Benzo(b)fluoranthene	1.1E-08	---	1.9E-09	1.3E-08	---	---	---	---	---
			Dibenz(a,h)anthracene	2.7E-08	---	4.6E-09	3.2E-08	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	8.6E-09	---	1.5E-09	1.0E-08	---	---	---	---	---
			Chemical Total	1.8E-07	0.0E+00	3.1E-08	**2.1E-07**		0.0E+00	0.0E+00	0.0E+00	**0.0E+00**
		East Ditch Exposure Point Total					**2.1E-07**					**0.0E+00**
	Sediment Exposure Medium Total						**2.1E-07**					**0.0E+00**
Sediment Medium Total							**2.1E-07**					**0.0E+00**
						Receptor Risk Total	**4.8E-07**				**Receptor HI Total**	**5.2E-03**

Total Nervous System HI Across All Media	**1.7E-03**
Total Developmental HI Across All Media	**5.6E-04**
Total Liver HI Across All Media	**2.2E-04**
Total Vascular System HI Across All Media	**5.6E-04**
Total Skin HI Across All Media	**3.9E-03**
Total Cardiovascular System HI Across All Media	**5.6E-04**
Total Immune System HI Across All Media	**8.1E-04**

TABLE 9.9 CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
North Pit Exposure Area - On-Site Adolescent Trespasser
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	East Ditch	Arsenic	1.2E-07	---	3.2E-08	1.5E-07	Vascular system/Skin	3.8E-03	---	1.0E-03	4.8E-03
			Aldrin	2.6E-09	---	6.3E-09	8.9E-09	Liver	7.1E-05	---	1.7E-04	2.4E-04
			Chemical Total	1.2E-07	0.0E+00	3.8E-08	**1.6E-07**		3.9E-03	0.0E+00	1.2E-03	**5.0E-03**
		East Ditch Exposure Point Total					**1.6E-07**					**5.0E-03**
	Surface Water Exposure Medium Total						**1.6E-07**					**5.0E-03**
Surface Water Medium Total							**1.6E-07**					**5.0E-03**
Surface Soil	Surface Soil	Surface Soil	Arsenic	5.3E-08	1.2E-11	3.7E-09	5.7E-08	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	1.7E-03	2.6E-06	1.1E-04	1.8E-03
			Lead	---	---	---	---	---	---	---	---	---
			Mercury	---	---	---	---	Immune system/Nervous System	2.1E-03	1.7E-07	6.9E-04	2.8E-03
			Benzo(a)pyrene	3.4E-09	3.9E-14	1.0E-09	4.4E-09	---	---	---	---	---
			Bis(2-ethylhexyl)phthalate	6.6E-10	8.7E-15	7.9E-10	1.5E-09	Liver	3.3E-05	---	4.0E-05	7.3E-05
			Chemical Total	5.7E-08	1.2E-11	5.4E-09	**6.3E-08**		3.8E-03	2.8E-06	8.5E-04	**4.7E-03**
		Surface Soil Exposure Point Total					**6.3E-08**					**4.7E-03**
	Surface Soil Exposure Medium Total						**6.3E-08**					**4.7E-03**
Surface Soil Medium Total							**6.3E-08**					**4.7E-03**
Subsurface Soil	Vapors	Outdoor Air	Mercury	---	---	---	---	Nervous system	---	3.2E-04	---	3.2E-04
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	**0.0E+00**		0.0E+00	3.2E-04	0.0E+00	**3.2E-04**
		Outdoor Air Exposure Point Total					**0.0E+00**					**3.2E-04**
	Vapors Exposure Medium Total						**0.0E+00**					**3.2E-04**
Subsurface Soil Medium Total							**0.0E+00**					**3.2E-04**
Sediment	Sediment	East Ditch	Benz(a)anthracene	2.2E-08	---	6.5E-09	2.9E-08	---	---	---	---	---
			Benzo(a)pyrene	1.9E-07	---	5.6E-08	2.5E-07	---	---	---	---	---
			Benzo(b)fluoranthene	1.8E-08	---	5.2E-09	2.3E-08	---	---	---	---	---
			Dibenz(a,h)anthracene	4.2E-08	---	1.2E-08	5.4E-08	---	---	---	---	---
			Indeno(1,2,3-cd)pyrene	1.3E-08	---	4.0E-09	1.7E-08	---	---	---	---	---
			Chemical Total	2.9E-07	0.0E+00	8.5E-08	**3.7E-07**		0.0E+00	0.0E+00	0.0E+00	**0.0E+00**
		East Ditch Exposure Point Total					**3.7E-07**					**0.0E+00**
	Sediment Exposure Medium Total						**3.7E-07**					**0.0E+00**
Sediment Medium Total							**3.7E-07**					**0.0E+00**
						Receptor Risk Total	**6.0E-07**				**Receptor HI Total**	**1.0E-02**

Total Nervous System HI Across All Media	**4.9E-03**
Total Developmental HI Across All Media	**1.8E-03**
Total Liver HI Across All Media	**3.2E-04**
Total Vascular System HI Across All Media	**1.8E-03**
Total Skin HI Across All Media	**6.6E-03**
Total Cardiovascular System HI Across All Media	**1.8E-03**
Total Immune System HI Across All Media	**2.8E-03**

TABLE 9.10 CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
Off-Site Exposure Area - Off-Site Outdoor Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Off-Site Exposure Area-UTU	Vapors	Outdoor Air	Benzene	---	3.8E-07	---	3.8E-07	Blood	---	1.3E-02	---	1.3E-02
			Chemical Total	0.0E+00	3.8E-07	0.0E+00	**3.8E-07**		0.0E+00	1.3E-02	0.0E+00	**1.3E-02**
		Outdoor Air Exposure Point Total					**3.8E-07**					**1.3E-02**
	Groundwater Exposure Medium Total						**3.8E-07**					**1.3E-02**
Off-Site Exposure Area - UTU Medium Total							**3.8E-07**					**1.3E-02**
Off-Site Exposure Area-STU	Groundwater	Tap Water	Arsenic	2.0E-04	---	---	2.0E-04	Vascular system/Skin	3.5E+00	---	---	3.5E+00
			Cobalt	---	---	---	---	Thyroid	2.0E-01	---	---	2.0E-01
			Manganese	---	---	---	---	Nervous system	2.5E-01	---	---	2.5E-01
			4,4´-DDE	1.2E-07	---	---	1.2E-07	---	---	---	---	---
			beta-BHC	1.7E-07	---	---	1.7E-07	---	---	---	---	---
			Dieldrin	9.9E-08	---	---	9.9E-08	Liver	9.6E-04	---	---	9.6E-04
			gamma-BHC	5.8E-08	---	---	5.8E-08	Liver/Kidney	1.4E-03	---	---	1.4E-03
			Heptachlor	5.2E-08	---	---	5.2E-08	Liver	1.8E-04	---	---	1.8E-04
			Heptachlor epoxide	2.2E-06	---	---	2.2E-06	Liver	1.4E-01	---	---	1.4E-01
			1,2,4-Trimethylbenzene	---	---	---	---	---	---	---	---	---
			Benzene	1.3E-06	---	---	1.3E-06	Blood	4.6E-02	---	---	4.6E-02
			Dibromochloromethane	4.0E-08	---	---	4.0E-08	Liver	1.9E-04	---	---	1.9E-04
			Ethylbenzene	8.0E-07	---	---	8.0E-07	Liver/Kidney	5.7E-03	---	---	5.7E-03
			Naphthalene	---	---	---	---	Body weight	9.8E-03	---	---	9.8E-03
			1-Methylnaphthalene	2.1E-07	---	---	2.1E-07	Lung	8.0E-04	---	---	8.0E-04
			2,4-Dimethylphenol	---	---	---	---	Nervous System/Blood	2.3E-01	---	---	2.3E-01
			4,6-Dinitro-2-methylphenol	---	---	---	---	Body weight/Occular	2.3E-01	---	---	2.3E-01
			Benz(a)anthracene	5.1E-08	---	---	5.1E-08	---	---	---	---	---
			Pentachlorophenol	2.4E-07	---	---	2.4E-07	Liver	9.2E-04	---	---	9.2E-04
			Chemical Total	2.1E-04	0.0E+00	0.0E+00	**2.1E-04**		4.6E+00	0.0E+00	0.0E+00	**4.6E+00**
		Tap Water Exposure Point Total					**2.1E-04**					**4.6E+00**
	Groundwater Exposure Medium Total						**2.1E-04**					**4.6E+00**
Off-Site Exposure Area - STU Medium Total							**2.1E-04**					**4.6E+00**

Receptor Risk Total	**2.1E-04**	**Receptor HI Total**	**4.6E+00**

Total Blood HI Across All Media	**2.8E-01**
Total Nervous System HI Across All Media	**4.7E-01**
Total Thyroid HI Across All Media	**2.0E-01**
Total Eyes HI Across All Media	**2.3E-01**
Total Liver HI Across All Media	**1.5E-01**
Total Kidney HI Across All Media	**7.0E-03**
Total Vascular System HI Across All Media	**3.5E+00**
Total Skin HI Across All Media	**3.5E+00**
Total Weight HI Across All Media	**2.4E-01**
Total Respiratory, Lungs, Nasal HI Across All Media	**8.0E-04**

TABLE 9.11 CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
Off-Site Exposure Area - Off-Site Construction Worker
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Off-Site Exposure Area-UTU	Groundwater in Trench	Trench	Benzene	2.6E-06	8.9E-07	2.6E-06	6.1E-06	Blood	8.2E-01	2.7E-01	8.4E-01	1.9E+00
			Chemical Total	2.6E-06	8.9E-07	2.6E-06	**6.1E-06**		8.2E-01	2.7E-01	8.4E-01	**1.9E+00**
		Trench Exposure Point Total					**6.1E-06**					**1.9E+00**
	Groundwater in Trench Exposure Medium Total						**6.1E-06**					**1.9E+00**
Off-Site Exposure Area - UTU Medium Total							**6.1E-06**					**1.9E+00**
						Receptor Risk Total	**6.1E-06**				**Receptor HI Total**	**1.9E+00**

Total Blood HI Across All Media **1.9E+00**

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T-10.2 Const South

T-10.3 Ind Outdoor Offsite

T-10.4 Const Offsite

TABLE 10.1 CT
RISK SUMMARY: OUTDOOR WORKER
CENTRAL TENDENCY
South Pit Exposure Area
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
South Pit Exposure Area - STU	Groundwater	Tap Water	Arsenic	3 3E-05	---	---	3.3E-05	Vascular system/Skin	5 8E-01	---	---	5.8E-01
			Cobalt	---	---	---	---	Thyroid	2 6E-01	---	---	2.6E-01
			Chemical Total	3 3E-05	0.0E+00	0 0E+00	**3.3E-05**		8 3E-01	0.0E+00	0 0E+00	**8.3E-01**
		Tap Water Exposure Point Total					**3.3E-05**					**8.3E-01**
	Groundwater Exposure Medium Total						**3.3E-05**					**8.3E-01**
South Pit Exposure Area - STU Medium Total							**3.3E-05**					**8.3E-01**
			Benzene	---	3.5E-06	---	3.5E-06	Blood	---	1.2E-01	---	1.2E-01
			Chemical Total	0.0E+00	3.5E-06	0 0E+00	**3.5E-06**		0.0E+00	1.2E-01	0 0E+00	**1.2E-01**
		Outdoor Air Exposure Point Total					**3.5E-06**					**1.2E-01**
	Vapors Exposure Medium Total						**3.5E-06**					**1.2E-01**
Waste Medium Total							**3.5E-06**					**1.2E-01**
Receptor Total						**Receptor Risk Total**	**3.7E-05**				**Receptor HI Total**	**9.5E-01**

Total Risk Across All Media	**3.7E-05**
Total Hazard Across All Media	**9.5E-01**
Total Blood HI Across All Media	**1.2E-01**
Total Thyroid HI Across All Media	**2.6E-01**
Total Vascular System HI Across All Media	**5.8E-01**
Total Skin HI Across All Media	**5.8E-01**

TABLE 10.2 CT
RISK SUMMARY: CONSTRUCTION WORKER
CENTRAL TENDENCY
South Pit Exposure Area
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Inges ion	Inhalation	Dermal	Exposure Routes Total
Sou h Pit Exposure Area - UTU	Groundwater in Trench	Groundwater in Trench	Arsenic	4.8E-05	---	3.2E-06	5.1E-05	Developmental/Cardiovascular system/Nervous System/Vascular system/Skin	7.5E+00	---	5 0E-01	8.0E+00
			Benzene	4.3E-06	1.5E-06	4.4E-06	1.0E-05	Blood	1.4E+00	4.4E-01	1.4E+00	3.2E+00
			3&4-Me hylphenol	---	---	---	---	CNS/Respiratory/Whole body	1.1E+01	2.5E-03	5.9E+00	1.7E+01
			Chemical Total	5.3E-05	1.5E-06	7.5E-06	**6.2E-05**		2.0E+01	4.4E-01	7.8E+00	**2.8E+01**
		South Pit Exposure Area -UTU Exposure Point Total					**6.2E-05**					**2.8E+01**
	Groundwater in Trench Exposure Medium Total						**6.2E-05**					**2.8E+01**
Sou h Pit Exposure Area - UTU Medium Total							**6.2E-05**					**2.8E+01**

Receptor Risk Total	**6.2E-05**	**Receptor HI Total**	**2.8E+01**

Total Risk Across All Media	**6.2E-05**	**Total Hazard Across All Media**	**2.8E+01**
		Total Blood HI Across All Media	**3.2E+00**
		Total Nervous System HI Across All Media	**2.5E+01**
		Total Developmental HI Across All Media	**8.0E+00**
		Total Lungs/Respiratory/Nasal HI Across All Media	**1.7E+01**
		Total Vascular System HI Across All Media	**8.0E+00**
		Total Weight HI Across All Media	**1.7E+01**
		Total Skin HI Across All Media	**8.0E+00**
		Total Cardiovascular System HI Across All Media	**8.0E+00**

TABLE 10.3 CT
RISK SUMMARY: OUTDOOR WORKER
CENTRAL TENDENCY
Off-Site Exposure Area
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Population:	Outdoor Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Off-Site Exposure Area - STU	Groundwater	Tap Water	Arsenic	2.0E-04	---	---	2.0E-04	Vascular system/Skin	3.5E+00	---	---	3.5E+00
			Chemical Total	2.0E-04	0.0E+00	0.0E+00	**2.0E-04**		3.5E+00	0.0E+00	0.0E+00	**3.5E+00**
		Tap Water Exposure Point Total					**2.0E-04**					**3.5E+00**
	Groundwater Exposure Medium Total						**2.0E-04**					**3.5E+00**
Off-Site Exposure Area - STU Medium Total							**2.0E-04**					**3.5E+00**
						Receptor Risk Total	**2.0E-04**				**Receptor HI Total**	**3.5E+00**

Total Risk Across All Media	**2.0E-04**

Total Hazard Across All Media	**3.5E+00**
Total Vascular Syst. HI Across All Media	**3.5E+00**
Total Skin HI Across All Media	**3.5E+00**

TABLE 10.4 CT
RISK SUMMARY: CONSTRUCTION WORKER
CENTRAL TENDENCY
Off-Site Exposure Area
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Scenario Timeframe:	Current/Future
Receptor Popula ion:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Off-Site Exposure Area - UTU	Groundwater in Trench	Groundwater in Trench	Benzene	2.6E-06	8.9E-07	2.6E-06	6.1E-06	Blood	8.2E-01	2.7E-01	8.4E-01	1.9E+00
			Chemical Total	2.6E-06	8.9E-07	2.6E-06	**6.1E-06**		8.2E-01	2.7E-01	8.4E-01	**1.9E+00**
		Trench Exposure Point Total					**6.1E-06**					**1.9E+00**
	Groundwater in Trench Exposure Medium Total						**6.1E-06**					**1.9E+00**
Off-Site Exposure Area - UTU Medium Total							**6.1E-06**					**1.9E+00**
						Receptor Risk Total	**6.1E-06**				**Receptor HI Total**	**1.9E+00**

Total Risk Across All Media **6.1E-06**

Total Hazard Across All Media **1.9E+00**

Total Blood HI Across All Media **1.9E+00**

South Pit Area UCL Calculations
0 to 2-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3			User Selected Options									
4			Date/Time of Computation	6/12/2014 5:53:34 PM								
5			From File	South Area 0 to 2 feet								
6			Full Precision	OFF								
7			Confidence Coefficient	95%								
8			Number of Bootstrap Operations	2000								
9												
10												

South Pit Area UCL Calculations
0 to 2-feet below ground surface
Brine Service Company Superfund Site

11	**Arsenic**											
12	**General Statistics**											
13	Total Number of Observations					57	Number of Distinct Observations					55
14							Number of Missing Observations					0
15	Minimum					0.766	Mean					4.562
16	Maximum					14.4	Median					3.45
17	SD					3.061	Std. Error of Mean					0.405
18	Coefficient of Variation					0.671	Skewness					1.618
19												
20	**Normal GOF Test**											
21	Shapiro Wilk Test Statistic					0.813	**Shapiro Wilk GOF Test**					
22	5% Shapiro Wilk P Value					1.8610E-9	Data Not Normal at 5% Significance Level					
23	Lilliefors Test Statistic					0.173	**Lilliefors GOF Test**					
24	5% Lilliefors Critical Value					0.117	Data Not Normal at 5% Significance Level					
25	**Data Not Normal at 5% Significance Level**											
26												
27	**Assuming Normal Distribution**											
28	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
29	95% Student's-t UCL					5.24	95% Adjusted-CLT UCL (Chen-1995)					5.322
30							95% Modified-t UCL (Johnson-1978)					5.254
31												
32	**Gamma GOF Test**											
33	A-D Test Statistic					1.452	**Anderson-Darling Gamma GOF Test**					
34	5% A-D Critical Value					0.758	Data Not Gamma Distributed at 5% Significance Level					
35	K-S Test Statistic					0.13	**Kolmogrov-Smirnoff Gamma GOF Test**					
36	5% K-S Critical Value					0.119	Data Not Gamma Distributed at 5% Significance Level					
37	**Data Not Gamma Distributed at 5% Significance Level**											
38												
39	**Gamma Statistics**											
40	k hat (MLE)					2.913	k star (bias corrected MLE)					2.771
41	Theta hat (MLE)					1.566	Theta star (bias corrected MLE)					1.646
42	nu hat (MLE)					332.1	nu star (bias corrected)					315.9
43	MLE Mean (bias corrected)					4.562	MLE Sd (bias corrected)					2.74
44							Approximate Chi Square Value (0.05)					275.7
45	Adjusted Level of Significance					0.0458	Adjusted Chi Square Value					274.8
46												
47	**Assuming Gamma Distribution**											
48	95% Approximate Gamma UCL (use when n>=50))					5.227	95% Adjusted Gamma UCL (use when n<50)					5.245
49												
50	**Lognormal GOF Test**											
51	Shapiro Wilk Test Statistic					0.963	**Shapiro Wilk Lognormal GOF Test**					
52	5% Shapiro Wilk P Value					0.165	Data appear Lognormal at 5% Significance Level					
53	Lilliefors Test Statistic					0.108	**Lilliefors Lognormal GOF Test**					
54	5% Lilliefors Critical Value					0.117	Data appear Lognormal at 5% Significance Level					
55	**Data appear Lognormal at 5% Significance Level**											
56												
57	**Lognormal Statistics**											
58	Minimum of Logged Data					-0.267	Mean of logged Data					1.336
59	Maximum of Logged Data					2.667	SD of logged Data					0.594
60												
61	**Assuming Lognormal Distribution**											
62	95% H-UCL					5.298	90% Chebyshev (MVUE) UCL					5.664

63				95% Chebyshev (MVUE) UCL		6.182				97.5% Chebyshev (MVUE) UCL		6.9
64				99% Chebyshev (MVUE) UCL		8.311						
65												
66	**Nonparametric Distribution Free UCL Statistics**											
67	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
68												
69	**Nonparametric Distribution Free UCLs**											
70				95% CLT UCL		5.229				95% Jackknife UCL		5.24
71				95% Standard Bootstrap UCL		5.221				95% Bootstrap-t UCL		5.368
72				95% Hall's Bootstrap UCL		5.299				95% Percentile Bootstrap UCL		5.219
73				95% BCA Bootstrap UCL		5.337						
74				90% Chebyshev(Mean, Sd) UCL		5.778				95% Chebyshev(Mean, Sd) UCL		6.329
75				97.5% Chebyshev(Mean, Sd) UCL		7.094				99% Chebyshev(Mean, Sd) UCL		8.596
76												
77	**Suggested UCL to Use**											
78				**95% H-UCL**		**5.298**						
79												
80	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
81	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
82	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
83	For additional insight the user may want to consult a statistician.											
84	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**											
85	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**											
86	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**											
87	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**											
88												
89	**Mercury**											
90	**General Statistics**											
91				Total Number of Observations		57				Number of Distinct Observations		57
92										Number of Missing Observations		0
93				Minimum		0.00183				Mean		1.02
94				Maximum		23				Median		0.0439
95				SD		3.209				Std. Error of Mean		0.425
96				Coefficient of Variation		3.145				Skewness		6.026
97												
98	**Normal GOF Test**											
99				Shapiro Wilk Test Statistic		0.351				**Shapiro Wilk GOF Test**		
100				5% Shapiro Wilk P Value		0				Data Not Normal at 5% Significance Level		
101				Lilliefors Test Statistic		0.375				**Lilliefors GOF Test**		
102				5% Lilliefors Critical Value		0.117				Data Not Normal at 5% Significance Level		
103	**Data Not Normal at 5% Significance Level**											
104												
105	**Assuming Normal Distribution**											
106				**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**		
107				95% Student's-t UCL		1.731				95% Adjusted-CLT UCL (Chen-1995)		2.082
108										95% Modified-t UCL (Johnson-1978)		1.788
109												
110	**Gamma GOF Test**											
111				A-D Test Statistic		4.348				**Anderson-Darling Gamma GOF Test**		
112				5% A-D Critical Value		0.87				Data Not Gamma Distributed at 5% Significance Level		
113				K-S Test Statistic		0.261				**Kolmogrov-Smirnoff Gamma GOF Test**		
114				5% K-S Critical Value		0.128				Data Not Gamma Distributed at 5% Significance Level		

	A	B	C	D	E	F	G	H	I	J	K	L
115	**Data Not Gamma Distributed at 5% Significance Level**											
116												
117	**Gamma Statistics**											
118					k hat (MLE)	0.287			k star (bias corrected MLE)			0.284
119					Theta hat (MLE)	3.555			Theta star (bias corrected MLE)			3.598
120					nu hat (MLE)	32.72			nu star (bias corrected)			32.33
121					MLE Mean (bias corrected)	1.02			MLE Sd (bias corrected)			1.916
122									Approximate Chi Square Value (0.05)			20.34
123					Adjusted Level of Significance	0.0458			Adjusted Chi Square Value			20.09
124												
125	**Assuming Gamma Distribution**											
126			95% Approximate Gamma UCL (use when n>=50))			1.622			95% Adjusted Gamma UCL (use when n<50)			1.642
127												
128	**Lognormal GOF Test**											
129					Shapiro Wilk Test Statistic	0.93			**Shapiro Wilk Lognormal GOF Test**			
130					5% Shapiro Wilk P Value	0.00305			Data Not Lognormal at 5% Significance Level			
131					Lilliefors Test Statistic	0.156			**Lilliefors Lognormal GOF Test**			
132					5% Lilliefors Critical Value	0.117			Data Not Lognormal at 5% Significance Level			
133	**Data Not Lognormal at 5% Significance Level**											
134												
135	**Lognormal Statistics**											
136					Minimum of Logged Data	-6.303			Mean of logged Data			-2.4
137					Maximum of Logged Data	3.135			SD of logged Data			2.233
138												
139	**Assuming Lognormal Distribution**											
140					95% H-UCL	3.806			90% Chebyshev (MVUE) UCL			2.267
141					95% Chebyshev (MVUE) UCL	2.861			97.5% Chebyshev (MVUE) UCL			3.684
142					99% Chebyshev (MVUE) UCL	5.301						
143												
144	**Nonparametric Distribution Free UCL Statistics**											
145	**Data do not follow a Discernible Distribution (0.05)**											
146												
147	**Nonparametric Distribution Free UCLs**											
148					95% CLT UCL	1.72			95% Jackknife UCL			1.731
149					95% Standard Bootstrap UCL	1.722			95% Bootstrap-t UCL			2.861
150					95% Hall's Bootstrap UCL	4.21			95% Percentile Bootstrap UCL			1.812
151					95% BCA Bootstrap UCL	2.328						
152					90% Chebyshev(Mean, Sd) UCL	2.296			95% Chebyshev(Mean, Sd) UCL			2.873
153					97.5% Chebyshev(Mean, Sd) UCL	3.675			99% Chebyshev(Mean, Sd) UCL			5.25
154												
155	**Suggested UCL to Use**											
156					**95% Chebyshev (Mean, Sd) UCL**	**2.873**						
157												
158	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
159	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
160	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
161	For additional insight the user may want to consult a statistician.											
162												
163	**Heptachlor Epoxide**											
164	**General Statistics**											
165					Total Number of Observations	57			Number of Distinct Observations			27
166					Number of Detects	7			Number of Non-Detects			50

South Pit Area UCL Calculations
0 to 2-feet below ground surface
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	A	B	C	D	E	F	G	H	I	J	K	L
167	Number of Distinct Detects					7	Number of Distinct Non-Detects					22
168	Minimum Detect					0.0015	Minimum Non-Detect					3.2000E-4
169	Maximum Detect					0.33	Maximum Non-Detect					0.028
170	Variance Detects					0.014	Percent Non-Detects					87.72%
171	Mean Detects					0.0647	SD Detects					0.118
172	Median Detects					0.023	CV Detects					1.824
173	Skewness Detects					2.54	Kurtosis Detects					6.568
174	Mean of Logged Detects					-4.045	SD of Logged Detects					1.895
175												
176	**Normal GOF Test on Detects Only**											
177	Shapiro Wilk Test Statistic					0.583	**Shapiro Wilk GOF Test**					
178	5% Shapiro Wilk Critical Value					0.803	Detected Data Not Normal at 5% Significance Level					
179	Lilliefors Test Statistic					0.414	**Lilliefors GOF Test**					
180	5% Lilliefors Critical Value					0.335	Detected Data Not Normal at 5% Significance Level					
181	**Detected Data Not Normal at 5% Significance Level**											
182												
183	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
184	Mean					0.00832	Standard Error of Mean					0.00626
185	SD					0.0438	95% KM (BCA) UCL					0.0199
186	95% KM (t) UCL					0.0188	95% KM (Percentile Bootstrap) UCL					0.0198
187	95% KM (z) UCL					0.0186	95% KM Bootstrap t UCL					0.0577
188	90% KM Chebyshev UCL					0.0271	95% KM Chebyshev UCL					0.0356
189	97.5% KM Chebyshev UCL					0.0474	99% KM Chebyshev UCL					0.0706
190												
191	**Gamma GOF Tests on Detected Observations Only**											
192	A-D Test Statistic					0.451	**Anderson-Darling GOF Test**					
193	5% A-D Critical Value					0.754	Detected data appear Gamma Distributed at 5% Significance Level					
194	K-S Test Statistic					0.243	**Kolmogrov-Smirnoff GOF**					
195	5% K-S Critical Value					0.328	Detected data appear Gamma Distributed at 5% Significance Level					
196	**Detected data appear Gamma Distributed at 5% Significance Level**											
197												
198	**Gamma Statistics on Detected Data Only**											
199	k hat (MLE)					0.488	k star (bias corrected MLE)					0.374
200	Theta hat (MLE)					0.133	Theta star (bias corrected MLE)					0.173
201	nu hat (MLE)					6.828	nu star (bias corrected)					5.235
202	MLE Mean (bias corrected)					0.0647	MLE Sd (bias corrected)					0.106
203												
204	**Gamma Kaplan-Meier (KM) Statistics**											
205	k hat (KM)					0.0361	nu hat (KM)					4.119
206	Approximate Chi Square Value (4.12, α)					0.769	Adjusted Chi Square Value (4.12, β)					0.734
207	95% Gamma Approximate KM-UCL (use when n>=50)					0.0445	95% Gamma Adjusted KM-UCL (use when n<50)					0.0467
208	Gamma (KM) may not be used when k hat (KM) is < 0.1											
209												
210	**Gamma ROS Statistics using Imputed Non-Detects**											
211	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
212	GROS may not be used when kstar of detected data is small such as < 0.1											
213	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
214	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
215	Minimum					0.0015	Mean					0.0167
216	Maximum					0.33	Median					0.01
217	SD					0.0427	CV					2.553
218	k hat (MLE)					1.263	k star (bias corrected MLE)					1.209

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219	Theta hat (MLE)					0.0132	Theta star (bias corrected MLE)					0.0138
220	nu hat (MLE)					144	nu star (bias corrected)					137.8
221	MLE Mean (bias corrected)					0.0167	MLE Sd (bias corrected)					0.0152
222							Adjusted Level of Significance (β)					0.0458
223	Approximate Chi Square Value (137.77, α)					111.7	Adjusted Chi Square Value (137.77, β)					111
224	95% Gamma Approximate UCL (use when n>=50)					0.0206	95% Gamma Adjusted UCL (use when n<50)					0.0207
225												
226	**Lognormal GOF Test on Detected Observations Only**											
227	Shapiro Wilk Test Statistic					0.924	**Shapiro Wilk GOF Test**					
228	5% Shapiro Wilk Critical Value					0.803	Detected Data appear Lognormal at 5% Significance Level					
229	Lilliefors Test Statistic					0.208	**Lilliefors GOF Test**					
230	5% Lilliefors Critical Value					0.335	Detected Data appear Lognormal at 5% Significance Level					
231	**Detected Data appear Lognormal at 5% Significance Level**											
232												
233	**Lognormal ROS Statistics Using Imputed Non-Detects**											
234	Mean in Original Scale					0.00799	Mean in Log Scale					-10.91
235	SD in Original Scale					0.0442	SD in Log Scale					3.324
236	95% t UCL (assumes normality of ROS data)					0.0178	95% Percentile Bootstrap UCL					0.0194
237	95% BCA Bootstrap UCL					0.0264	95% Bootstrap t UCL					0.0731
238	95% H-UCL (Log ROS)					0.0637						
239												
240	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
241	KM Mean (logged)					-7.473	95% H-UCL (KM -Log)					0.00305
242	KM SD (logged)					1.47	95% Critical H Value (KM-Log)					3.053
243	KM Standard Error of Mean (logged)					0.224						
244												
245	**DL/2 Statistics**											
246	**DL/2 Normal**						**DL/2 Log-Transformed**					
247	Mean in Original Scale					0.00931	Mean in Log Scale					-6.771
248	SD in Original Scale					0.044	SD in Log Scale					1.607
249	95% t UCL (Assumes normality)					0.0191	95% H-Stat UCL					0.00835
250	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
251												
252	**Nonparametric Distribution Free UCL Statistics**											
253	**Detected Data appear Gamma Distributed at 5% Significance Level**											
254												
255	**Suggested UCL to Use**											
256	**95% KM (t) UCL**					**0.0188**	95% GROS Approximate Gamma UCL					0.0206
257	95% Approximate Gamma KM-UCL					0.0445						
258												
259	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
260	Recommendations are based upon data size, data distribution, and skewness.											
261	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
262	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
263												
264	**Total PCBs**											
265	**General Statistics**											
266	Total Number of Observations					55	Number of Distinct Observations					34
267	Number of Detects					24	Number of Non-Detects					31
268	Number of Distinct Detects					23	Number of Distinct Non-Detects					11
269	Minimum Detect					0.0178	Minimum Non-Detect					0.00875
270	Maximum Detect					0.778	Maximum Non-Detect					0.105

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271					Variance Detects	0.0308					Percent Non-Detects	56.36%
272					Mean Detects	0.138					SD Detects	0.175
273					Median Detects	0.0413					CV Detects	1.269
274					Skewness Detects	2.422					Kurtosis Detects	7.108
275					Mean of Logged Detects	-2.626					SD of Logged Detects	1.16
276												
277	**Normal GOF Test on Detects Only**											
278					Shapiro Wilk Test Statistic	0.7	**Shapiro Wilk GOF Test**					
279					5% Shapiro Wilk Critical Value	0.916	Detected Data Not Normal at 5% Significance Level					
280					Lilliefors Test Statistic	0.249	**Lilliefors GOF Test**					
281					5% Lilliefors Critical Value	0.181	Detected Data Not Normal at 5% Significance Level					
282	**Detected Data Not Normal at 5% Significance Level**											
283												
284	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
285					Mean	0.0656	Standard Error of Mean	0.018				
286					SD	0.13	95% KM (BCA) UCL	0.0966				
287					95% KM (t) UCL	0.0957	95% KM (Percentile Bootstrap) UCL	0.0966				
288					95% KM (z) UCL	0.0952	95% KM Bootstrap t UCL	0.115				
289					90% KM Chebyshev UCL	0.119	95% KM Chebyshev UCL	0.144				
290					97.5% KM Chebyshev UCL	0.178	99% KM Chebyshev UCL	0.244				
291												
292	**Gamma GOF Tests on Detected Observations Only**											
293					A-D Test Statistic	1.188	**Anderson-Darling GOF Test**					
294					5% A-D Critical Value	0.776	Detected Data Not Gamma Distributed at 5% Significance Level					
295					K-S Test Statistic	0.254	**Kolmogrov-Smirnoff GOF**					
296					5% K-S Critical Value	0.184	Detected Data Not Gamma Distributed at 5% Significance Level					
297	**Detected Data Not Gamma Distributed at 5% Significance Level**											
298												
299	**Gamma Statistics on Detected Data Only**											
300					k hat (MLE)	0.902	k star (bias corrected MLE)	0.817				
301					Theta hat (MLE)	0.153	Theta star (bias corrected MLE)	0.169				
302					nu hat (MLE)	43.3	nu star (bias corrected)	39.22				
303					MLE Mean (bias corrected)	0.138	MLE Sd (bias corrected)	0.153				
304												
305	**Gamma Kaplan-Meier (KM) Statistics**											
306					k hat (KM)	0.254	nu hat (KM)	27.92				
307					Approximate Chi Square Value (27.92, α)	16.87	Adjusted Chi Square Value (27.92, β)	16.63				
308					95% Gamma Approximate KM-UCL (use when n>=50)	0.109	95% Gamma Adjusted KM-UCL (use when n<50)	0.11				
309												
310	**Gamma ROS Statistics using Imputed Non-Detects**											
311	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
312	GROS may not be used when kstar of detected data is small such as < 0.1											
313	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
314	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
315					Minimum	0.01	Mean	0.066				
316					Maximum	0.778	Median	0.01				
317					SD	0.131	CV	1.989				
318					k hat (MLE)	0.603	k star (bias corrected MLE)	0.582				
319					Theta hat (MLE)	0.109	Theta star (bias corrected MLE)	0.113				
320					nu hat (MLE)	66.36	nu star (bias corrected)	64.07				
321					MLE Mean (bias corrected)	0.066	MLE Sd (bias corrected)	0.0865				
322							Adjusted Level of Significance (β)	0.0456				

323	Approximate Chi Square Value (64.07, α)					46.66	Adjusted Chi Square Value (64.07, β)					46.26
324	95% Gamma Approximate UCL (use when n>=50)					0.0906	95% Gamma Adjusted UCL (use when n<50)					0.0914
325												
326	**Lognormal GOF Test on Detected Observations Only**											
327	Shapiro Wilk Test Statistic					0.895	**Shapiro Wilk GOF Test**					
328	5% Shapiro Wilk Critical Value					0.916	Detected Data Not Lognormal at 5% Significance Level					
329	Lilliefors Test Statistic					0.218	**Lilliefors GOF Test**					
330	5% Lilliefors Critical Value					0.181	Detected Data Not Lognormal at 5% Significance Level					
331	**Detected Data Not Lognormal at 5% Significance Level**											
332												
333	**Lognormal ROS Statistics Using Imputed Non-Detects**											
334	Mean in Original Scale					0.0628	Mean in Log Scale					-4.381
335	SD in Original Scale					0.133	SD in Log Scale					1.858
336	95% t UCL (assumes normality of ROS data)					0.0928	95% Percentile Bootstrap UCL					0.0953
337	95% BCA Bootstrap UCL					0.102	95% Bootstrap t UCL					0.115
338	95% H-UCL (Log ROS)					0.17						
339												
340	**DL/2 Statistics**											
341	**DL/2 Normal**						**DL/2 Log-Transformed**					
342	Mean in Original Scale					0.065	Mean in Log Scale					-4.052
343	SD in Original Scale					0.132	SD in Log Scale					1.551
344	95% t UCL (Assumes normality)					0.0948	95% H-Stat UCL					0.111
345	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
346												
347	**Nonparametric Distribution Free UCL Statistics**											
348	**Data do not follow a Discernible Distribution at 5% Significance Level**											
349												
350	**Suggested UCL to Use**											
351	**95% KM (BCA) UCL**					**0.0966**						
352												
353	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
354	Recommendations are based upon data size, data distribution, and skewness.											
355	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
356	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
357												
358	**Benz(a)anthracene**											
359	**General Statistics**											
360	Total Number of Observations					55	Number of Distinct Observations					47
361	Number of Detects					45	Number of Non-Detects					10
362	Number of Distinct Detects					41	Number of Distinct Non-Detects					7
363	Minimum Detect					0.0029	Minimum Non-Detect					0.0018
364	Maximum Detect					4.3	Maximum Non-Detect					0.032
365	Variance Detects					0.41	Percent Non-Detects					18.18%
366	Mean Detects					0.189	SD Detects					0.64
367	Median Detects					0.053	CV Detects					3.39
368	Skewness Detects					6.306	Kurtosis Detects					41.16
369	Mean of Logged Detects					-2.976	SD of Logged Detects					1.417
370												
371	**Normal GOF Test on Detects Only**											
372	Shapiro Wilk Test Statistic					0.275	**Shapiro Wilk GOF Test**					
373	5% Shapiro Wilk Critical Value					0.945	Detected Data Not Normal at 5% Significance Level					
374	Lilliefors Test Statistic					0.386	**Lilliefors GOF Test**					

South Pit Area UCL Calculations
0 to 2-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
375	5% Lilliefors Critical Value					0.132	Detected Data Not Normal at 5% Significance Level					
376	**Detected Data Not Normal at 5% Significance Level**											
377												
378	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
379	Mean					0.155	Standard Error of Mean					0.0787
380	SD					0.577	95% KM (BCA) UCL					0.316
381	95% KM (t) UCL					0.287	95% KM (Percentile Bootstrap) UCL					0.306
382	95% KM (z) UCL					0.285	95% KM Bootstrap t UCL					0.767
383	90% KM Chebyshev UCL					0.391	95% KM Chebyshev UCL					0.498
384	97.5% KM Chebyshev UCL					0.647	99% KM Chebyshev UCL					0.938
385												
386	**Gamma GOF Tests on Detected Observations Only**											
387	A-D Test Statistic					3.022	**Anderson-Darling GOF Test**					
388	5% A-D Critical Value					0.816	Detected Data Not Gamma Distributed at 5% Significance Level					
389	K-S Test Statistic					0.219	**Kolmogrov-Smirnoff GOF**					
390	5% K-S Critical Value					0.14	Detected Data Not Gamma Distributed at 5% Significance Level					
391	**Detected Data Not Gamma Distributed at 5% Significance Level**											
392												
393	**Gamma Statistics on Detected Data Only**											
394	k hat (MLE)					0.487	k star (bias corrected MLE)					0.47
395	Theta hat (MLE)					0.387	Theta star (bias corrected MLE)					0.402
396	nu hat (MLE)					43.87	nu star (bias corrected)					42.28
397	MLE Mean (bias corrected)					0.189	MLE Sd (bias corrected)					0.275
398												
399	**Gamma Kaplan-Meier (KM) Statistics**											
400	k hat (KM)					0.0725	nu hat (KM)					7.977
401	Approximate Chi Square Value (7.98, α)					2.722	Adjusted Chi Square Value (7.98, β)					2.64
402	95% Gamma Approximate KM-UCL (use when n>=50)					0.455	95% Gamma Adjusted KM-UCL (use when n<50)					0.469
403	Gamma (KM) may not be used when k hat (KM) is < 0.1											
404												
405	**Gamma ROS Statistics using Imputed Non-Detects**											
406	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
407	GROS may not be used when kstar of detected data is small such as < 0.1											
408	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
409	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
410	Minimum					0.0029	Mean					0.156
411	Maximum					4.3	Median					0.032
412	SD					0.582	CV					3.724
413	k hat (MLE)					0.455	k star (bias corrected MLE)					0.443
414	Theta hat (MLE)					0.343	Theta star (bias corrected MLE)					0.353
415	nu hat (MLE)					50.08	nu star (bias corrected)					48.69
416	MLE Mean (bias corrected)					0.156	MLE Sd (bias corrected)					0.235
417							Adjusted Level of Significance (β)					0.0456
418	Approximate Chi Square Value (48.69, α)					33.67	Adjusted Chi Square Value (48.69, β)					33.33
419	**95% Gamma Approximate UCL (use when n>=50)**					**0.226**	95% Gamma Adjusted UCL (use when n<50)					0.228
420												
421	**Lognormal GOF Test on Detected Observations Only**											
422	Shapiro Wilk Test Statistic					0.977	**Shapiro Wilk GOF Test**					
423	5% Shapiro Wilk Critical Value					0.945	Detected Data appear Lognormal at 5% Significance Level					
424	Lilliefors Test Statistic					0.0717	**Lilliefors GOF Test**					
425	5% Lilliefors Critical Value					0.132	Detected Data appear Lognormal at 5% Significance Level					
426	**Detected Data appear Lognormal at 5% Significance Level**											

427												
428	**Lognormal ROS Statistics Using Imputed Non-Detects**											
429					Mean in Original Scale	0.155				Mean in Log Scale	-3.47	
430					SD in Original Scale	0.582				SD in Log Scale	1.688	
431					95% t UCL (assumes normality of ROS data)	0.287				95% Percentile Bootstrap UCL	0.307	
432					95% BCA Bootstrap UCL	0.398				95% Bootstrap t UCL	0.764	
433					95% H-UCL (Log ROS)	0.274						
434												
435	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
436					KM Mean (logged)	-3.479				95% H-UCL (KM -Log)	0.274	
437					KM SD (logged)	1.691				95% Critical H Value (KM-Log)	3.27	
438					KM Standard Error of Mean (logged)	0.234						
439												
440	**DL/2 Statistics**											
441	**DL/2 Normal**						**DL/2 Log-Transformed**					
442					Mean in Original Scale	0.155				Mean in Log Scale	-3.488	
443					SD in Original Scale	0.582				SD in Log Scale	1.75	
444					95% t UCL (Assumes normality)	0.287				95% H-Stat UCL	0.313	
445	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
446												
447	**Nonparametric Distribution Free UCL Statistics**											
448	**Detected Data appear Lognormal Distributed at 5% Significance Level**											
449												
450	**Suggested UCL to Use**											
451					95% KM (Chebyshev) UCL	0.498						
452												
453	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
454	Recommendations are based upon data size, data distribution, and skewness.											
455	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
456	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
457												
458	**Benzo(a)pyrene**											
459	**General Statistics**											
460					Total Number of Observations	55				Number of Distinct Observations	42	
461					Number of Detects	42				Number of Non-Detects	13	
462					Number of Distinct Detects	38				Number of Distinct Non-Detects	8	
463					Minimum Detect	0.0026				Minimum Non-Detect	0.0018	
464					Maximum Detect	4.4				Maximum Non-Detect	0.15	
465					Variance Detects	0.461				Percent Non-Detects	23.64%	
466					Mean Detects	0.228				SD Detects	0.679	
467					Median Detects	0.063				CV Detects	2.981	
468					Skewness Detects	5.951				Kurtosis Detects	37.12	
469					Mean of Logged Detects	-2.767				SD of Logged Detects	1.529	
470												
471	**Normal GOF Test on Detects Only**											
472					Shapiro Wilk Test Statistic	0.31	**Shapiro Wilk GOF Test**					
473					5% Shapiro Wilk Critical Value	0.942	Detected Data Not Normal at 5% Significance Level					
474					Lilliefors Test Statistic	0.37	**Lilliefors GOF Test**					
475					5% Lilliefors Critical Value	0.137	Detected Data Not Normal at 5% Significance Level					
476	**Detected Data Not Normal at 5% Significance Level**											
477												
478	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											

South Pit Area UCL Calculations
0 to 2-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
479					Mean	0.175				Standard Error of Mean		0.081
480					SD	0.594				95% KM (BCA) UCL		0.329
481					95% KM (t) UCL	0.311				95% KM (Percentile Bootstrap) UCL		0.32
482					95% KM (z) UCL	0.308				95% KM Bootstrap t UCL		0.714
483					90% KM Chebyshev UCL	0.418				95% KM Chebyshev UCL		0.528
484					97.5% KM Chebyshev UCL	0.681				99% KM Chebyshev UCL		0.981
485												
486					**Gamma GOF Tests on Detected Observations Only**							
487					A-D Test Statistic	1.861	**Anderson-Darling GOF Test**					
488					5% A-D Critical Value	0.815	Detected Data Not Gamma Distributed at 5% Significance Level					
489					K-S Test Statistic	0.152	**Kolmogrov-Smirnoff GOF**					
490					5% K-S Critical Value	0.144	Detected Data Not Gamma Distributed at 5% Significance Level					
491					**Detected Data Not Gamma Distributed at 5% Significance Level**							
492												
493					**Gamma Statistics on Detected Data Only**							
494					k hat (MLE)	0.494				k star (bias corrected MLE)		0.475
495					Theta hat (MLE)	0.461				Theta star (bias corrected MLE)		0.479
496					nu hat (MLE)	41.52				nu star (bias corrected)		39.89
497					MLE Mean (bias corrected)	0.228				MLE Sd (bias corrected)		0.33
498												
499					**Gamma Kaplan-Meier (KM) Statistics**							
500					k hat (KM)	0.0872				nu hat (KM)		9.59
501					Approximate Chi Square Value (9.59, α)	3.687				Adjusted Chi Square Value (9.59, β)		3.589
502					95% Gamma Approximate KM-UCL (use when n>=50)	0.456				95% Gamma Adjusted KM-UCL (use when n<50)		0.468
503					Gamma (KM) may not be used when k hat (KM) is < 0.1							
504												
505					**Gamma ROS Statistics using Imputed Non-Detects**							
506					GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs							
507					GROS may not be used when kstar of detected data is small such as < 0.1							
508					For such situations, GROS method tends to yield inflated values of UCLs and BTVs							
509					For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates							
510					Minimum	0.0026				Mean		0.176
511					Maximum	4.4				Median		0.033
512					SD	0.599				CV		3.397
513					k hat (MLE)	0.442				k star (bias corrected MLE)		0.43
514					Theta hat (MLE)	0.399				Theta star (bias corrected MLE)		0.41
515					nu hat (MLE)	48.61				nu star (bias corrected)		47.29
516					MLE Mean (bias corrected)	0.176				MLE Sd (bias corrected)		0.269
517										Adjusted Level of Significance (β)		0.0456
518					Approximate Chi Square Value (47.29, α)	32.51				Adjusted Chi Square Value (47.29, β)		32.18
519					**95% Gamma Approximate UCL (use when n>=50)**	**0.256**				95% Gamma Adjusted UCL (use when n<50)		0.259
520												
521					**Lognormal GOF Test on Detected Observations Only**							
522					Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk GOF Test**					
523					5% Shapiro Wilk Critical Value	0.942	Detected Data appear Lognormal at 5% Significance Level					
524					Lilliefors Test Statistic	0.0552	**Lilliefors GOF Test**					
525					5% Lilliefors Critical Value	0.137	Detected Data appear Lognormal at 5% Significance Level					
526					**Detected Data appear Lognormal at 5% Significance Level**							
527												
528					**Lognormal ROS Statistics Using Imputed Non-Detects**							
529					Mean in Original Scale	0.175				Mean in Log Scale		-3.465
530					SD in Original Scale	0.599				SD in Log Scale		1.879

531	95% t UCL (assumes normality of ROS data)					0.31	95% Percentile Bootstrap UCL					0.327
532	95% BCA Bootstrap UCL					0.474	95% Bootstrap t UCL					0.716
533	95% H-UCL (Log ROS)					0.45						
534												
535	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
536	KM Mean (logged)					-3.486	95% H-UCL (KM -Log)					0.466
537	KM SD (logged)					1.9	95% Critical H Value (KM-Log)					3.553
538	KM Standard Error of Mean (logged)					0.264						
539												
540	**DL/2 Statistics**											
541	**DL/2 Normal**						**DL/2 Log-Transformed**					
542	Mean in Original Scale					0.176	Mean in Log Scale					-3.443
543	SD in Original Scale					0.599	SD in Log Scale					1.933
544	95% t UCL (Assumes normality)					0.312	95% H-Stat UCL					0.534
545	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
546												
547	**Nonparametric Distribution Free UCL Statistics**											
548	**Detected Data appear Lognormal Distributed at 5% Significance Level**											
549												
550	**Suggested UCL to Use**											
551	97.5% KM (Chebyshev) UCL					0.681						
552												
553	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
554	Recommendations are based upon data size, data distribution, and skewness.											
555	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
556	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
557												
558	**Benzo(b)fluoranthene**											
559	**General Statistics**											
560	Total Number of Observations					55	Number of Distinct Observations					42
561	Number of Detects					42	Number of Non-Detects					13
562	Number of Distinct Detects					34	Number of Distinct Non-Detects					9
563	Minimum Detect					0.0033	Minimum Non-Detect					0.0018
564	Maximum Detect					5.6	Maximum Non-Detect					0.21
565	Variance Detects					0.734	Percent Non-Detects					23.64%
566	Mean Detects					0.219	SD Detects					0.857
567	Median Detects					0.0555	CV Detects					3.919
568	Skewness Detects					6.343	Kurtosis Detects					40.75
569	Mean of Logged Detects					-2.933	SD of Logged Detects					1.374
570												
571	**Normal GOF Test on Detects Only**											
572	Shapiro Wilk Test Statistic					0.23	**Shapiro Wilk GOF Test**					
573	5% Shapiro Wilk Critical Value					0.942	Detected Data Not Normal at 5% Significance Level					
574	Lilliefors Test Statistic					0.419	**Lilliefors GOF Test**					
575	5% Lilliefors Critical Value					0.137	Detected Data Not Normal at 5% Significance Level					
576	**Detected Data Not Normal at 5% Significance Level**											
577												
578	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
579	Mean					0.169	Standard Error of Mean					0.102
580	SD					0.745	95% KM (BCA) UCL					0.372
581	95% KM (t) UCL					0.339	95% KM (Percentile Bootstrap) UCL					0.366
582	95% KM (z) UCL					0.336	95% KM Bootstrap t UCL					1.409

South Pit Area UCL Calculations
0 to 2-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
583					90% KM Chebyshev UCL	0.474					95% KM Chebyshev UCL	0.612
584					97.5% KM Chebyshev UCL	0.804					99% KM Chebyshev UCL	1.181
585												
586	**Gamma GOF Tests on Detected Observations Only**											
587					A-D Test Statistic	3.822	**Anderson-Darling GOF Test**					
588					5% A-D Critical Value	0.823	Detected Data Not Gamma Distributed at 5% Significance Level					
589					K-S Test Statistic	0.228	**Kolmogrov-Smirnoff GOF**					
590					5% K-S Critical Value	0.145	Detected Data Not Gamma Distributed at 5% Significance Level					
591	**Detected Data Not Gamma Distributed at 5% Significance Level**											
592												
593	**Gamma Statistics on Detected Data Only**											
594					k hat (MLE)	0.456					k star (bias corrected MLE)	0.44
595					Theta hat (MLE)	0.479					Theta star (bias corrected MLE)	0.497
596					nu hat (MLE)	38.33					nu star (bias corrected)	36.92
597					MLE Mean (bias corrected)	0.219					MLE Sd (bias corrected)	0.33
598												
599	**Gamma Kaplan-Meier (KM) Statistics**											
600					k hat (KM)	0.0515					nu hat (KM)	5.668
601					Approximate Chi Square Value (5.67, α)	1.472					Adjusted Chi Square Value (5.67, β)	1.416
602					95% Gamma Approximate KM-UCL (use when n>=50)	0.651					95% Gamma Adjusted KM-UCL (use when n<50)	0.677
603	Gamma (KM) may not be used when k hat (KM) is < 0.1											
604												
605	**Gamma ROS Statistics using Imputed Non-Detects**											
606	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
607	GROS may not be used when kstar of detected data is small such as < 0.1											
608	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
609	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
610					Minimum	0.0033					Mean	0.169
611					Maximum	5.6					Median	0.026
612					SD	0.752					CV	4.44
613					k hat (MLE)	0.421					k star (bias corrected MLE)	0.41
614					Theta hat (MLE)	0.402					Theta star (bias corrected MLE)	0.413
615					nu hat (MLE)	46.27					nu star (bias corrected)	45.08
616					MLE Mean (bias corrected)	0.169					MLE Sd (bias corrected)	0.264
617											Adjusted Level of Significance (β)	0.0456
618					Approximate Chi Square Value (45.08, α)	30.68					Adjusted Chi Square Value (45.08, β)	30.36
619			**95% Gamma Approximate UCL (use when n>=50)**			**0.249**					95% Gamma Adjusted UCL (use when n<50)	0.251
620												
621	**Lognormal GOF Test on Detected Observations Only**											
622					Shapiro Wilk Test Statistic	0.913	**Shapiro Wilk GOF Test**					
623					5% Shapiro Wilk Critical Value	0.942	Detected Data Not Lognormal at 5% Significance Level					
624					Lilliefors Test Statistic	0.083	**Lilliefors GOF Test**					
625					5% Lilliefors Critical Value	0.137	Detected Data appear Lognormal at 5% Significance Level					
626	**Detected Data appear Approximate Lognormal at 5% Significance Level**											
627												
628	**Lognormal ROS Statistics Using Imputed Non-Detects**											
629					Mean in Original Scale	0.169					Mean in Log Scale	-3.491
630					SD in Original Scale	0.752					SD in Log Scale	1.621
631					95% t UCL (assumes normality of ROS data)	0.338					95% Percentile Bootstrap UCL	0.361
632					95% BCA Bootstrap UCL	0.561					95% Bootstrap t UCL	1.4
633					95% H-UCL (Log ROS)	0.229						
634												

635	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
636					KM Mean (logged)	-3.532				95% H-UCL (KM -Log)		0.254
637					KM SD (logged)	1.682				95% Critical H Value (KM-Log)		3.258
638					KM Standard Error of Mean (logged)	0.238						
639												
640	**DL/2 Statistics**											
641	**DL/2 Normal**						**DL/2 Log-Transformed**					
642					Mean in Original Scale	0.17				Mean in Log Scale		-3.492
643					SD in Original Scale	0.752				SD in Log Scale		1.713
644					95% t UCL (Assumes normality)	0.34				95% H-Stat UCL		0.285
645	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
646												
647	**Nonparametric Distribution Free UCL Statistics**											
648	**Detected Data appear Approximate Lognormal Distributed at 5% Significance Level**											
649												
650	**Suggested UCL to Use**											
651					95% KM (Chebyshev) UCL	0.612						
652												
653	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
654	Recommendations are based upon data size, data distribution, and skewness.											
655	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
656	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
657												
658	**Dibenz(a,h)anthracene**											
659	**General Statistics**											
660					Total Number of Observations	55				Number of Distinct Observations		30
661					Number of Detects	19				Number of Non-Detects		36
662					Number of Distinct Detects	19				Number of Distinct Non-Detects		13
663					Minimum Detect	0.0023				Minimum Non-Detect		0.0023
664					Maximum Detect	1.5				Maximum Non-Detect		0.14
665					Variance Detects	0.12				Percent Non-Detects		65.45%
666					Mean Detects	0.14				SD Detects		0.346
667					Median Detects	0.018				CV Detects		2.472
668					Skewness Detects	3.758				Kurtosis Detects		14.91
669					Mean of Logged Detects	-3.796				SD of Logged Detects		1.973
670												
671	**Normal GOF Test on Detects Only**											
672					Shapiro Wilk Test Statistic	0.44	**Shapiro Wilk GOF Test**					
673					5% Shapiro Wilk Critical Value	0.901	Detected Data Not Normal at 5% Significance Level					
674					Lilliefors Test Statistic	0.354	**Lilliefors GOF Test**					
675					5% Lilliefors Critical Value	0.203	Detected Data Not Normal at 5% Significance Level					
676	**Detected Data Not Normal at 5% Significance Level**											
677												
678	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
679					Mean	0.0503				Standard Error of Mean		0.0289
680					SD	0.209				95% KM (BCA) UCL		0.109
681					95% KM (t) UCL	0.0987				95% KM (Percentile Bootstrap) UCL		0.104
682					95% KM (z) UCL	0.0979				95% KM Bootstrap t UCL		0.305
683					90% KM Chebyshev UCL	0.137				95% KM Chebyshev UCL		0.176
684					97.5% KM Chebyshev UCL	0.231				99% KM Chebyshev UCL		0.338
685												
686	**Gamma GOF Tests on Detected Observations Only**											

South Pit Area UCL Calculations
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	A	B	C	D	E	F	G	H	I	J	K	L
687					A-D Test Statistic	1.289	**Anderson-Darling GOF Test**					
688					5% A-D Critical Value	0.83	Detected Data Not Gamma Distributed at 5% Significance Level					
689					K-S Test Statistic	0.202	**Kolmogrov-Smirnoff GOF**					
690					5% K-S Critical Value	0.213	Detected data appear Gamma Distributed at 5% Significance Level					
691	**Detected data follow Appr. Gamma Distribution at 5% Significance Level**											
692												
693	**Gamma Statistics on Detected Data Only**											
694					k hat (MLE)	0.365				k star (bias corrected MLE)		0.342
695					Theta hat (MLE)	0.384				Theta star (bias corrected MLE)		0.41
696					nu hat (MLE)	13.86				nu star (bias corrected)		13
697					MLE Mean (bias corrected)	0.14				MLE Sd (bias corrected)		0.24
698												
699	**Gamma Kaplan-Meier (KM) Statistics**											
700					k hat (KM)	0.0581				nu hat (KM)		6.396
701					Approximate Chi Square Value (6.40, α)	1.846				Adjusted Chi Square Value (6.40, β)		1.781
702				95% Gamma Approximate KM-UCL (use when n>=50)		0.174				95% Gamma Adjusted KM-UCL (use when n<50)		0.181
703	Gamma (KM) may not be used when k hat (KM) is < 0.1											
704												
705	**Gamma ROS Statistics using Imputed Non-Detects**											
706	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
707	GROS may not be used when kstar of detected data is small such as < 0.1											
708	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
709	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
710					Minimum	0.0023				Mean		0.055
711					Maximum	1.5				Median		0.01
712					SD	0.21				CV		3.813
713					k hat (MLE)	0.453				k star (bias corrected MLE)		0.44
714					Theta hat (MLE)	0.121				Theta star (bias corrected MLE)		0.125
715					nu hat (MLE)	49.81				nu star (bias corrected)		48.43
716					MLE Mean (bias corrected)	0.055				MLE Sd (bias corrected)		0.0828
717										Adjusted Level of Significance (β)		0.0456
718					Approximate Chi Square Value (48.43, α)	33.45				Adjusted Chi Square Value (48.43, β)		33.12
719				95% Gamma Approximate UCL (use when n>=50)		0.0796				95% Gamma Adjusted UCL (use when n<50)		0.0804
720												
721	**Lognormal GOF Test on Detected Observations Only**											
722					Shapiro Wilk Test Statistic	0.903	**Shapiro Wilk GOF Test**					
723					5% Shapiro Wilk Critical Value	0.901	Detected Data appear Lognormal at 5% Significance Level					
724					Lilliefors Test Statistic	0.217	**Lilliefors GOF Test**					
725					5% Lilliefors Critical Value	0.203	Detected Data Not Lognormal at 5% Significance Level					
726	**Detected Data appear Approximate Lognormal at 5% Significance Level**											
727												
728	**Lognormal ROS Statistics Using Imputed Non-Detects**											
729					Mean in Original Scale	0.0489				Mean in Log Scale		-6.814
730					SD in Original Scale	0.211				SD in Log Scale		2.798
731				95% t UCL (assumes normality of ROS data)		0.0965				95% Percentile Bootstrap UCL		0.1
732					**95% BCA Bootstrap UCL**	**0.147**				95% Bootstrap t UCL		0.278
733					95% H-UCL (Log ROS)	0.368						
734												
735	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
736					KM Mean (logged)	-5.226				95% H-UCL (KM -Log)		0.0349
737					KM SD (logged)	1.559				95% Critical H Value (KM-Log)		3.095
738					KM Standard Error of Mean (logged)	0.22						

739												
740	**DL/2 Statistics**											
741	**DL/2 Normal**						**DL/2 Log-Transformed**					
742	Mean in Original Scale					0.053	Mean in Log Scale					-5.061
743	SD in Original Scale					0.21	SD in Log Scale					1.753
744	95% t UCL (Assumes normality)					0.1	95% H-Stat UCL					0.0656
745	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
746												
747	**Nonparametric Distribution Free UCL Statistics**											
748	**Detected Data appear Approximate Gamma Distributed at 5% Significance Level**											
749												
750	**Suggested UCL to Use**											
751	95% KM (t) UCL					0.0987	95% GROS Approximate Gamma UCL					0.0796
752	95% Approximate Gamma KM-UCL					0.174						
753												
754	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
755	Recommendations are based upon data size, data distribution, and skewness.											
756	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
757	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
758												
759	**Indeno(1,2,3-cd)pyrene**											
760	**General Statistics**											
761	Total Number of Observations					55	Number of Distinct Observations					43
762	Number of Detects					35	Number of Non-Detects					20
763	Number of Distinct Detects					32	Number of Distinct Non-Detects					12
764	Minimum Detect					0.0027	Minimum Non-Detect					0.0018
765	Maximum Detect					3.3	Maximum Non-Detect					0.22
766	Variance Detects					0.306	Percent Non-Detects					36.36%
767	Mean Detects					0.164	SD Detects					0.554
768	Median Detects					0.056	CV Detects					3.373
769	Skewness Detects					5.664	Kurtosis Detects					32.86
770	Mean of Logged Detects					-3.202	SD of Logged Detects					1.464
771												
772	**Normal GOF Test on Detects Only**											
773	Shapiro Wilk Test Statistic					0.278	**Shapiro Wilk GOF Test**					
774	5% Shapiro Wilk Critical Value					0.934	Detected Data Not Normal at 5% Significance Level					
775	Lilliefors Test Statistic					0.396	**Lilliefors GOF Test**					
776	5% Lilliefors Critical Value					0.15	Detected Data Not Normal at 5% Significance Level					
777	**Detected Data Not Normal at 5% Significance Level**											
778												
779	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
780	Mean					0.107	Standard Error of Mean					0.0605
781	SD					0.442	95% KM (BCA) UCL					0.231
782	95% KM (t) UCL					0.208	95% KM (Percentile Bootstrap) UCL					0.225
783	95% KM (z) UCL					0.206	95% KM Bootstrap t UCL					0.708
784	90% KM Chebyshev UCL					0.288	95% KM Chebyshev UCL					0.37
785	97.5% KM Chebyshev UCL					0.484	99% KM Chebyshev UCL					0.708
786												
787	**Gamma GOF Tests on Detected Observations Only**											
788	A-D Test Statistic					2.699	**Anderson-Darling GOF Test**					
789	5% A-D Critical Value					0.821	Detected Data Not Gamma Distributed at 5% Significance Level					
790	K-S Test Statistic					0.239	**Kolmogrov-Smirnoff GOF**					

South Pit Area UCL Calculations
0 to 2-feet below ground surface
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	A	B	C	D	E	F	G	H	I	J	K	L
791					5% K-S Critical Value	0.158	Detected Data Not Gamma Distributed at 5% Significance Level					
792	**Detected Data Not Gamma Distributed at 5% Significance Level**											
793												
794	**Gamma Statistics on Detected Data Only**											
795					k hat (MLE)	0.461				k star (bias corrected MLE)		0.441
796					Theta hat (MLE)	0.356				Theta star (bias corrected MLE)		0.373
797					nu hat (MLE)	32.27				nu star (bias corrected)		30.84
798					MLE Mean (bias corrected)	0.164				MLE Sd (bias corrected)		0.247
799												
800	**Gamma Kaplan-Meier (KM) Statistics**											
801					k hat (KM)	0.0585				nu hat (KM)		6.435
802					Approximate Chi Square Value (6.44, α)	1.866				Adjusted Chi Square Value (6.44, β)		1.801
803					95% Gamma Approximate KM-UCL (use when n>=50)	0.369				95% Gamma Adjusted KM-UCL (use when n<50)		0.382
804	Gamma (KM) may not be used when k hat (KM) is < 0.1											
805												
806	**Gamma ROS Statistics using Imputed Non-Detects**											
807	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
808	GROS may not be used when kstar of detected data is small such as < 0.1											
809	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
810	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
811					Minimum	0.0027				Mean		0.108
812					Maximum	3.3				Median		0.012
813					SD	0.446				CV		4.123
814					k hat (MLE)	0.436				k star (bias corrected MLE)		0.425
815					Theta hat (MLE)	0.248				Theta star (bias corrected MLE)		0.255
816					nu hat (MLE)	47.99				nu star (bias corrected)		46.7
817					MLE Mean (bias corrected)	0.108				MLE Sd (bias corrected)		0.166
818										Adjusted Level of Significance (β)		0.0456
819					Approximate Chi Square Value (46.70, α)	32.02				Adjusted Chi Square Value (46.70, β)		31.69
820					**95% Gamma Approximate UCL (use when n>=50)**	**0.158**				95% Gamma Adjusted UCL (use when n<50)		0.159
821												
822	**Lognormal GOF Test on Detected Observations Only**											
823					Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk GOF Test**					
824					5% Shapiro Wilk Critical Value	0.934	Detected Data appear Lognormal at 5% Significance Level					
825					Lilliefors Test Statistic	0.101	**Lilliefors GOF Test**					
826					5% Lilliefors Critical Value	0.15	Detected Data appear Lognormal at 5% Significance Level					
827	**Detected Data appear Lognormal at 5% Significance Level**											
828												
829	**Lognormal ROS Statistics Using Imputed Non-Detects**											
830					Mean in Original Scale	0.106				Mean in Log Scale		-4.129
831					SD in Original Scale	0.446				SD in Log Scale		1.78
832					95% t UCL (assumes normality of ROS data)	0.207				95% Percentile Bootstrap UCL		0.222
833					95% BCA Bootstrap UCL	0.3				95% Bootstrap t UCL		0.7
834					95% H-UCL (Log ROS)	0.178						
835												
836	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
837					KM Mean (logged)	-4.066				95% H-UCL (KM -Log)		0.158
838					KM SD (logged)	1.705				95% Critical H Value (KM-Log)		3.289
839					KM Standard Error of Mean (logged)	0.245						
840												
841	**DL/2 Statistics**											
842	**DL/2 Normal**						**DL/2 Log-Transformed**					

South Pit Area UCL Calculations
0 to 2-feet below ground surface
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	A	B	C	D	E	F	G	H	I	J	K	L
843					Mean in Original Scale	0.11					Mean in Log Scale	-3.904
844					SD in Original Scale	0.445					SD in Log Scale	1.698
845					95% t UCL (Assumes normality)	0.21					95% H-Stat UCL	0.182
846	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
847												
848	**Nonparametric Distribution Free UCL Statistics**											
849	**Detected Data appear Lognormal Distributed at 5% Significance Level**											
850												
851	**Suggested UCL to Use**											
852					95% KM (Chebyshev) UCL	0.37						
853												
854	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
855	Recommendations are based upon data size, data distribution, and skewness.											
856	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
857	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
858												

South Pit Area UCL Calculations
0 to 10-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3			User Selected Options									
4			Date/Time of Computation	6/12/2014 11:29:11 AM								
5			From File	South Area 0 to 10.xls								
6			Full Precision	OFF								
7			Confidence Coefficient	95%								
8			Number of Bootstrap Operations	2000								
9												
10												

South Pit Area UCL Calculations
0 to 10-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
11	**Arsenic**											
12	**General Statistics**											
13					Total Number of Observations	119				Number of Distinct Observations		112
14										Number of Missing Observations		0
15					Minimum	0.766				Mean		6.428
16					Maximum	94.5				Median		3.64
17					SD	12.89				Std. Error of Mean		1.181
18					Coefficient of Variation	2.005				Skewness		5.934
19												
20	**Normal GOF Test**											
21					Shapiro Wilk Test Statistic	0.311	**Shapiro Wilk GOF Test**					
22					5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level					
23					Lilliefors Test Statistic	0.342	**Lilliefors GOF Test**					
24					5% Lilliefors Critical Value	0.0812	Data Not Normal at 5% Significance Level					
25	**Data Not Normal at 5% Significance Level**											
26												
27	**Assuming Normal Distribution**											
28	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
29					95% Student's-t UCL	8.387				95% Adjusted-CLT UCL (Chen-1995)		9.058
30										95% Modified-t UCL (Johnson-1978)		8.494
31												
32	**Gamma GOF Test**											
33					A-D Test Statistic	10.99	**Anderson-Darling Gamma GOF Test**					
34					5% A-D Critical Value	0.776	Data Not Gamma Distributed at 5% Significance Level					
35					K-S Test Statistic	0.204	**Kolmogrov-Smirnoff Gamma GOF Test**					
36					5% K-S Critical Value	0.0866	Data Not Gamma Distributed at 5% Significance Level					
37	**Data Not Gamma Distributed at 5% Significance Level**											
38												
39	**Gamma Statistics**											
40					k hat (MLE)	1.275				k star (bias corrected MLE)		1.248
41					Theta hat (MLE)	5.042				Theta star (bias corrected MLE)		5.15
42					nu hat (MLE)	303.4				nu star (bias corrected)		297.1
43					MLE Mean (bias corrected)	6.428				MLE Sd (bias corrected)		5.753
44										Approximate Chi Square Value (0.05)		258.2
45					Adjusted Level of Significance	0.048				Adjusted Chi Square Value		257.7
46												
47	**Assuming Gamma Distribution**											
48					95% Approximate Gamma UCL (use when n>=50))	7.397				95% Adjusted Gamma UCL (use when n<50)		7.41
49												
50	**Lognormal GOF Test**											
51					Shapiro Wilk Test Statistic	0.868	**Shapiro Wilk Lognormal GOF Test**					
52					5% Shapiro Wilk P Value	3.331E-16	Data Not Lognormal at 5% Significance Level					
53					Lilliefors Test Statistic	0.111	**Lilliefors Lognormal GOF Test**					
54					5% Lilliefors Critical Value	0.0812	Data Not Lognormal at 5% Significance Level					
55	**Data Not Lognormal at 5% Significance Level**											
56												
57	**Lognormal Statistics**											
58					Minimum of Logged Data	-0.267				Mean of logged Data		1.42
59					Maximum of Logged Data	4.549				SD of logged Data		0.714
60												
61	**Assuming Lognormal Distribution**											
62					95% H-UCL	6.079				90% Chebyshev (MVUE) UCL		6.482
63					95% Chebyshev (MVUE) UCL	7.008				97.5% Chebyshev (MVUE) UCL		7.737

64	99% Chebyshev (MVUE) UCL					9.17						
65												
66	**Nonparametric Distribution Free UCL Statistics**											
67	**Data do not follow a Discernible Distribution (0.05)**											
68												
69	**Nonparametric Distribution Free UCLs**											
70	95% CLT UCL					8.371	95% Jackknife UCL					8.387
71	95% Standard Bootstrap UCL					8.333	95% Bootstrap-t UCL					10.19
72	95% Hall's Bootstrap UCL					8.414	95% Percentile Bootstrap UCL					8.482
73	95% BCA Bootstrap UCL					9.06						
74	90% Chebyshev(Mean, Sd) UCL					9.972	95% Chebyshev(Mean, Sd) UCL					11.58
75	97.5% Chebyshev(Mean, Sd) UCL					13.81	99% Chebyshev(Mean, Sd) UCL					18.18
76												
77	**Suggested UCL to Use**											
78	**95% Chebyshev (Mean, Sd) UCL**					**11.58**						
79												
80	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
81	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
82	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
83	For additional insight the user may want to consult a statistician.											
84												
85	**Mercury**											
86	**General Statistics**											
87	Total Number of Observations					110	Number of Distinct Observations					108
88	Number of Detects					106	Number of Non-Detects					4
89	Number of Distinct Detects					104	Number of Distinct Non-Detects					4
90	Minimum Detect					3.5100E-4	Minimum Non-Detect					3.4000E-4
91	Maximum Detect					23	Maximum Non-Detect					3.7000E-4
92	Variance Detects					5.979	Percent Non-Detects					3.636%
93	Mean Detects					0.711	SD Detects					2.445
94	Median Detects					0.0292	CV Detects					3.437
95	Skewness Detects					7.54	Kurtosis Detects					66.85
96	Mean of Logged Detects					-3.123	SD of Logged Detects					2.473
97												
98	**Normal GOF Test on Detects Only**											
99	Shapiro Wilk Test Statistic					0.327	**Normal GOF Test on Detected Observations Only**					
100	5% Shapiro Wilk P Value					0	Detected Data Not Normal at 5% Significance Level					
101	Lilliefors Test Statistic					0.386	**Lilliefors GOF Test**					
102	5% Lilliefors Critical Value					0.0861	Detected Data Not Normal at 5% Significance Level					
103	**Detected Data Not Normal at 5% Significance Level**											
104												
105	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
106	Mean					0.686	Standard Error of Mean					0.229
107	SD					2.393	95% KM (BCA) UCL					1.15
108	95% KM (t) UCL					1.066	95% KM (Percentile Bootstrap) UCL					1.119
109	95% KM (z) UCL					1.063	95% KM Bootstrap t UCL					1.542
110	90% KM Chebyshev UCL					1.373	**95% KM Chebyshev UCL**					**1.685**
111	97.5% KM Chebyshev UCL					2.117	99% KM Chebyshev UCL					2.966
112												
113	**Gamma GOF Tests on Detected Observations Only**											
114	A-D Test Statistic					7.593	**Anderson-Darling GOF Test**					
115	5% A-D Critical Value					0.89	Detected Data Not Gamma Distributed at 5% Significance Level					
116	K-S Test Statistic					0.225	**Kolmogrov-Smirnoff GOF**					

	A	B	C	D	E	F	G	H	I	J	K	L
117					5% K-S Critical Value	0.0964	Detected Data Not Gamma Distributed at 5% Significance Level					
118	**Detected Data Not Gamma Distributed at 5% Significance Level**											
119												
120	**Gamma Statistics on Detected Data Only**											
121					k hat (MLE)	0.255				k star (bias corrected MLE)		0.254
122					Theta hat (MLE)	2.795				Theta star (bias corrected MLE)		2.805
123					nu hat (MLE)	53.95				nu star (bias corrected)		53.76
124					MLE Mean (bias corrected)	0.711				MLE Sd (bias corrected)		1.413
125												
126	**Gamma Kaplan-Meier (KM) Statistics**											
127					k hat (KM)	0.0821				nu hat (KM)		18.06
128					Approximate Chi Square Value (18.06, α)	9.435				Adjusted Chi Square Value (18.06, β)		9.352
129					95% Gamma Approximate KM-UCL (use when n>=50)	1.312				95% Gamma Adjusted KM-UCL (use when n<50)		1.324
130	Gamma (KM) may not be used when k hat (KM) is < 0.1											
131												
132	**Gamma ROS Statistics using Imputed Non-Detects**											
133	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
134	GROS may not be used when kstar of detected data is small such as < 0.1											
135	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
136	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
137					Minimum	3.5100E-4				Mean		0.686
138					Maximum	23				Median		0.0254
139					SD	2.404				CV		3.504
140					k hat (MLE)	0.253				k star (bias corrected MLE)		0.252
141					Theta hat (MLE)	2.71				Theta star (bias corrected MLE)		2.719
142					nu hat (MLE)	55.69				nu star (bias corrected)		55.51
143					MLE Mean (bias corrected)	0.686				MLE Sd (bias corrected)		1.366
144										Adjusted Level of Significance (β)		0.0478
145					Approximate Chi Square Value (55.51, α)	39.38				Adjusted Chi Square Value (55.51, β)		39.2
146					95% Gamma Approximate UCL (use when n>=50)	0.967				95% Gamma Adjusted UCL (use when n<50)		0.971
147												
148	**Lognormal GOF Test on Detected Observations Only**											
149					Lilliefors Test Statistic	0.0891	**Lilliefors GOF Test**					
150					5% Lilliefors Critical Value	0.0861	Detected Data Not Lognormal at 5% Significance Level					
151	**Detected Data Not Lognormal at 5% Significance Level**											
152												
153	**Lognormal ROS Statistics Using Imputed Non-Detects**											
154					Mean in Original Scale	0.686				Mean in Log Scale		-3.337
155					SD in Original Scale	2.404				SD in Log Scale		2.668
156					95% t UCL (assumes normality of ROS data)	1.066				95% Percentile Bootstrap UCL		1.107
157					95% BCA Bootstrap UCL	1.315				95% Bootstrap t UCL		1.526
158					95% H-UCL (Log ROS)	3.618						
159												
160	**DL/2 Statistics**											
161	**DL/2 Normal**						**DL/2 Log-Transformed**					
162					Mean in Original Scale	0.686				Mean in Log Scale		-3.324
163					SD in Original Scale	2.404				SD in Log Scale		2.639
164					95% t UCL (Assumes normality)	1.066				95% H-Stat UCL		3.329
165	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
166												
167	**Nonparametric Distribution Free UCL Statistics**											
168	**Data do not follow a Discernible Distribution at 5% Significance Level**											
169												

	A	B	C	D	E	F	G	H	I	J	K	L
170	**Suggested UCL to Use**											
171					97.5% KM (Chebyshev) UCL	2.117						
172												
173	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
174	Recommendations are based upon data size, data distribution, and skewness.											
175	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
176	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
177												
178	**Heptachlor Epoxide**											
179	**General Statistics**											
180					Total Number of Observations	108			Number of Distinct Observations			35
181					Number of Detects	11			Number of Non-Detects			97
182					Number of Distinct Detects	11			Number of Distinct Non-Detects			25
183					Minimum Detect	0.0084			Minimum Non-Detect			3.2000E-4
184					Maximum Detect	0.79			Maximum Non-Detect			0.017
185					Variance Detects	0.0548			Percent Non-Detects			89.81%
186					Mean Detects	0.146			SD Detects			0.234
187					Median Detects	0.048			CV Detects			1.601
188					Skewness Detects	2.492			Kurtosis Detects			6.502
189					Mean of Logged Detects	-2.848			SD of Logged Detects			1.399
190												
191	**Normal GOF Test on Detects Only**											
192					Shapiro Wilk Test Statistic	0.638			**Shapiro Wilk GOF Test**			
193					5% Shapiro Wilk Critical Value	0.85			Detected Data Not Normal at 5% Significance Level			
194					Lilliefors Test Statistic	0.289			**Lilliefors GOF Test**			
195					5% Lilliefors Critical Value	0.267			Detected Data Not Normal at 5% Significance Level			
196	**Detected Data Not Normal at 5% Significance Level**											
197												
198	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
199					Mean	0.0152			Standard Error of Mean			0.00845
200					SD	0.0838			95% KM (BCA) UCL			0.0309
201					95% KM (t) UCL	0.0292			95% KM (Percentile Bootstrap) UCL			0.0307
202					95% KM (z) UCL	0.0291			95% KM Bootstrap t UCL			0.0671
203					90% KM Chebyshev UCL	0.0405			95% KM Chebyshev UCL			0.052
204					97.5% KM Chebyshev UCL	0.068			99% KM Chebyshev UCL			0.0993
205												
206	**Gamma GOF Tests on Detected Observations Only**											
207					A-D Test Statistic	0.555			**Anderson-Darling GOF Test**			
208					5% A-D Critical Value	0.769			Detected data appear Gamma Distributed at 5% Significance Level			
209					K-S Test Statistic	0.202			**Kolmogrov-Smirnoff GOF**			
210					5% K-S Critical Value	0.266			Detected data appear Gamma Distributed at 5% Significance Level			
211	**Detected data appear Gamma Distributed at 5% Significance Level**											
212												
213	**Gamma Statistics on Detected Data Only**											
214					k hat (MLE)	0.659			k star (bias corrected MLE)			0.54
215					Theta hat (MLE)	0.222			Theta star (bias corrected MLE)			0.271
216					nu hat (MLE)	14.5			nu star (bias corrected)			11.88
217					MLE Mean (bias corrected)	0.146			MLE Sd (bias corrected)			0.199
218												
219	**Gamma Kaplan-Meier (KM) Statistics**											
220					k hat (KM)	0.0328			nu hat (KM)			7.089
221					Approximate Chi Square Value (7.09, α)	2.22			Adjusted Chi Square Value (7.09, β)			2.183
222					95% Gamma Approximate KM-UCL (use when n>=50)	0.0485			95% Gamma Adjusted KM-UCL (use when n<50)			0.0493

	A	B	C	D	E	F	G	H	I	J	K	L
223	Gamma (KM) may not be used when k hat (KM) is < 0.1											
224												
225	**Gamma ROS Statistics using Imputed Non-Detects**											
226	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
227	GROS may not be used when kstar of detected data is small such as < 0.1											
228	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
229	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
230					Minimum	0.0084				Mean		0.0239
231					Maximum	0.79				Median		0.01
232					SD	0.0826				CV		3.463
233					k hat (MLE)	0.852				k star (bias corrected MLE)		0.835
234					Theta hat (MLE)	0.028				Theta star (bias corrected MLE)		0.0286
235					nu hat (MLE)	184				nu star (bias corrected)		180.3
236					MLE Mean (bias corrected)	0.0239				MLE Sd (bias corrected)		0.0261
237										Adjusted Level of Significance (β)		0.0478
238					Approximate Chi Square Value (180.27, α)	150.2				Adjusted Chi Square Value (180.27, β)		149.8
239					95% Gamma Approximate UCL (use when n>=50)	0.0286				95% Gamma Adjusted UCL (use when n<50)		0.0287
240												
241	**Lognormal GOF Test on Detected Observations Only**											
242					Shapiro Wilk Test Statistic	0.963				**Shapiro Wilk GOF Test**		
243					5% Shapiro Wilk Critical Value	0.85				Detected Data appear Lognormal at 5% Significance Level		
244					Lilliefors Test Statistic	0.119				**Lilliefors GOF Test**		
245					5% Lilliefors Critical Value	0.267				Detected Data appear Lognormal at 5% Significance Level		
246	**Detected Data appear Lognormal at 5% Significance Level**											
247												
248	**Lognormal ROS Statistics Using Imputed Non-Detects**											
249					Mean in Original Scale	0.0151				Mean in Log Scale		-9.709
250					SD in Original Scale	0.0842				SD in Log Scale		3.305
251					95% t UCL (assumes normality of ROS data)	0.0285				95% Percentile Bootstrap UCL		0.0292
252					95% BCA Bootstrap UCL	0.0391				95% Bootstrap t UCL		0.0622
253					**95% H-UCL (Log ROS)**	**0.0707**						
254												
255	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
256					KM Mean (logged)	-7.517				95% H-UCL (KM -Log)		0.00322
257					KM SD (logged)	1.63				95% Critical H Value (KM-Log)		2.87
258					KM Standard Error of Mean (logged)	0.165						
259												
260	**DL/2 Statistics**											
261	**DL/2 Normal**									**DL/2 Log-Transformed**		
262					Mean in Original Scale	0.0156				Mean in Log Scale		-7.177
263					SD in Original Scale	0.0841				SD in Log Scale		1.816
264					95% t UCL (Assumes normality)	0.029				95% H-Stat UCL		0.00683
265	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
266												
267	**Nonparametric Distribution Free UCL Statistics**											
268	**Detected Data appear Gamma Distributed at 5% Significance Level**											
269												
270	**Suggested UCL to Use**											
271					95% KM (t) UCL	0.0292				95% GROS Approximate Gamma UCL		0.0286
272					95% Approximate Gamma KM-UCL	0.0485						
273												
274	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
275	Recommendations are based upon data size, data distribution, and skewness.											

276	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
277	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
278												
279	**Total PCBs**											
280	**General Statistics**											
281	Total Number of Observations					108	Number of Distinct Observations					57
282	Number of Detects					35	Number of Non-Detects					73
283	Number of Distinct Detects					34	Number of Distinct Non-Detects					23
284	Minimum Detect					0.0178	Minimum Non-Detect					0.00845
285	Maximum Detect					1.184	Maximum Non-Detect					1.315
286	Variance Detects					0.0616	Percent Non-Detects					67.59%
287	Mean Detects					0.176	SD Detects					0.248
288	Median Detects					0.0874	CV Detects					1.409
289	Skewness Detects					2.614	Kurtosis Detects					7.816
290	Mean of Logged Detects					-2.49	SD of Logged Detects					1.238
291												
292	**Normal GOF Test on Detects Only**											
293	Shapiro Wilk Test Statistic					0.67	**Shapiro Wilk GOF Test**					
294	5% Shapiro Wilk Critical Value					0.934	Detected Data Not Normal at 5% Significance Level					
295	Lilliefors Test Statistic					0.262	**Lilliefors GOF Test**					
296	5% Lilliefors Critical Value					0.15	Detected Data Not Normal at 5% Significance Level					
297	**Detected Data Not Normal at 5% Significance Level**											
298												
299	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
300	Mean					0.0647	Standard Error of Mean					0.0159
301	SD					0.161	95% KM (BCA) UCL					0.09
302	95% KM (t) UCL					0.091	95% KM (Percentile Bootstrap) UCL					0.0929
303	95% KM (z) UCL					0.0907	95% KM Bootstrap t UCL					0.103
304	90% KM Chebyshev UCL					0.112	95% KM Chebyshev UCL					0.134
305	97.5% KM Chebyshev UCL					0.164	99% KM Chebyshev UCL					0.222
306												
307	**Gamma GOF Tests on Detected Observations Only**											
308	A-D Test Statistic					1.307	**Anderson-Darling GOF Test**					
309	5% A-D Critical Value					0.786	Detected Data Not Gamma Distributed at 5% Significance Level					
310	K-S Test Statistic					0.189	**Kolmogrov-Smirnoff GOF**					
311	5% K-S Critical Value					0.154	Detected Data Not Gamma Distributed at 5% Significance Level					
312	**Detected Data Not Gamma Distributed at 5% Significance Level**											
313												
314	**Gamma Statistics on Detected Data Only**											
315	k hat (MLE)					0.789	k star (bias corrected MLE)					0.74
316	Theta hat (MLE)					0.223	Theta star (bias corrected MLE)					0.238
317	nu hat (MLE)					55.2	nu star (bias corrected)					51.81
318	MLE Mean (bias corrected)					0.176	MLE Sd (bias corrected)					0.205
319												
320	**Gamma Kaplan-Meier (KM) Statistics**											
321	k hat (KM)					0.161	nu hat (KM)					34.88
322	Approximate Chi Square Value (34.88, α)					22.37	Adjusted Chi Square Value (34.88, β)					22.23
323	95% Gamma Approximate KM-UCL (use when n>=50)					0.101	95% Gamma Adjusted KM-UCL (use when n<50)					0.101
324												
325	**Gamma ROS Statistics using Imputed Non-Detects**											
326	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
327	GROS may not be used when kstar of detected data is small such as < 0.1											
328	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											

329	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
330					Minimum	0.01				Mean		0.0639
331					Maximum	1.184				Median		0.01
332					SD	0.16				CV		2.51
333					k hat (MLE)	0.537				k star (bias corrected MLE)		0.529
334					Theta hat (MLE)	0.119				Theta star (bias corrected MLE)		0.121
335					nu hat (MLE)	116.1				nu star (bias corrected)		114.2
336					MLE Mean (bias corrected)	0.0639				MLE Sd (bias corrected)		0.0879
337										Adjusted Level of Significance (β)		0.0478
338					Approximate Chi Square Value (114.19, α)	90.52				Adjusted Chi Square Value (114.19, β)		90.24
339	**95% Gamma Approximate UCL (use when n>=50)**					**0.0806**				95% Gamma Adjusted UCL (use when n<50)		0.0808
340												
341	**Lognormal GOF Test on Detected Observations Only**											
342					Shapiro Wilk Test Statistic	0.916	**Shapiro Wilk GOF Test**					
343					5% Shapiro Wilk Critical Value	0.934	Detected Data Not Lognormal at 5% Significance Level					
344					Lilliefors Test Statistic	0.162	**Lilliefors GOF Test**					
345					5% Lilliefors Critical Value	0.15	Detected Data Not Lognormal at 5% Significance Level					
346	**Detected Data Not Lognormal at 5% Significance Level**											
347												
348	**Lognormal ROS Statistics Using Imputed Non-Detects**											
349					Mean in Original Scale	0.0599				Mean in Log Scale		-4.83
350					SD in Original Scale	0.162				SD in Log Scale		1.996
351					95% t UCL (assumes normality of ROS data)	0.0857				95% Percentile Bootstrap UCL		0.0892
352					95% BCA Bootstrap UCL	0.0949				95% Bootstrap t UCL		0.101
353					95% H-UCL (Log ROS)	0.111						
354												
355	**DL/2 Statistics**											
356	**DL/2 Normal**						**DL/2 Log-Transformed**					
357					Mean in Original Scale	0.0762				Mean in Log Scale		-4.117
358					SD in Original Scale	0.175				SD in Log Scale		1.615
359					95% t UCL (Assumes normality)	0.104				95% H-Stat UCL		0.0937
360	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
361												
362	**Nonparametric Distribution Free UCL Statistics**											
363	**Data do not follow a Discernible Distribution at 5% Significance Level**											
364												
365	**Suggested UCL to Use**											
366					95% KM (BCA) UCL	0.09						
367												
368	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
369	Recommendations are based upon data size, data distribution, and skewness.											
370	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
371	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
372												
373	**Benzene**											
374	**General Statistics**											
375					Total Number of Observations	108				Number of Distinct Observations		39
376					Number of Detects	11				Number of Non-Detects		97
377					Number of Distinct Detects	11				Number of Distinct Non-Detects		29
378					Minimum Detect	6.0000E-4				Minimum Non-Detect		4.2000E-4
379					Maximum Detect	6				Maximum Non-Detect		0.04
380					Variance Detects	3.222				Percent Non-Detects		89.81%
381					Mean Detects	0.642				SD Detects		1.795

	A	B	C	D	E	F	G	H	I	J	K	L
382					Median Detects	0.0091					CV Detects	2.798
383					Skewness Detects	3.206					Kurtosis Detects	10.41
384					Mean of Logged Detects	-3.973					SD of Logged Detects	2.919
385												
386	**Normal GOF Test on Detects Only**											
387					Shapiro Wilk Test Statistic	0.418	**Shapiro Wilk GOF Test**					
388					5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level					
389					Lilliefors Test Statistic	0.442	**Lilliefors GOF Test**					
390					5% Lilliefors Critical Value	0.267	Detected Data Not Normal at 5% Significance Level					
391	**Detected Data Not Normal at 5% Significance Level**											
392												
393	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
394					Mean	0.0657					Standard Error of Mean	0.0585
395					SD	0.58					95% KM (BCA) UCL	0.176
396					95% KM (t) UCL	0.163					95% KM (Percentile Bootstrap) UCL	0.17
397					95% KM (z) UCL	0.162					95% KM Bootstrap t UCL	4.186
398					90% KM Chebyshev UCL	0.241					**95% KM Chebyshev UCL**	**0.321**
399					97.5% KM Chebyshev UCL	0.431					99% KM Chebyshev UCL	0.648
400												
401	**Gamma GOF Tests on Detected Observations Only**											
402					A-D Test Statistic	1.125	**Anderson-Darling GOF Test**					
403					5% A-D Critical Value	0.858	Detected Data Not Gamma Distributed at 5% Significance Level					
404					K-S Test Statistic	0.318	**Kolmogrov-Smirnoff GOF**					
405					5% K-S Critical Value	0.281	Detected Data Not Gamma Distributed at 5% Significance Level					
406	**Detected Data Not Gamma Distributed at 5% Significance Level**											
407												
408	**Gamma Statistics on Detected Data Only**											
409					k hat (MLE)	0.207					k star (bias corrected MLE)	0.211
410					Theta hat (MLE)	3.094					Theta star (bias corrected MLE)	3.035
411					nu hat (MLE)	4.562					nu star (bias corrected)	4.651
412					MLE Mean (bias corrected)	0.642					MLE Sd (bias corrected)	1.395
413												
414	**Gamma Kaplan-Meier (KM) Statistics**											
415					k hat (KM)	0.0129					nu hat (KM)	2.777
416					Approximate Chi Square Value (2.78, α)	0.31					Adjusted Chi Square Value (2.78, β)	0.301
417					95% Gamma Approximate KM-UCL (use when n>=50)	0.59					95% Gamma Adjusted KM-UCL (use when n<50)	0.607
418	Gamma (KM) may not be used when k hat (KM) is < 0.1											
419												
420	**Gamma ROS Statistics using Imputed Non-Detects**											
421	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
422	GROS may not be used when kstar of detected data is small such as < 0.1											
423	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
424	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
425					Minimum	6.0000E-4					Mean	0.0743
426					Maximum	6					Median	0.01
427					SD	0.581					CV	7.822
428					k hat (MLE)	0.347					k star (bias corrected MLE)	0.343
429					Theta hat (MLE)	0.214					Theta star (bias corrected MLE)	0.216
430					nu hat (MLE)	74.92					nu star (bias corrected)	74.18
431					MLE Mean (bias corrected)	0.0743					MLE Sd (bias corrected)	0.127
432											Adjusted Level of Significance (β)	0.0478
433					Approximate Chi Square Value (74.18, α)	55.34					Adjusted Chi Square Value (74.18, β)	55.12
434					95% Gamma Approximate UCL (use when n>=50)	0.0996					95% Gamma Adjusted UCL (use when n<50)	0.1

435												
436	**Lognormal GOF Test on Detected Observations Only**											
437					Shapiro Wilk Test Statistic	0.929	**Shapiro Wilk GOF Test**					
438					5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level					
439					Lilliefors Test Statistic	0.144	**Lilliefors GOF Test**					
440					5% Lilliefors Critical Value	0.267	Detected Data appear Lognormal at 5% Significance Level					
441	**Detected Data appear Lognormal at 5% Significance Level**											
442	**Lognormal ROS Statistics Using Imputed Non-Detects**											
443					Mean in Original Scale	0.0653				Mean in Log Scale	-17.56	
444					SD in Original Scale	0.582				SD in Log Scale	6.33	
445					95% t UCL (assumes normality of ROS data)	0.158				95% Percentile Bootstrap UCL	0.17	
446					95% BCA Bootstrap UCL	0.288				95% Bootstrap t UCL	4.558	
447					95% H-UCL (Log ROS)	3271						
448	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
449					KM Mean (logged)	-7.387				95% H-UCL (KM -Log)	0.00259	
450					KM SD (logged)	1.453				95% Critical H Value (KM-Log)	2.672	
451					KM Standard Error of Mean (logged)	0.147						
452												
453	**DL/2 Statistics**											
454	**DL/2 Normal**						**DL/2 Log-Transformed**					
455					Mean in Original Scale	0.0658				Mean in Log Scale	-7.771	
456					SD in Original Scale	0.582				SD in Log Scale	1.624	
457					95% t UCL (Assumes normality)	0.159				95% H-Stat UCL	0.00247	
458	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
459												
460	**Nonparametric Distribution Free UCL Statistics**											
461	**Detected Data appear Lognormal Distributed at 5% Significance Level**											
462												
463	**Suggested UCL to Use**											
464					97.5% KM (Chebyshev) UCL	0.431						
465												
466	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
467	Recommendations are based upon data size, data distribution, and skewness.											
468	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
469	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
470												
471	**Benz(a)anthracene**											
472	**General Statistics**											
473					Total Number of Observations	108				Number of Distinct Observations	68	
474					Number of Detects	64				Number of Non-Detects	44	
475					Number of Distinct Detects	55				Number of Distinct Non-Detects	16	
476					Minimum Detect	0.0027				Minimum Non-Detect	0.0018	
477					Maximum Detect	4.3				Maximum Non-Detect	0.068	
478					Variance Detects	0.535				Percent Non-Detects	40.74%	
479					Mean Detects	0.277				SD Detects	0.731	
480					Median Detects	0.059				CV Detects	2.64	
481					Skewness Detects	4.271				Kurtosis Detects	19.07	
482					Mean of Logged Detects	-2.812				SD of Logged Detects	1.67	
483												
484	**Normal GOF Test on Detects Only**											
485					Shapiro Wilk Test Statistic	0.403	**Normal GOF Test on Detected Observations Only**					
486					5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level					
487					Lilliefors Test Statistic	0.358	**Lilliefors GOF Test**					

	A	B	C	D	E	F	G	H	I	J	K	L
488	5% Lilliefors Critical Value					0.111	Detected Data Not Normal at 5% Significance Level					
489	**Detected Data Not Normal at 5% Significance Level**											
490												
491	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
492	Mean					0.165	Standard Error of Mean					0.0557
493	SD					0.575	95% KM (BCA) UCL					0.257
494	95% KM (t) UCL					0.258	95% KM (Percentile Bootstrap) UCL					0.266
495	95% KM (z) UCL					0.257	95% KM Bootstrap t UCL					0.375
496	90% KM Chebyshev UCL					0.333	95% KM Chebyshev UCL					0.408
497	97.5% KM Chebyshev UCL					0.513	99% KM Chebyshev UCL					0.72
498												
499	**Gamma GOF Tests on Detected Observations Only**											
500	A-D Test Statistic					3.825	**Anderson-Darling GOF Test**					
501	5% A-D Critical Value					0.834	Detected Data Not Gamma Distributed at 5% Significance Level					
502	K-S Test Statistic					0.199	**Kolmogrov-Smirnoff GOF**					
503	5% K-S Critical Value					0.119	Detected Data Not Gamma Distributed at 5% Significance Level					
504	**Detected Data Not Gamma Distributed at 5% Significance Level**											
505												
506	**Gamma Statistics on Detected Data Only**											
507	k hat (MLE)					0.426	k star (bias corrected MLE)					0.417
508	Theta hat (MLE)					0.65	Theta star (bias corrected MLE)					0.665
509	nu hat (MLE)					54.56	nu star (bias corrected)					53.33
510	MLE Mean (bias corrected)					0.277	MLE Sd (bias corrected)					0.429
511												
512	**Gamma Kaplan-Meier (KM) Statistics**											
513	k hat (KM)					0.0829	nu hat (KM)					17.91
514	Approximate Chi Square Value (17.91, α)					9.322	Adjusted Chi Square Value (17.91, β)					9.238
515	95% Gamma Approximate KM-UCL (use when n>=50)					0.318	95% Gamma Adjusted KM-UCL (use when n<50)					0.321
516	Gamma (KM) may not be used when k hat (KM) is < 0.1											
517												
518	**Gamma ROS Statistics using Imputed Non-Detects**											
519	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
520	GROS may not be used when kstar of detected data is small such as < 0.1											
521	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
522	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
523	Minimum					0.0027	Mean					0.168
524	Maximum					4.3	Median					0.012
525	SD					0.576	CV					3.426
526	k hat (MLE)					0.377	k star (bias corrected MLE)					0.373
527	Theta hat (MLE)					0.446	Theta star (bias corrected MLE)					0.451
528	nu hat (MLE)					81.52	nu star (bias corrected)					80.59
529	MLE Mean (bias corrected)					0.168	MLE Sd (bias corrected)					0.275
530							Adjusted Level of Significance (β)					0.0478
531	Approximate Chi Square Value (80.59, α)					60.9	Adjusted Chi Square Value (80.59, β)					60.67
532	**95% Gamma Approximate UCL (use when n>=50)**					**0.223**	95% Gamma Adjusted UCL (use when n<50)					0.223
533												
534	**Lognormal GOF Test on Detected Observations Only**											
535	Lilliefors Test Statistic					0.0618	**Lilliefors GOF Test**					
536	5% Lilliefors Critical Value					0.111	Detected Data appear Lognormal at 5% Significance Level					
537	**Detected Data appear Lognormal at 5% Significance Level**											
538												
539	**Lognormal ROS Statistics Using Imputed Non-Detects**											
540	Mean in Original Scale					0.165	Mean in Log Scale					-4.348

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	A	B	C	D	E	F	G	H	I	J	K	L
541					SD in Original Scale	0.577				SD in Log Scale		2.346
542				95% t UCL (assumes normality of ROS data)		0.257				95% Percentile Bootstrap UCL		0.265
543					95% BCA Bootstrap UCL	0.295				95% Bootstrap t UCL		0.356
544					95% H-UCL (Log ROS)	0.473						
545												
546	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
547					KM Mean (logged)	-4.159				95% H-UCL (KM -Log)		0.284
548					KM SD (logged)	2.099				95% Critical H Value (KM-Log)		3.433
549					KM Standard Error of Mean (logged)	0.206						
550												
551	**DL/2 Statistics**											
552	**DL/2 Normal**						**DL/2 Log-Transformed**					
553					Mean in Original Scale	0.166				Mean in Log Scale		-4.131
554					SD in Original Scale	0.577				SD in Log Scale		2.171
555					95% t UCL (Assumes normality)	0.258				95% H-Stat UCL		0.355
556	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
557												
558	**Nonparametric Distribution Free UCL Statistics**											
559	**Detected Data appear Lognormal Distributed at 5% Significance Level**											
560												
561	**Suggested UCL to Use**											
562					97.5% KM (Chebyshev) UCL	0.513						
563												
564	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
565	Recommendations are based upon data size, data distribution, and skewness.											
566	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
567	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
568												

	A	B	C	D	E	F	G	H	I	J	K	L
569	**Benzo(a)pyrene**											
570	**General Statistics**											
571	Total Number of Observations					116	Number of Distinct Observations					68
572	Number of Detects					66	Number of Non-Detects					50
573	Number of Distinct Detects					57	Number of Distinct Non-Detects					16
574	Minimum Detect					0.0026	Minimum Non-Detect					0.0018
575	Maximum Detect					7.4	Maximum Non-Detect					0.15
576	Variance Detects					2.115	Percent Non-Detects					43.1%
577	Mean Detects					0.561	SD Detects					1.454
578	Median Detects					0.091	CV Detects					2.592
579	Skewness Detects					3.722	Kurtosis Detects					13.78
580	Mean of Logged Detects					-2.306	SD of Logged Detects					1.833
581												
582	**Normal GOF Test on Detects Only**											
583	Shapiro Wilk Test Statistic					0.412	**Normal GOF Test on Detected Observations Only**					
584	5% Shapiro Wilk P Value					0	Detected Data Not Normal at 5% Significance Level					
585	Lilliefors Test Statistic					0.401	**Lilliefors GOF Test**					
586	5% Lilliefors Critical Value					0.109	Detected Data Not Normal at 5% Significance Level					
587	**Detected Data Not Normal at 5% Significance Level**											
588												
589	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
590	Mean					0.321	Standard Error of Mean					0.105
591	SD					1.123	95% KM (BCA) UCL					0.508
592	95% KM (t) UCL					0.495	95% KM (Percentile Bootstrap) UCL					0.496
593	95% KM (z) UCL					0.493	95% KM Bootstrap t UCL					0.616
594	90% KM Chebyshev UCL					0.636	95% KM Chebyshev UCL					0.779
595	97.5% KM Chebyshev UCL					0.977	99% KM Chebyshev UCL					1.366
596												
597	**Gamma GOF Tests on Detected Observations Only**											
598	A-D Test Statistic					4.101	**Anderson-Darling GOF Test**					
599	5% A-D Critical Value					0.845	Detected Data Not Gamma Distributed at 5% Significance Level					
600	K-S Test Statistic					0.212	**Kolmogrov-Smirnoff GOF**					
601	5% K-S Critical Value					0.118	Detected Data Not Gamma Distributed at 5% Significance Level					
602	**Detected Data Not Gamma Distributed at 5% Significance Level**											
603												
604	**Gamma Statistics on Detected Data Only**											
605	k hat (MLE)					0.383	k star (bias corrected MLE)					0.376
606	Theta hat (MLE)					1.464	Theta star (bias corrected MLE)					1.492
607	nu hat (MLE)					50.6	nu star (bias corrected)					49.64
608	MLE Mean (bias corrected)					0.561	MLE Sd (bias corrected)					0.915
609												
610	**Gamma Kaplan-Meier (KM) Statistics**											
611	k hat (KM)					0.0814	nu hat (KM)					18.89
612	Approximate Chi Square Value (18.89, α)					10.04	Adjusted Chi Square Value (18.89, β)					9.955
613	95% Gamma Approximate KM-UCL (use when n>=50)					0.603	95% Gamma Adjusted KM-UCL (use when n<50)					0.608
614	Gamma (KM) may not be used when k hat (KM) is < 0.1											
615												
616	**Gamma ROS Statistics using Imputed Non-Detects**											
617	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
618	GROS may not be used when kstar of detected data is small such as < 0.1											
619	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
620	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
621	Minimum					0.0026	Mean					0.324

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622					Maximum	7.4					Median	0.0115
623					SD	1.127					CV	3.484
624					k hat (MLE)	0.315					k star (bias corrected MLE)	0.313
625					Theta hat (MLE)	1.026					Theta star (bias corrected MLE)	1.034
626					nu hat (MLE)	73.17					nu star (bias corrected)	72.61
627					MLE Mean (bias corrected)	0.324					MLE Sd (bias corrected)	0.578
628											Adjusted Level of Significance (β)	0.0479
629					Approximate Chi Square Value (72.61, α)	53.99					Adjusted Chi Square Value (72.61, β)	53.79
630					**95% Gamma Approximate UCL (use when n>=50)**	**0.435**					95% Gamma Adjusted UCL (use when n<50)	0.437
631												
632					**Lognormal GOF Test on Detected Observations Only**							
633					Lilliefors Test Statistic	0.0743					**Lilliefors GOF Test**	
634					5% Lilliefors Critical Value	0.109					Detected Data appear Lognormal at 5% Significance Level	
635					**Detected Data appear Lognormal at 5% Significance Level**							
636												
637					**Lognormal ROS Statistics Using Imputed Non-Detects**							
638					Mean in Original Scale	0.32					Mean in Log Scale	-4.156
639					SD in Original Scale	1.128					SD in Log Scale	2.645
640					95% t UCL (assumes normality of ROS data)	0.494					95% Percentile Bootstrap UCL	0.502
641					95% BCA Bootstrap UCL	0.561					95% Bootstrap t UCL	0.592
642					95% H-UCL (Log ROS)	1.444						
643												
644					**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**							
645					KM Mean (logged)	-3.97					95% H-UCL (KM -Log)	0.747
646					KM SD (logged)	2.381					95% Critical H Value (KM-Log)	3.809
647					KM Standard Error of Mean (logged)	0.225						
648												
649					**DL/2 Statistics**							
650					**DL/2 Normal**						**DL/2 Log-Transformed**	
651					Mean in Original Scale	0.322					Mean in Log Scale	-3.928
652					SD in Original Scale	1.128					SD in Log Scale	2.448
653					95% t UCL (Assumes normality)	0.495					95% H-Stat UCL	0.96
654					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
655												
656					**Nonparametric Distribution Free UCL Statistics**							
657					**Detected Data appear Lognormal Distributed at 5% Significance Level**							
658												
659					**Suggested UCL to Use**							
660					97.5% KM (Chebyshev) UCL	0.977						
661												
662					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
663					Recommendations are based upon data size, data distribution, and skewness.							
664					These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).							
665					However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.							
666												

	A	B	C	D	E	F	G	H	I	J	K	L
667	**Benzo(b)fluoranthene**											
668	**General Statistics**											
669	Total Number of Observations					108	Number of Distinct Observations					62
670	Number of Detects					57	Number of Non-Detects					51
671	Number of Distinct Detects					45	Number of Distinct Non-Detects					20
672	Minimum Detect					0.0031	Minimum Non-Detect					0.0018
673	Maximum Detect					5.6	Maximum Non-Detect					0.21
674	Variance Detects					0.569	Percent Non-Detects					47.22%
675	Mean Detects					0.207	SD Detects					0.755
676	Median Detects					0.051	CV Detects					3.638
677	Skewness Detects					6.819	Kurtosis Detects					48.8
678	Mean of Logged Detects					-2.977	SD of Logged Detects					1.477
679												
680	**Normal GOF Test on Detects Only**											
681	Shapiro Wilk Test Statistic					0.262	**Normal GOF Test on Detected Observations Only**					
682	5% Shapiro Wilk P Value					0	Detected Data Not Normal at 5% Significance Level					
683	Lilliefors Test Statistic					0.393	**Lilliefors GOF Test**					
684	5% Lilliefors Critical Value					0.117	Detected Data Not Normal at 5% Significance Level					
685	**Detected Data Not Normal at 5% Significance Level**											
686												
687	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
688	Mean					0.111	Standard Error of Mean					0.0537
689	SD					0.553	95% KM (BCA) UCL					0.22
690	95% KM (t) UCL					0.201	95% KM (Percentile Bootstrap) UCL					0.215
691	95% KM (z) UCL					0.2	95% KM Bootstrap t UCL					0.576
692	90% KM Chebyshev UCL					0.272	95% KM Chebyshev UCL					0.345
693	97.5% KM Chebyshev UCL					0.447	99% KM Chebyshev UCL					0.645
694												
695	**Gamma GOF Tests on Detected Observations Only**											
696	A-D Test Statistic					3.887	**Anderson-Darling GOF Test**					
697	5% A-D Critical Value					0.825	Detected Data Not Gamma Distributed at 5% Significance Level					
698	K-S Test Statistic					0.198	**Kolmogrov-Smirnoff GOF**					
699	5% K-S Critical Value					0.125	Detected Data Not Gamma Distributed at 5% Significance Level					
700	**Detected Data Not Gamma Distributed at 5% Significance Level**											
701												
702	**Gamma Statistics on Detected Data Only**											
703	k hat (MLE)					0.459	k star (bias corrected MLE)					0.446
704	Theta hat (MLE)					0.452	Theta star (bias corrected MLE)					0.465
705	nu hat (MLE)					52.29	nu star (bias corrected)					50.87
706	MLE Mean (bias corrected)					0.207	MLE Sd (bias corrected)					0.31
707												
708	**Gamma Kaplan-Meier (KM) Statistics**											
709	k hat (KM)					0.0406	nu hat (KM)					8.78
710	Approximate Chi Square Value (8.78, α)					3.195	Adjusted Chi Square Value (8.78, β)					3.149
711	95% Gamma Approximate KM-UCL (use when n>=50)					0.306	95% Gamma Adjusted KM-UCL (use when n<50)					0.311
712	Gamma (KM) may not be used when k hat (KM) is < 0.1											
713												
714	**Gamma ROS Statistics using Imputed Non-Detects**											
715	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
716	GROS may not be used when kstar of detected data is small such as < 0.1											
717	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
718	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
719	Minimum					0.0031	Mean					0.114

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720					Maximum	5.6				Median		0.01
721					SD	0.555				CV		4.859
722					k hat (MLE)	0.415				k star (bias corrected MLE)		0.41
723					Theta hat (MLE)	0.275				Theta star (bias corrected MLE)		0.279
724					nu hat (MLE)	89.66				nu star (bias corrected)		88.51
725					MLE Mean (bias corrected)	0.114				MLE Sd (bias corrected)		0.178
726										Adjusted Level of Significance (β)		0.0478
727					Approximate Chi Square Value (88.51, α)	67.82				Adjusted Chi Square Value (88.51, β)		67.57
728					**95% Gamma Approximate UCL (use when n>=50)**	**0.149**				95% Gamma Adjusted UCL (use when n<50)		0.15
729												
730					**Lognormal GOF Test on Detected Observations Only**							
731					Lilliefors Test Statistic	0.0641				**Lilliefors GOF Test**		
732					5% Lilliefors Critical Value	0.117				Detected Data appear Lognormal at 5% Significance Level		
733					**Detected Data appear Lognormal at 5% Significance Level**							
734												
735					**Lognormal ROS Statistics Using Imputed Non-Detects**							
736					Mean in Original Scale	0.111				Mean in Log Scale		-4.507
737					SD in Original Scale	0.555				SD in Log Scale		2.052
738					95% t UCL (assumes normality of ROS data)	0.2				95% Percentile Bootstrap UCL		0.215
739					95% BCA Bootstrap UCL	0.301				95% Bootstrap t UCL		0.556
740					95% H-UCL (Log ROS)	0.177						
741												
742					**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**							
743					KM Mean (logged)	-4.409				95% H-UCL (KM -Log)		0.14
744					KM SD (logged)	1.922				95% Critical H Value (KM-Log)		3.216
745					KM Standard Error of Mean (logged)	0.193						
746												
747					**DL/2 Statistics**							
748					**DL/2 Normal**					**DL/2 Log-Transformed**		
749					Mean in Original Scale	0.113				Mean in Log Scale		-4.285
750					SD in Original Scale	0.555				SD in Log Scale		1.963
751					95% t UCL (Assumes normality)	0.202				95% H-Stat UCL		0.176
752					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
753												
754					**Nonparametric Distribution Free UCL Statistics**							
755					**Detected Data appear Lognormal Distributed at 5% Significance Level**							
756												
757					**Suggested UCL to Use**							
758					95% KM (Chebyshev) UCL	0.345						
759												
760	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
761	Recommendations are based upon data size, data distribution, and skewness.											
762	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
763	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
764												

	A	B	C	D	E	F	G	H	I	J	K	L
765	**Dibenz(a,h)anthracene**											
766	**General Statistics**											
767	Total Number of Observations					108			Number of Distinct Observations			41
768	Number of Detects					28			Number of Non-Detects			80
769	Number of Distinct Detects					26			Number of Distinct Non-Detects			17
770	Minimum Detect					0.0024			Minimum Non-Detect			0.0023
771	Maximum Detect					1.5			Maximum Non-Detect			0.14
772	Variance Detects					0.086			Percent Non-Detects			74.07%
773	Mean Detects					0.129			SD Detects			0.293
774	Median Detects					0.028			CV Detects			2.28
775	Skewness Detects					4.117			Kurtosis Detects			18.85
776	Mean of Logged Detects					-3.584			SD of Logged Detects			1.814
777												
778	**Normal GOF Test on Detects Only**											
779	Shapiro Wilk Test Statistic					0.465	**Shapiro Wilk GOF Test**					
780	5% Shapiro Wilk Critical Value					0.924	Detected Data Not Normal at 5% Significance Level					
781	Lilliefors Test Statistic					0.333	**Lilliefors GOF Test**					
782	5% Lilliefors Critical Value					0.167	Detected Data Not Normal at 5% Significance Level					
783	**Detected Data Not Normal at 5% Significance Level**											
784												
785	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
786	Mean					0.0354			Standard Error of Mean			0.0154
787	SD					0.157			95% KM (BCA) UCL			0.0619
788	95% KM (t) UCL					0.0609			95% KM (Percentile Bootstrap) UCL			0.0646
789	95% KM (z) UCL					0.0607			95% KM Bootstrap t UCL			0.1
790	90% KM Chebyshev UCL					0.0815			95% KM Chebyshev UCL			0.102
791	97.5% KM Chebyshev UCL					0.131			99% KM Chebyshev UCL			0.188
792												
793	**Gamma GOF Tests on Detected Observations Only**											
794	A-D Test Statistic					1.284	**Anderson-Darling GOF Test**					
795	5% A-D Critical Value					0.827	Detected Data Not Gamma Distributed at 5% Significance Level					
796	K-S Test Statistic					0.166	**Kolmogrov-Smirnoff GOF**					
797	5% K-S Critical Value					0.177	Detected data appear Gamma Distributed at 5% Significance Level					
798	**Detected data follow Appr. Gamma Distribution at 5% Significance Level**											
799												
800	**Gamma Statistics on Detected Data Only**											
801	k hat (MLE)					0.425			k star (bias corrected MLE)			0.403
802	Theta hat (MLE)					0.303			Theta star (bias corrected MLE)			0.319
803	nu hat (MLE)					23.8			nu star (bias corrected)			22.58
804	MLE Mean (bias corrected)					0.129			MLE Sd (bias corrected)			0.203
805												
806	**Gamma Kaplan-Meier (KM) Statistics**											
807	k hat (KM)					0.0511			nu hat (KM)			11.03
808	Approximate Chi Square Value (11.03, α)					4.594			Adjusted Chi Square Value (11.03, β)			4.538
809	95% Gamma Approximate KM-UCL (use when n>=50)					0.085			95% Gamma Adjusted KM-UCL (use when n<50)			0.0861
810	Gamma (KM) may not be used when k hat (KM) is < 0.1											
811												
812	**Gamma ROS Statistics using Imputed Non-Detects**											
813	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
814	GROS may not be used when kstar of detected data is small such as < 0.1											
815	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
816	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
817	Minimum					0.0024			Mean			0.0408

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818					Maximum	1.5					Median	0.01
819					SD	0.156					CV	3.835
820					k hat (MLE)	0.549					k star (bias corrected MLE)	0.54
821					Theta hat (MLE)	0.0743					Theta star (bias corrected MLE)	0.0755
822					nu hat (MLE)	118.6					nu star (bias corrected)	116.6
823					MLE Mean (bias corrected)	0.0408					MLE Sd (bias corrected)	0.0555
824											Adjusted Level of Significance (β)	0.0478
825					Approximate Chi Square Value (116.62, α)	92.69					Adjusted Chi Square Value (116.62, β)	92.4
826					95% Gamma Approximate UCL (use when n>=50)	0.0513					95% Gamma Adjusted UCL (use when n<50)	0.0515
827												
828					**Lognormal GOF Test on Detected Observations Only**							
829					Shapiro Wilk Test Statistic	0.935					**Shapiro Wilk GOF Test**	
830					5% Shapiro Wilk Critical Value	0.924					Detected Data appear Lognormal at 5% Significance Level	
831					Lilliefors Test Statistic	0.131					**Lilliefors GOF Test**	
832					5% Lilliefors Critical Value	0.167					Detected Data appear Lognormal at 5% Significance Level	
833					**Detected Data appear Lognormal at 5% Significance Level**							
834												
835					**Lognormal ROS Statistics Using Imputed Non-Detects**							
836					Mean in Original Scale	0.0337					Mean in Log Scale	-7.634
837					SD in Original Scale	0.158					SD in Log Scale	3.07
838					95% t UCL (assumes normality of ROS data)	0.0589					95% Percentile Bootstrap UCL	0.0596
839					95% BCA Bootstrap UCL	0.0779					95% Bootstrap t UCL	0.0995
840					95% H-UCL (Log ROS)	0.217						
841												
842					**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**							
843					KM Mean (logged)	-5.378					95% H-UCL (KM -Log)	0.0183
844					KM SD (logged)	1.423					95% Critical H Value (KM-Log)	2.639
845					KM Standard Error of Mean (logged)	0.142						
846												
847					**DL/2 Statistics**							
848					**DL/2 Normal**						**DL/2 Log-Transformed**	
849					Mean in Original Scale	0.0381					Mean in Log Scale	-5.282
850					SD in Original Scale	0.157					SD in Log Scale	1.686
851					95% t UCL (Assumes normality)	0.0632					95% H-Stat UCL	0.034
852					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
853												
854					**Nonparametric Distribution Free UCL Statistics**							
855					**Detected Data appear Approximate Gamma Distributed at 5% Significance Level**							
856												
857					**Suggested UCL to Use**							
858					95% KM (t) UCL	0.0609					95% GROS Approximate Gamma UCL	0.0513
859					**95% Approximate Gamma KM-UCL**	**0.085**						
860												
861	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
862	Recommendations are based upon data size, data distribution, and skewness.											
863	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
864	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
865												

	A	B	C	D	E	F	G	H	I	J	K	L
866	**Indeno(1,2,3-cd)pyrene**											
867	**General Statistics**											
868	Total Number of Observations					108	Number of Distinct Observations					61
869	Number of Detects					44	Number of Non-Detects					64
870	Number of Distinct Detects					39	Number of Distinct Non-Detects					25
871	Minimum Detect					0.0023	Minimum Non-Detect					0.0018
872	Maximum Detect					3.3	Maximum Non-Detect					0.22
873	Variance Detects					0.249	Percent Non-Detects					59.26%
874	Mean Detects					0.158	SD Detects					0.499
875	Median Detects					0.0385	CV Detects					3.153
876	Skewness Detects					6.096	Kurtosis Detects					38.95
877	Mean of Logged Detects					-3.2	SD of Logged Detects					1.518
878												
879	**Normal GOF Test on Detects Only**											
880	Shapiro Wilk Test Statistic					0.303	**Shapiro Wilk GOF Test**					
881	5% Shapiro Wilk Critical Value					0.944	Detected Data Not Normal at 5% Significance Level					
882	Lilliefors Test Statistic					0.377	**Lilliefors GOF Test**					
883	5% Lilliefors Critical Value					0.134	Detected Data Not Normal at 5% Significance Level					
884	**Detected Data Not Normal at 5% Significance Level**											
885												
886	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
887	Mean					0.0667	Standard Error of Mean					0.0315
888	SD					0.324	95% KM (BCA) UCL					0.127
889	95% KM (t) UCL					0.119	95% KM (Percentile Bootstrap) UCL					0.126
890	95% KM (z) UCL					0.118	95% KM Bootstrap t UCL					0.262
891	90% KM Chebyshev UCL					0.161	95% KM Chebyshev UCL					0.204
892	97.5% KM Chebyshev UCL					0.263	99% KM Chebyshev UCL					0.38
893												
894	**Gamma GOF Tests on Detected Observations Only**											
895	A-D Test Statistic					2.508	**Anderson-Darling GOF Test**					
896	5% A-D Critical Value					0.82	Detected Data Not Gamma Distributed at 5% Significance Level					
897	K-S Test Statistic					0.195	**Kolmogrov-Smirnoff GOF**					
898	5% K-S Critical Value					0.141	Detected Data Not Gamma Distributed at 5% Significance Level					
899	**Detected Data Not Gamma Distributed at 5% Significance Level**											
900												
901	**Gamma Statistics on Detected Data Only**											
902	k hat (MLE)					0.473	k star (bias corrected MLE)					0.455
903	Theta hat (MLE)					0.335	Theta star (bias corrected MLE)					0.347
904	nu hat (MLE)					41.58	nu star (bias corrected)					40.08
905	MLE Mean (bias corrected)					0.158	MLE Sd (bias corrected)					0.234
906												
907	**Gamma Kaplan-Meier (KM) Statistics**											
908	k hat (KM)					0.0424	nu hat (KM)					9.158
909	Approximate Chi Square Value (9.16, α)					3.422	Adjusted Chi Square Value (9.16, β)					3.375
910	95% Gamma Approximate KM-UCL (use when n>=50)					0.178	95% Gamma Adjusted KM-UCL (use when n<50)					0.181
911	Gamma (KM) may not be used when k hat (KM) is < 0.1											
912												
913	**Gamma ROS Statistics using Imputed Non-Detects**											
914	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
915	GROS may not be used when kstar of detected data is small such as < 0.1											
916	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
917	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
918	Minimum					0.0023	Mean					0.0703

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	A	B	C	D	E	F	G	H	I	J	K	L
919					Maximum	3.3					Median	0.01
920					SD	0.324					CV	4.612
921					k hat (MLE)	0.466					k star (bias corrected MLE)	0.459
922					Theta hat (MLE)	0.151					Theta star (bias corrected MLE)	0.153
923					nu hat (MLE)	100.6					nu star (bias corrected)	99.17
924					MLE Mean (bias corrected)	0.0703					MLE Sd (bias corrected)	0.104
925											Adjusted Level of Significance (β)	0.0478
926					Approximate Chi Square Value (99.17, α)	77.19					Adjusted Chi Square Value (99.17, β)	76.93
927					95% Gamma Approximate UCL (use when n>=50)	0.0904					95% Gamma Adjusted UCL (use when n<50)	0.0907
928												
929					**Lognormal GOF Test on Detected Observations Only**							
930					Shapiro Wilk Test Statistic	0.977					**Shapiro Wilk GOF Test**	
931					5% Shapiro Wilk Critical Value	0.944					Detected Data appear Lognormal at 5% Significance Level	
932					Lilliefors Test Statistic	0.0808					**Lilliefors GOF Test**	
933					5% Lilliefors Critical Value	0.134					Detected Data appear Lognormal at 5% Significance Level	
934					**Detected Data appear Lognormal at 5% Significance Level**							
935												
936					**Lognormal ROS Statistics Using Imputed Non-Detects**							
937					Mean in Original Scale	0.0656					Mean in Log Scale	-5.344
938					SD in Original Scale	0.325					SD in Log Scale	2.206
939					95% t UCL (assumes normality of ROS data)	0.118					95% Percentile Bootstrap UCL	0.126
940					95% BCA Bootstrap UCL	0.166					95% Bootstrap t UCL	0.255
941					95% H-UCL (Log ROS)	0.116						
942												
943					**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**							
944					KM Mean (logged)	-4.897					95% H-UCL (KM -Log)	0.0618
945					KM SD (logged)	1.782					95% Critical H Value (KM-Log)	3.049
946					KM Standard Error of Mean (logged)	0.181						
947												
948					**DL/2 Statistics**							
949					**DL/2 Normal**						**DL/2 Log-Transformed**	
950					Mean in Original Scale	0.0707					Mean in Log Scale	-4.616
951					SD in Original Scale	0.325					SD in Log Scale	1.848
952					95% t UCL (Assumes normality)	0.123					95% H-Stat UCL	0.0954
953					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
954												
955					**Nonparametric Distribution Free UCL Statistics**							
956					**Detected Data appear Lognormal Distributed at 5% Significance Level**							
957												
958					**Suggested UCL to Use**							
959					**95% KM (Chebyshev) UCL**	**0.204**						
960												
961	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
962	Recommendations are based upon data size, data distribution, and skewness.											
963	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
964	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
965												

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UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	6/16/2014 2:00:24 PM
From File	South Area greater than 2 UCLs Input 20140616.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Mercury

General Statistics

Total Number of Observations	65	Number of Distinct Observations	63
Number of Detects	59	Number of Non-Detects	6
Number of Distinct Detects	58	Number of Distinct Non-Detects	5
Minimum Detect	3.5100E-4	Minimum Non-Detect	3.3000E-4
Maximum Detect	4.2	Maximum Non-Detect	3.7000E-4
Variance Detects	0.694	Percent Non-Detects	9.231%
Mean Detects	0.299	SD Detects	0.833
Median Detects	0.0108	CV Detects	2.787
Skewness Detects	3.44	Kurtosis Detects	11.94
Mean of Logged Detects	-4.099	SD of Logged Detects	2.377

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.419	**Normal GOF Test on Detected Observations Only**
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.405	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.115	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.271	Standard Error of Mean	0.099
SD	0.792	95% KM (BCA) UCL	0.46
95% KM (t) UCL	0.437	95% KM (Percentile Bootstrap) UCL	0.437
95% KM (z) UCL	0.434	95% KM Bootstrap t UCL	0.531
90% KM Chebyshev UCL	0.568	95% KM Chebyshev UCL	0.703
97.5% KM Chebyshev UCL	0.89	99% KM Chebyshev UCL	1.257

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	5.944	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.891	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.272	**Kolmogrov-Smirnoff GOF**
5% K-S Critical Value	0.127	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.246	k star (bias corrected MLE)	0.245
Theta hat (MLE)	1.214	Theta star (bias corrected MLE)	1.22
nu hat (MLE)	29.06	nu star (bias corrected)	28.92
MLE Mean (bias corrected)	0.299	MLE Sd (bias corrected)	0.604

Gamma Kaplan-Meier (KM) Statistics

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52	k hat (KM)					0.117	nu hat (KM)					15.27
53	Approximate Chi Square Value (15.27, α)					7.449	Adjusted Chi Square Value (15.27, β)					7.325
54	95% Gamma Approximate KM-UCL (use when n>=50)					0.556	95% Gamma Adjusted KM-UCL (use when n<50)					0.566
55												
56	**Gamma ROS Statistics using Imputed Non-Detects**											
57	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
58	GROS may not be used when kstar of detected data is small such as < 0.1											
59	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
60	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
61	Minimum					3.5100E-4	Mean					0.272
62	Maximum					4.2	Median					0.01
63	SD					0.797	CV					2.93
64	k hat (MLE)					0.25	k star (bias corrected MLE)					0.248
65	Theta hat (MLE)					1.09	Theta star (bias corrected MLE)					1.095
66	nu hat (MLE)					32.47	nu star (bias corrected)					32.3
67	MLE Mean (bias corrected)					0.272	MLE Sd (bias corrected)					0.546
68							Adjusted Level of Significance (β)					0.0463
69	Approximate Chi Square Value (32.30, α)					20.31	Adjusted Chi Square Value (32.30, β)					20.1
70	95% Gamma Approximate UCL (use when n>=50)					0.433	95% Gamma Adjusted UCL (use when n<50)					0.438
71												
72	**Lognormal GOF Test on Detected Observations Only**											
73	Lilliefors Test Statistic					0.136	**Lilliefors GOF Test**					
74	5% Lilliefors Critical Value					0.115	Detected Data Not Lognormal at 5% Significance Level					
75	**Detected Data Not Lognormal at 5% Significance Level**											
76												
77	**Lognormal ROS Statistics Using Imputed Non-Detects**											
78	Mean in Original Scale					0.271	Mean in Log Scale					-4.587
79	SD in Original Scale					0.798	SD in Log Scale					2.741
80	95% t UCL (assumes normality of ROS data)					0.436	95% Percentile Bootstrap UCL					0.441
81	95% BCA Bootstrap UCL					0.48	95% Bootstrap t UCL					0.547
82	95% H-UCL (Log ROS)					1.437						
83												
84	**DL/2 Statistics**											
85	**DL/2 Normal**						**DL/2 Log-Transformed**					
86	Mean in Original Scale					0.271	Mean in Log Scale					-4.519
87	SD in Original Scale					0.798	SD in Log Scale					2.623
88	95% t UCL (Assumes normality)					0.436	95% H-Stat UCL					1.017
89	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
90												
91	**Nonparametric Distribution Free UCL Statistics**											
92	**Data do not follow a Discernible Distribution at 5% Significance Level**											
93												
94	**Suggested UCL to Use**											
95	97.5% KM (Chebyshev) UCL					0.89						
96												
97	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
98	Recommendations are based upon data size, data distribution, and skewness.											
99	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
100	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
101												
102	**Total PCBs**											

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	A	B	C	D	E	F	G	H	I	J	K	L
103	**General Statistics**											
104	Total Number of Observations					65	Number of Distinct Observations					33
105	Number of Detects					12	Number of Non-Detects					53
106	Number of Distinct Detects					12	Number of Distinct Non-Detects					21
107	Minimum Detect					0.0186	Minimum Non-Detect					0.00845
108	Maximum Detect					9.86	Maximum Non-Detect					1.315
109	Variance Detects					7.798	Percent Non-Detects					81.54%
110	Mean Detects					1.059	SD Detects					2.792
111	Median Detects					0.0892	CV Detects					2.637
112	Skewness Detects					3.375	Kurtosis Detects					11.53
113	Mean of Logged Detects					-1.819	SD of Logged Detects					1.863
114												
115	**Normal GOF Test on Detects Only**											
116	Shapiro Wilk Test Statistic					0.416	**Shapiro Wilk GOF Test**					
117	5% Shapiro Wilk Critical Value					0.859	Detected Data Not Normal at 5% Significance Level					
118	Lilliefors Test Statistic					0.403	**Lilliefors GOF Test**					
119	5% Lilliefors Critical Value					0.256	Detected Data Not Normal at 5% Significance Level					
120	**Detected Data Not Normal at 5% Significance Level**											
121												
122	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
123	Mean					0.205	Standard Error of Mean					0.158
124	SD					1.219	95% KM (BCA) UCL					0.519
125	95% KM (t) UCL					0.468	95% KM (Percentile Bootstrap) UCL					0.503
126	95% KM (z) UCL					0.464	95% KM Bootstrap t UCL					2.729
127	90% KM Chebyshev UCL					0.679	95% KM Chebyshev UCL					0.893
128	97.5% KM Chebyshev UCL					1.191	99% KM Chebyshev UCL					1.776
129												
130	**Gamma GOF Tests on Detected Observations Only**											
131	A-D Test Statistic					1.211	**Anderson-Darling GOF Test**					
132	5% A-D Critical Value					0.813	Detected Data Not Gamma Distributed at 5% Significance Level					
133	K-S Test Statistic					0.263	**Kolmogrov-Smirnoff GOF**					
134	5% K-S Critical Value					0.263	Detected data appear Gamma Distributed at 5% Significance Level					
135	**Detected data follow Appr. Gamma Distribution at 5% Significance Level**											
136												
137	**Gamma Statistics on Detected Data Only**											
138	k hat (MLE)					0.357	k star (bias corrected MLE)					0.323
139	Theta hat (MLE)					2.966	Theta star (bias corrected MLE)					3.275
140	nu hat (MLE)					8.571	nu star (bias corrected)					7.762
141	MLE Mean (bias corrected)					1.059	MLE Sd (bias corrected)					1.862
142												
143	**Gamma Kaplan-Meier (KM) Statistics**											
144	k hat (KM)					0.0282	nu hat (KM)					3.666
145	Approximate Chi Square Value (3.67, α)					0.594	Adjusted Chi Square Value (3.67, β)					0.569
146	95% Gamma Approximate KM-UCL (use when n>=50)					1.263	95% Gamma Adjusted KM-UCL (use when n<50)					1.319
147	Gamma (KM) may not be used when k hat (KM) is < 0.1											
148												
149	**Gamma ROS Statistics using Imputed Non-Detects**											
150	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
151	GROS may not be used when kstar of detected data is small such as < 0.1											
152	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
153	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											

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	A	B	C	D	E	F	G	H	I	J	K	L
154					Minimum	0.01					Mean	0.204
155					Maximum	9.86					Median	0.01
156					SD	1.228					CV	6.03
157					k hat (MLE)	0.279					k star (bias corrected MLE)	0.277
158					Theta hat (MLE)	0.73					Theta star (bias corrected MLE)	0.737
159					nu hat (MLE)	36.29					nu star (bias corrected)	35.95
160					MLE Mean (bias corrected)	0.204					MLE Sd (bias corrected)	0.387
161											Adjusted Level of Significance (β)	0.0463
162					Approximate Chi Square Value (35.95, α)	23.22					Adjusted Chi Square Value (35.95, β)	22.99
163				95% Gamma Approximate UCL (use when n>=50)		0.315					95% Gamma Adjusted UCL (use when n<50)	0.318
164												
165					**Lognormal GOF Test on Detected Observations Only**							
166					Shapiro Wilk Test Statistic	0.918			**Shapiro Wilk GOF Test**			
167					5% Shapiro Wilk Critical Value	0.859			Detected Data appear Lognormal at 5% Significance Level			
168					Lilliefors Test Statistic	0.207			**Lilliefors GOF Test**			
169					5% Lilliefors Critical Value	0.256			Detected Data appear Lognormal at 5% Significance Level			
170					**Detected Data appear Lognormal at 5% Significance Level**							
171												
172					**Lognormal ROS Statistics Using Imputed Non-Detects**							
173					Mean in Original Scale	0.196					Mean in Log Scale	-7.076
174					SD in Original Scale	1.229					SD in Log Scale	3.175
175					95% t UCL (assumes normality of ROS data)	0.451					95% Percentile Bootstrap UCL	0.495
176					95% BCA Bootstrap UCL	0.664					95% Bootstrap t UCL	2.822
177					95% H-UCL (Log ROS)	0.671						
178												
179					**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**							
180					KM Mean (logged)	-4.183					95% H-UCL (KM -Log)	0.0608
181					KM SD (logged)	1.4					95% Critical H Value (KM-Log)	2.297
182					KM Standard Error of Mean (logged)	0.186						
183												
184					**DL/2 Statistics**							
185					**DL/2 Normal**				**DL/2 Log-Transformed**			
186					Mean in Original Scale	0.229					Mean in Log Scale	-4.178
187					SD in Original Scale	1.229					SD in Log Scale	1.816
188					95% t UCL (Assumes normality)	0.483					95% H-Stat UCL	0.151
189					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
190												
191					**Nonparametric Distribution Free UCL Statistics**							
192					**Detected Data appear Approximate Gamma Distributed at 5% Significance Level**							
193												
194					**Suggested UCL to Use**							
195					95% KM (t) UCL	0.468					95% GROS Approximate Gamma UCL	0.315
196					95% Approximate Gamma KM-UCL	1.263						
197					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
198					Recommendations are based upon data size, data distribution, and skewness.							
199					These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).							
200					However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.							
201												
202					**Benzene**							
203					**General Statistics**							
204					Total Number of Observations	65					Number of Distinct Observations	39

South Pit Area UCL Calculations
Soil greater than 2-feet below ground surface
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	A	B	C	D	E	F	G	H	I	J	K	L
205					Number of Detects	14				Number of Non-Detects		51
206					Number of Distinct Detects	14				Number of Distinct Non-Detects		26
207					Minimum Detect	0.0021				Minimum Non-Detect		4.3000E-4
208					Maximum Detect	6				Maximum Non-Detect		0.18
209					Variance Detects	2.48				Percent Non-Detects		78.46%
210					Mean Detects	0.624				SD Detects		1.575
211					Median Detects	0.056				CV Detects		2.525
212					Skewness Detects	3.528				Kurtosis Detects		12.81
213					Mean of Logged Detects	-2.603				SD of Logged Detects		2.262
214												
215	**Normal GOF Test on Detects Only**											
216					Shapiro Wilk Test Statistic	0.435	**Shapiro Wilk GOF Test**					
217					5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level					
218					Lilliefors Test Statistic	0.369	**Lilliefors GOF Test**					
219					5% Lilliefors Critical Value	0.237	Detected Data Not Normal at 5% Significance Level					
220	**Detected Data Not Normal at 5% Significance Level**											
221												
222	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
223					Mean	0.135				Standard Error of Mean		0.0965
224					SD	0.749				95% KM (BCA) UCL		0.328
225					95% KM (t) UCL	0.296				95% KM (Percentile Bootstrap) UCL		0.313
226					95% KM (z) UCL	0.293				95% KM Bootstrap t UCL		0.954
227					90% KM Chebyshev UCL	0.424				95% KM Chebyshev UCL		0.555
228					97.5% KM Chebyshev UCL	0.737				99% KM Chebyshev UCL		1.094
229												
230	**Gamma GOF Tests on Detected Observations Only**											
231					A-D Test Statistic	0.832	**Anderson-Darling GOF Test**					
232					5% A-D Critical Value	0.828	Detected Data Not Gamma Distributed at 5% Significance Level					
233					K-S Test Statistic	0.249	**Kolmogrov-Smirnoff GOF**					
234					5% K-S Critical Value	0.247	Detected Data Not Gamma Distributed at 5% Significance Level					
235	**Detected Data Not Gamma Distributed at 5% Significance Level**											
236												
237	**Gamma Statistics on Detected Data Only**											
238					k hat (MLE)	0.32				k star (bias corrected MLE)		0.299
239					Theta hat (MLE)	1.948				Theta star (bias corrected MLE)		2.084
240					nu hat (MLE)	8.966				nu star (bias corrected)		8.378
241					MLE Mean (bias corrected)	0.624				MLE Sd (bias corrected)		1.14
242												
243	**Gamma Kaplan-Meier (KM) Statistics**											
244					k hat (KM)	0.0323				nu hat (KM)		4.205
245					Approximate Chi Square Value (4.21, α)	0.804				Adjusted Chi Square Value (4.21, β)		0.773
246					95% Gamma Approximate KM-UCL (use when n>=50)	0.705				95% Gamma Adjusted KM-UCL (use when n<50)		0.733
247	Gamma (KM) may not be used when k hat (KM) is < 0.1											
248												
249	**Gamma ROS Statistics using Imputed Non-Detects**											
250	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
251	GROS may not be used when kstar of detected data is small such as < 0.1											
252	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
253	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
254					Minimum	0.0021				Mean		0.142
255					Maximum	6				Median		0.01

South Pit Area UCL Calculations
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	A	B	C	D	E	F	G	H	I	J	K	L
256					SD	0.754					CV	5.303
257					k hat (MLE)	0.309					k star (bias corrected MLE)	0.305
258					Theta hat (MLE)	0.46					Theta star (bias corrected MLE)	0.467
259					nu hat (MLE)	40.13					nu star (bias corrected)	39.62
260					MLE Mean (bias corrected)	0.142					MLE Sd (bias corrected)	0.258
261											Adjusted Level of Significance (β)	0.0463
262					Approximate Chi Square Value (39.62, α)	26.2					Adjusted Chi Square Value (39.62, β)	25.95
263					95% Gamma Approximate UCL (use when n>=50)	0.215					95% Gamma Adjusted UCL (use when n<50)	0.217
264												
265					**Lognormal GOF Test on Detected Observations Only**							
266					Shapiro Wilk Test Statistic	0.97			**Shapiro Wilk GOF Test**			
267					5% Shapiro Wilk Critical Value	0.874			Detected Data appear Lognormal at 5% Significance Level			
268					Lilliefors Test Statistic	0.136			**Lilliefors GOF Test**			
269					5% Lilliefors Critical Value	0.237			Detected Data appear Lognormal at 5% Significance Level			
270					**Detected Data appear Lognormal at 5% Significance Level**							
271												
272					**Lognormal ROS Statistics Using Imputed Non-Detects**							
273					Mean in Original Scale	0.134					Mean in Log Scale	-9.104
274					SD in Original Scale	0.755					SD in Log Scale	3.987
275					95% t UCL (assumes normality of ROS data)	0.291					95% Percentile Bootstrap UCL	0.315
276					95% BCA Bootstrap UCL	0.433					95% Bootstrap t UCL	0.894
277					95% H-UCL (Log ROS)	4.375						
278												
279					**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**							
280					KM Mean (logged)	-6.623					95% H-UCL (KM -Log)	0.0545
281					KM SD (logged)	2.352					95% Critical H Value (KM-Log)	3.221
282					KM Standard Error of Mean (logged)	0.305						
283												
284					**DL/2 Statistics**							
285					**DL/2 Normal**				**DL/2 Log-Transformed**			
286					Mean in Original Scale	0.137					Mean in Log Scale	-6.793
287					SD in Original Scale	0.755					SD in Log Scale	2.656
288					95% t UCL (Assumes normality)	0.293					95% H-Stat UCL	0.117
289					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
290												
291					**Nonparametric Distribution Free UCL Statistics**							
292					**Detected Data appear Lognormal Distributed at 5% Significance Level**							
293												
294					**Suggested UCL to Use**							
295					97.5% KM (Chebyshev) UCL	0.737						
296												
297	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
298	Recommendations are based upon data size, data distribution, and skewness.											
299	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
300	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
301												

North Pit Area UCL Calculations
0 to 2-feet below ground surface
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	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3				User Selected Options								
4				Date/Time of Computation	6/13/2014 11:02:26 AM							
5				From File	North Area 0 - 2.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												

North Pit Area UCL Calculations
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11	**Arsenic**											
12	**General Statistics**											
13					Total Number of Observations	56			Number of Distinct Observations			54
14									Number of Missing Observations			0
15					Minimum	1.33			Mean			5.924
16					Maximum	32.3			Median			4.43
17					SD	5.397			Std. Error of Mean			0.721
18					Coefficient of Variation	0.911			Skewness			3.38
19												
20	**Normal GOF Test**											
21					Shapiro Wilk Test Statistic	0.643	**Shapiro Wilk GOF Test**					
22					5% Shapiro Wilk P Value	1.110E-16	Data Not Normal at 5% Significance Level					
23					Lilliefors Test Statistic	0.206	**Lilliefors GOF Test**					
24					5% Lilliefors Critical Value	0.118	Data Not Normal at 5% Significance Level					
25	**Data Not Normal at 5% Significance Level**											
26												
27	**Assuming Normal Distribution**											
28	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
29					95% Student's-t UCL	7.131			95% Adjusted-CLT UCL (Chen-1995)			7.459
30									95% Modified-t UCL (Johnson-1978)			7.185
31												
32	**Gamma GOF Test**											
33					A-D Test Statistic	1.411	**Anderson-Darling Gamma GOF Test**					
34					5% A-D Critical Value	0.761	Data Not Gamma Distributed at 5% Significance Level					
35					K-S Test Statistic	0.146	**Kolmogrov-Smirnoff Gamma GOF Test**					
36					5% K-S Critical Value	0.12	Data Not Gamma Distributed at 5% Significance Level					
37	**Data Not Gamma Distributed at 5% Significance Level**											
38												
39	**Gamma Statistics**											
40					k hat (MLE)	2.289			k star (bias corrected MLE)			2.178
41					Theta hat (MLE)	2.588			Theta star (bias corrected MLE)			2.72
42					nu hat (MLE)	256.4			nu star (bias corrected)			244
43					MLE Mean (bias corrected)	5.924			MLE Sd (bias corrected)			4.014
44									Approximate Chi Square Value (0.05)			208.8
45					Adjusted Level of Significance	0.0457			Adjusted Chi Square Value			208
46												
47	**Assuming Gamma Distribution**											
48					95% Approximate Gamma UCL (use when n>=50))	6.922			95% Adjusted Gamma UCL (use when n<50)			6.951
49												
50	**Lognormal GOF Test**											
51					Shapiro Wilk Test Statistic	0.966	**Shapiro Wilk Lognormal GOF Test**					
52					5% Shapiro Wilk P Value	0.236	Data appear Lognormal at 5% Significance Level					
53					Lilliefors Test Statistic	0.0954	**Lilliefors Lognormal GOF Test**					
54					5% Lilliefors Critical Value	0.118	Data appear Lognormal at 5% Significance Level					
55	**Data appear Lognormal at 5% Significance Level**											
56												
57	**Lognormal Statistics**											
58					Minimum of Logged Data	0.285			Mean of logged Data			1.545
59					Maximum of Logged Data	3.475			SD of logged Data			0.64
60												
61	**Assuming Lognormal Distribution**											

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62					95% H-UCL	6.83				90% Chebyshev (MVUE) UCL		7.319
63				95% Chebyshev (MVUE) UCL		8.04				97.5% Chebyshev (MVUE) UCL		9.039
64				99% Chebyshev (MVUE) UCL		11						
65												
66	**Nonparametric Distribution Free UCL Statistics**											
67	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
68												
69	**Nonparametric Distribution Free UCLs**											
70					95% CLT UCL	7.111				95% Jackknife UCL		7.131
71				95% Standard Bootstrap UCL		7.113				95% Bootstrap-t UCL		8.019
72				95% Hall's Bootstrap UCL		13.29				95% Percentile Bootstrap UCL		7.198
73				95% BCA Bootstrap UCL		7.476						
74				90% Chebyshev(Mean, Sd) UCL		8.088				95% Chebyshev(Mean, Sd) UCL		9.068
75				97.5% Chebyshev(Mean, Sd) UCL		10.43				99% Chebyshev(Mean, Sd) UCL		13.1
76												
77	**Suggested UCL to Use**											
78					**95% H-UCL**	**6.83**						
79												
80	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
81	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
82	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
83	For additional insight the user may want to consult a statistician.											
84												
85	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**											
86	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**											
87	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**											
88	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**											
89												
90	**Lead**											
91	**General Statistics**											
92					Total Number of Observations	51				Number of Distinct Observations		50
93										Number of Missing Observations		0
94					Minimum	7.02				Mean		120.2
95					Maximum	1800				Median		48.8
96					SD	274.3				Std. Error of Mean		38.41
97					Coefficient of Variation	2.283				Skewness		5.174
98												
99	**Normal GOF Test**											
100					Shapiro Wilk Test Statistic	0.408				**Shapiro Wilk GOF Test**		
101					5% Shapiro Wilk P Value	0				Data Not Normal at 5% Significance Level		
102					Lilliefors Test Statistic	0.34				**Lilliefors GOF Test**		
103					5% Lilliefors Critical Value	0.124				Data Not Normal at 5% Significance Level		
104	**Data Not Normal at 5% Significance Level**											
105												
106	**Assuming Normal Distribution**											
107					**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**		
108					95% Student's-t UCL	184.5				95% Adjusted-CLT UCL (Chen-1995)		213.1
109										95% Modified-t UCL (Johnson-1978)		189.2
110												
111	**Gamma GOF Test**											
112					A-D Test Statistic	2.283				**Anderson-Darling Gamma GOF Test**		

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	A	B	C	D	E	F	G	H	I	J	K	L
113					5% A-D Critical Value	0.803	Data Not Gamma Distributed at 5% Significance Level					
114					K-S Test Statistic	0.154	**Kolmogrov-Smirnoff Gamma GOF Test**					
115					5% K-S Critical Value	0.13	Data Not Gamma Distributed at 5% Significance Level					
116	**Data Not Gamma Distributed at 5% Significance Level**											
117												
118	**Gamma Statistics**											
119					k hat (MLE)	0.63				k star (bias corrected MLE)		0.606
120					Theta hat (MLE)	190.8				Theta star (bias corrected MLE)		198.3
121					nu hat (MLE)	64.25				nu star (bias corrected)		61.8
122					MLE Mean (bias corrected)	120.2				MLE Sd (bias corrected)		154.4
123										Approximate Chi Square Value (0.05)		44.72
124					Adjusted Level of Significance	0.0453				Adjusted Chi Square Value		44.3
125												
126	**Assuming Gamma Distribution**											
127			95% Approximate Gamma UCL (use when n>=50))			166				95% Adjusted Gamma UCL (use when n<50)		167.6
128												
129	**Lognormal GOF Test**											
130					Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk Lognormal GOF Test**					
131					5% Shapiro Wilk P Value	0.0109	Data Not Lognormal at 5% Significance Level					
132					Lilliefors Test Statistic	0.125	**Lilliefors Lognormal GOF Test**					
133					5% Lilliefors Critical Value	0.124	Data Not Lognormal at 5% Significance Level					
134	**Data Not Lognormal at 5% Significance Level**											
135												
136	**Lognormal Statistics**											
137					Minimum of Logged Data	1.949				Mean of logged Data		3.815
138					Maximum of Logged Data	7.496				SD of logged Data		1.308
139												
140	**Assuming Lognormal Distribution**											
141					95% H-UCL	174.3				90% Chebyshev (MVUE) UCL		176
142					95% Chebyshev (MVUE) UCL	208.8				97.5% Chebyshev (MVUE) UCL		254.4
143					99% Chebyshev (MVUE) UCL	343.8						
144												
145	**Nonparametric Distribution Free UCL Statistics**											
146	**Data do not follow a Discernible Distribution (0.05)**											
147												
148	**Nonparametric Distribution Free UCLs**											
149					95% CLT UCL	183.3				95% Jackknife UCL		184.5
150					95% Standard Bootstrap UCL	182				95% Bootstrap-t UCL		314.8
151					95% Hall's Bootstrap UCL	453.1				95% Percentile Bootstrap UCL		190.2
152					95% BCA Bootstrap UCL	228.2						
153					90% Chebyshev(Mean, Sd) UCL	235.4				95% Chebyshev(Mean, Sd) UCL		287.6
154					97.5% Chebyshev(Mean, Sd) UCL	360				99% Chebyshev(Mean, Sd) UCL		502.4
155												
156	**Suggested UCL to Use**											
157					**95% Chebyshev (Mean, Sd) UCL**	**287.6**						
158												
159	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
160	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
161	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
162	For additional insight the user may want to consult a statistician.											
163												

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	A	B	C	D	E	F	G	H	I	J	K	L
164	**Mercury**											
165	**General Statistics**											
166					Total Number of Observations	57				Number of Distinct Observations		56
167										Number of Missing Observations		0
168					Minimum	0.00472				Mean		3.538
169					Maximum	58.1				Median		0.285
170					SD	9.003				Std. Error of Mean		1.193
171					Coefficient of Variation	2.545				Skewness		4.687
172												
173	**Normal GOF Test**											
174					Shapiro Wilk Test Statistic	0.443	**Shapiro Wilk GOF Test**					
175					5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level					
176					Lilliefors Test Statistic	0.347	**Lilliefors GOF Test**					
177					5% Lilliefors Critical Value	0.117	Data Not Normal at 5% Significance Level					
178	**Data Not Normal at 5% Significance Level**											
179												
180	**Assuming Normal Distribution**											
181	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
182					95% Student's-t UCL	5.532				95% Adjusted-CLT UCL (Chen-1995)		6.29
183										95% Modified-t UCL (Johnson-1978)		5.656
184												
185	**Gamma GOF Test**											
186					A-D Test Statistic	2.721	**Anderson-Darling Gamma GOF Test**					
187					5% A-D Critical Value	0.858	Data Not Gamma Distributed at 5% Significance Level					
188					K-S Test Statistic	0.199	**Kolmogrov-Smirnoff Gamma GOF Test**					
189					5% K-S Critical Value	0.128	Data Not Gamma Distributed at 5% Significance Level					
190	**Data Not Gamma Distributed at 5% Significance Level**											
191												
192	**Gamma Statistics**											
193					k hat (MLE)	0.319				k star (bias corrected MLE)		0.314
194					Theta hat (MLE)	11.08				Theta star (bias corrected MLE)		11.26
195					nu hat (MLE)	36.41				nu star (bias corrected)		35.82
196					MLE Mean (bias corrected)	3.538				MLE Sd (bias corrected)		6.311
197										Approximate Chi Square Value (0.05)		23.13
198					Adjusted Level of Significance	0.0458				Adjusted Chi Square Value		22.86
199												
200	**Assuming Gamma Distribution**											
201					95% Approximate Gamma UCL (use when n>=50))	5.48				95% Adjusted Gamma UCL (use when n<50)		5.544
202												
203	**Lognormal GOF Test**											
204					Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk Lognormal GOF Test**					
205					5% Shapiro Wilk P Value	0.128	Data appear Lognormal at 5% Significance Level					
206					Lilliefors Test Statistic	0.0926	**Lilliefors Lognormal GOF Test**					
207					5% Lilliefors Critical Value	0.117	Data appear Lognormal at 5% Significance Level					
208	**Data appear Lognormal at 5% Significance Level**											
209												
210	**Lognormal Statistics**											
211					Minimum of Logged Data	-5.356				Mean of logged Data		-0.874
212					Maximum of Logged Data	4.062				SD of logged Data		2.246
213												
214	**Assuming Lognormal Distribution**											

215					95% H-UCL	18.27				90% Chebyshev (MVUE) UCL		10.75
216				95% Chebyshev (MVUE) UCL		13.57				97.5% Chebyshev (MVUE) UCL		17.48
217				99% Chebyshev (MVUE) UCL		25.17						
218												
219	**Nonparametric Distribution Free UCL Statistics**											
220	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
221												
222	**Nonparametric Distribution Free UCLs**											
223					95% CLT UCL	5.499				95% Jackknife UCL		5.532
224				95% Standard Bootstrap UCL		5.448				95% Bootstrap-t UCL		7.952
225				95% Hall's Bootstrap UCL		14.13				95% Percentile Bootstrap UCL		5.675
226				95% BCA Bootstrap UCL		6.578						
227				90% Chebyshev(Mean, Sd) UCL		7.115				95% Chebyshev(Mean, Sd) UCL		8.736
228				97.5% Chebyshev(Mean, Sd) UCL		10.99				99% Chebyshev(Mean, Sd) UCL		15.4
229												
230	**Suggested UCL to Use**											
231				**95% Chebyshev (Mean, Sd) UCL**		**8.736**						
232												
233	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
234	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
235	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
236	For additional insight the user may want to consult a statistician.											
237												
238	**Benzo(a)pyrene**											
239	**General Statistics**											
240					Total Number of Observations	51				Number of Distinct Observations		40
241					Number of Detects	42				Number of Non-Detects		9
242					Number of Distinct Detects	34				Number of Distinct Non-Detects		6
243					Minimum Detect	0.0039				Minimum Non-Detect		0.0025
244					Maximum Detect	0.38				Maximum Non-Detect		0.13
245					Variance Detects	0.00733				Percent Non-Detects		17.65%
246					Mean Detects	0.0765				SD Detects		0.0856
247					Median Detects	0.0535				CV Detects		1.119
248					Skewness Detects	2.293				Kurtosis Detects		5.621
249					Mean of Logged Detects	-3.059				SD of Logged Detects		1.018
250												
251	**Normal GOF Test on Detects Only**											
252					Shapiro Wilk Test Statistic	0.697				**Shapiro Wilk GOF Test**		
253					5% Shapiro Wilk Critical Value	0.942				Detected Data Not Normal at 5% Significance Level		
254					Lilliefors Test Statistic	0.278				**Lilliefors GOF Test**		
255					5% Lilliefors Critical Value	0.137				Detected Data Not Normal at 5% Significance Level		
256	**Detected Data Not Normal at 5% Significance Level**											
257												
258	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
259					Mean	0.0642				Standard Error of Mean		0.0116
260					SD	0.0814				95% KM (BCA) UCL		0.0845
261					95% KM (t) UCL	0.0836				95% KM (Percentile Bootstrap) UCL		0.0844
262					95% KM (z) UCL	0.0832				95% KM Bootstrap t UCL		0.0911
263					90% KM Chebyshev UCL	0.0989				95% KM Chebyshev UCL		0.115
264					97.5% KM Chebyshev UCL	0.136				99% KM Chebyshev UCL		0.179
265												

	A	B	C	D	E	F	G	H	I	J	K	L
266	**Gamma GOF Tests on Detected Observations Only**											
267					A-D Test Statistic	0.756	**Anderson-Darling GOF Test**					
268					5% A-D Critical Value	0.774	Detected data appear Gamma Distributed at 5% Significance Level					
269					K-S Test Statistic	0.162	**Kolmogrov-Smirnoff GOF**					
270					5% K-S Critical Value	0.14	Detected Data Not Gamma Distributed at 5% Significance Level					
271	**Detected data follow Appr. Gamma Distribution at 5% Significance Level**											
272												
273	**Gamma Statistics on Detected Data Only**											
274					k hat (MLE)	1.162	k star (bias corrected MLE)					1.095
275					Theta hat (MLE)	0.0659	Theta star (bias corrected MLE)					0.0699
276					nu hat (MLE)	97.6	nu star (bias corrected)					91.96
277					MLE Mean (bias corrected)	0.0765	MLE Sd (bias corrected)					0.0731
278												
279	**Gamma Kaplan-Meier (KM) Statistics**											
280					k hat (KM)	0.622	nu hat (KM)					63.42
281					Approximate Chi Square Value (63.42, α)	46.1	Adjusted Chi Square Value (63.42, β)					45.67
282					95% Gamma Approximate KM-UCL (use when n>=50)	0.0883	95% Gamma Adjusted KM-UCL (use when n<50)					0.0892
283												
284	**Gamma ROS Statistics using Imputed Non-Detects**											
285	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
286	GROS may not be used when kstar of detected data is small such as < 0.1											
287	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
288	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
289					Minimum	0.0039	Mean					0.065
290					Maximum	0.38	Median					0.034
291					SD	0.0815	CV					1.254
292					k hat (MLE)	0.991	k star (bias corrected MLE)					0.946
293					Theta hat (MLE)	0.0656	Theta star (bias corrected MLE)					0.0687
294					nu hat (MLE)	101.1	nu star (bias corrected)					96.5
295					MLE Mean (bias corrected)	0.065	MLE Sd (bias corrected)					0.0668
296							Adjusted Level of Significance (β)					0.0453
297					Approximate Chi Square Value (96.50, α)	74.84	Adjusted Chi Square Value (96.50, β)					74.28
298					95% Gamma Approximate UCL (use when n>=50)	0.0838	95% Gamma Adjusted UCL (use when n<50)					0.0845
299												
300	**Lognormal GOF Test on Detected Observations Only**											
301					Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk GOF Test**					
302					5% Shapiro Wilk Critical Value	0.942	Detected Data appear Lognormal at 5% Significance Level					
303					Lilliefors Test Statistic	0.096	**Lilliefors GOF Test**					
304					5% Lilliefors Critical Value	0.137	Detected Data appear Lognormal at 5% Significance Level					
305	**Detected Data appear Lognormal at 5% Significance Level**											
306												
307	**Lognormal ROS Statistics Using Imputed Non-Detects**											
308					Mean in Original Scale	0.0644	Mean in Log Scale					-3.41
309					SD in Original Scale	0.0819	SD in Log Scale					1.223
310					95% t UCL (assumes normality of ROS data)	0.0836	95% Percentile Bootstrap UCL					0.0842
311					95% BCA Bootstrap UCL	0.0879	95% Bootstrap t UCL					0.0904
312					95% H-UCL (Log ROS)	0.109						
313												
314	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
315					KM Mean (logged)	-3.516	95% H-UCL (KM -Log)					0.135
316					KM SD (logged)	1.392	95% Critical H Value (KM-Log)					2.748

317	KM Standard Error of Mean (logged)					0.2						
318												
319	**DL/2 Statistics**											
320	**DL/2 Normal**						**DL/2 Log-Transformed**					
321	Mean in Original Scale					0.0647	Mean in Log Scale					-3.564
322	SD in Original Scale					0.0821	SD in Log Scale					1.544
323	95% t UCL (Assumes normality)					0.084	95% H-Stat UCL					0.177
324	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
325												
326	**Nonparametric Distribution Free UCL Statistics**											
327	**Detected Data appear Approximate Gamma Distributed at 5% Significance Level**											
328												
329	**Suggested UCL to Use**											
330	95% KM (BCA) UCL					0.0845	**95% GROS Approximate Gamma UCL**					**0.0838**
331	95% Approximate Gamma KM-UCL					0.0883						
332												
333	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
334	Recommendations are based upon data size, data distribution, and skewness.											
335	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
336	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
337												
338	**Bis(2-ethylhexyl)phthalate**											
339	**General Statistics**											
340	Total Number of Observations					51	Number of Distinct Observations					34
341	Number of Detects					14	Number of Non-Detects					37
342	Number of Distinct Detects					13	Number of Distinct Non-Detects					21
343	Minimum Detect					0.0087	Minimum Non-Detect					0.0018
344	Maximum Detect					84	Maximum Non-Detect					0.37
345	Variance Detects					503.7	Percent Non-Detects					72.55%
346	Mean Detects					6.022	SD Detects					22.44
347	Median Detects					0.0135	CV Detects					3.727
348	Skewness Detects					3.742	Kurtosis Detects					14
349	Mean of Logged Detects					-3.447	SD of Logged Detects					2.382
350												
351	**Normal GOF Test on Detects Only**											
352	Shapiro Wilk Test Statistic					0.298	**Shapiro Wilk GOF Test**					
353	5% Shapiro Wilk Critical Value					0.874	Detected Data Not Normal at 5% Significance Level					
354	Lilliefors Test Statistic					0.533	**Lilliefors GOF Test**					
355	5% Lilliefors Critical Value					0.237	Detected Data Not Normal at 5% Significance Level					
356	**Detected Data Not Normal at 5% Significance Level**											
357												
358	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
359	Mean					1.655	Standard Error of Mean					1.692
360	SD					11.65	95% KM (BCA) UCL					4.952
361	95% KM (t) UCL					4.491	95% KM (Percentile Bootstrap) UCL					4.949
362	95% KM (z) UCL					4.439	95% KM Bootstrap t UCL					1792
363	90% KM Chebyshev UCL					6.732	**95% KM Chebyshev UCL**					**9.032**
364	97.5% KM Chebyshev UCL					12.22	99% KM Chebyshev UCL					18.49
365												
366	**Gamma GOF Tests on Detected Observations Only**											
367	A-D Test Statistic					4.158	**Anderson-Darling GOF Test**					

368	5% A-D Critical Value					0.926	Detected Data Not Gamma Distributed at 5% Significance Level					
369	K-S Test Statistic					0.493	**Kolmogrov-Smirnoff GOF**					
370	5% K-S Critical Value					0.257	Detected Data Not Gamma Distributed at 5% Significance Level					
371	**Detected Data Not Gamma Distributed at 5% Significance Level**											
372												
373	**Gamma Statistics on Detected Data Only**											
374	k hat (MLE)					0.147	k star (bias corrected MLE)					0.163
375	Theta hat (MLE)					40.96	Theta star (bias corrected MLE)					36.92
376	nu hat (MLE)					4.117	nu star (bias corrected)					4.568
377	MLE Mean (bias corrected)					6.022	MLE Sd (bias corrected)					14.91
378												
379	**Gamma Kaplan-Meier (KM) Statistics**											
380	k hat (KM)					0.0202	nu hat (KM)					2.061
381	Approximate Chi Square Value (2.06, α)					0.159	Adjusted Chi Square Value (2.06, β)					0.151
382	95% Gamma Approximate KM-UCL (use when n>=50)					21.44	95% Gamma Adjusted KM-UCL (use when n<50)					22.59
383	Gamma (KM) may not be used when k hat (KM) is < 0.1											
384												
385	**Gamma ROS Statistics using Imputed Non-Detects**											
386	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
387	GROS may not be used when kstar of detected data is small such as < 0.1											
388	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
389	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
390	Minimum					0.0087	Mean					1.66
391	Maximum					84	Median					0.01
392	SD					11.76	CV					7.083
393	k hat (MLE)					0.159	k star (bias corrected MLE)					0.163
394	Theta hat (MLE)					10.45	Theta star (bias corrected MLE)					10.21
395	nu hat (MLE)					16.21	nu star (bias corrected)					16.59
396	MLE Mean (bias corrected)					1.66	MLE Sd (bias corrected)					4.117
397							Adjusted Level of Significance (β)					0.0453
398	Approximate Chi Square Value (16.59, α)					8.382	Adjusted Chi Square Value (16.59, β)					8.212
399	95% Gamma Approximate UCL (use when n>=50)					3.287	95% Gamma Adjusted UCL (use when n<50)					3.355
400												
401	**Lognormal GOF Test on Detected Observations Only**											
402	Shapiro Wilk Test Statistic					0.551	**Shapiro Wilk GOF Test**					
403	5% Shapiro Wilk Critical Value					0.874	Detected Data Not Lognormal at 5% Significance Level					
404	Lilliefors Test Statistic					0.293	**Lilliefors GOF Test**					
405	5% Lilliefors Critical Value					0.237	Detected Data Not Lognormal at 5% Significance Level					
406	**Detected Data Not Lognormal at 5% Significance Level**											
407												
408	**Lognormal ROS Statistics Using Imputed Non-Detects**											
409	Mean in Original Scale					1.653	Mean in Log Scale					-7.577
410	SD in Original Scale					11.76	SD in Log Scale					3.081
411	95% t UCL (assumes normality of ROS data)					4.413	95% Percentile Bootstrap UCL					4.947
412	95% BCA Bootstrap UCL					6.601	95% Bootstrap t UCL					1982
413	95% H-UCL (Log ROS)					0.536						
414												
415	**DL/2 Statistics**											
416	**DL/2 Normal**						**DL/2 Log-Transformed**					
417	Mean in Original Scale					1.664	Mean in Log Scale					-4.682
418	SD in Original Scale					11.76	SD in Log Scale					1.741

North Pit Area UCL Calculations
0 to 2-feet below ground surface
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	A	B	C	D	E	F	G	H	I	J	K	L
419				95% t UCL (Assumes normality)		4.424					95% H-Stat UCL	0.0925
420	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
421												
422	**Nonparametric Distribution Free UCL Statistics**											
423	**Data do not follow a Discernible Distribution at 5% Significance Level**											
424												
425	**Suggested UCL to Use**											
426				99% KM (Chebyshev) UCL		18.49						
427												
428	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
429	Recommendations are based upon data size, data distribution, and skewness.											
430	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
431	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
432												

North Pit UCL Calculations
0 to 10-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			6/13/2014 11:06:45 AM								
5	From File			North Area 0 - 10.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												

North Pit UCL Calculations
0 to 10-feet below ground surface
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10	**Arsenic**											
11	**General Statistics**											
12					Total Number of Observations	99			Number of Distinct Observations			93
13									Number of Missing Observations			0
14					Minimum	0.891			Mean			4.959
15					Maximum	32.3			Median			3.77
16					SD	4.344			Std. Error of Mean			0.437
17					Coefficient of Variation	0.876			Skewness			4.137
18												
19	**Normal GOF Test**											
20					Shapiro Wilk Test Statistic	0.619	**Shapiro Wilk GOF Test**					
21					5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level					
22					Lilliefors Test Statistic	0.228	**Lilliefors GOF Test**					
23					5% Lilliefors Critical Value	0.089	Data Not Normal at 5% Significance Level					
24	**Data Not Normal at 5% Significance Level**											
25												
26	**Assuming Normal Distribution**											
27	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
28					95% Student's-t UCL	5.684			95% Adjusted-CLT UCL (Chen-1995)			5.871
29									95% Modified-t UCL (Johnson-1978)			5.714
30												
31	**Gamma GOF Test**											
32					A-D Test Statistic	2.486	**Anderson-Darling Gamma GOF Test**					
33					5% A-D Critical Value	0.761	Data Not Gamma Distributed at 5% Significance Level					
34					K-S Test Statistic	0.145	**Kolmogrov-Smirnoff Gamma GOF Test**					
35					5% K-S Critical Value	0.0908	Data Not Gamma Distributed at 5% Significance Level					
36	**Data Not Gamma Distributed at 5% Significance Level**											
37												
38	**Gamma Statistics**											
39					k hat (MLE)	2.608			k star (bias corrected MLE)			2.536
40					Theta hat (MLE)	1.901			Theta star (bias corrected MLE)			1.955
41					nu hat (MLE)	516.5			nu star (bias corrected)			502.2
42					MLE Mean (bias corrected)	4.959			MLE Sd (bias corrected)			3.114
43									Approximate Chi Square Value (0.05)			451.2
44					Adjusted Level of Significance	0.0476			Adjusted Chi Square Value			450.5
45												
46	**Assuming Gamma Distribution**											
47					95% Approximate Gamma UCL (use when n>=50))	5.519			95% Adjusted Gamma UCL (use when n<50)			5.528
48												
49	**Lognormal GOF Test**											
50					Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**					
51					5% Shapiro Wilk P Value	0.135	Data appear Lognormal at 5% Significance Level					
52					Lilliefors Test Statistic	0.0938	**Lilliefors Lognormal GOF Test**					
53					5% Lilliefors Critical Value	0.089	Data Not Lognormal at 5% Significance Level					
54	**Data appear Approximate Lognormal at 5% Significance Level**											
55												
56	**Lognormal Statistics**											
57					Minimum of Logged Data	-0.115			Mean of logged Data			1.397
58					Maximum of Logged Data	3.475			SD of logged Data			0.595
59												
60	**Assuming Lognormal Distribution**											

North Pit UCL Calculations
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61					95% H-UCL	5.416				90% Chebyshev (MVUE) UCL		5.747
62				95% Chebyshev (MVUE) UCL		6.169				97.5% Chebyshev (MVUE) UCL		6.753
63				99% Chebyshev (MVUE) UCL		7.902						
64												
65	**Nonparametric Distribution Free UCL Statistics**											
66	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
67												
68	**Nonparametric Distribution Free UCLs**											
69					95% CLT UCL	5.677				95% Jackknife UCL		5.684
70				95% Standard Bootstrap UCL		5.675				95% Bootstrap-t UCL		6.103
71				95% Hall's Bootstrap UCL		6.937				95% Percentile Bootstrap UCL		5.726
72				95% BCA Bootstrap UCL		5.873						
73				90% Chebyshev(Mean, Sd) UCL		6.269				95% Chebyshev(Mean, Sd) UCL		6.862
74				97.5% Chebyshev(Mean, Sd) UCL		7.686				99% Chebyshev(Mean, Sd) UCL		9.303
75												
76	**Suggested UCL to Use**											
77				**95% Chebyshev (Mean, Sd) UCL**		**6.862**						
78												
79	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
80	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
81	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
82	For additional insight the user may want to consult a statistician.											
83												
84												
85	**Lead**											
86	**General Statistics**											
87					Total Number of Observations	94				Number of Distinct Observations		86
88										Number of Missing Observations		0
89					Minimum	4.92				Mean		78.97
90					Maximum	1800				Median		13.45
91					SD	219.5				Std. Error of Mean		22.64
92					Coefficient of Variation	2.78				Skewness		6.11
93												
94	**Normal GOF Test**											
95					Shapiro Wilk Test Statistic	0.361				**Shapiro Wilk GOF Test**		
96					5% Shapiro Wilk P Value	0				Data Not Normal at 5% Significance Level		
97					Lilliefors Test Statistic	0.368				**Lilliefors GOF Test**		
98					5% Lilliefors Critical Value	0.0914				Data Not Normal at 5% Significance Level		
99	**Data Not Normal at 5% Significance Level**											
100												
101	**Assuming Normal Distribution**											
102				**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**		
103					95% Student's-t UCL	116.6				95% Adjusted-CLT UCL (Chen-1995)		131.5
104										95% Modified-t UCL (Johnson-1978)		119
105												
106	**Gamma GOF Test**											
107					A-D Test Statistic	7.987				**Anderson-Darling Gamma GOF Test**		
108					5% A-D Critical Value	0.815				Data Not Gamma Distributed at 5% Significance Level		
109					K-S Test Statistic	0.221				**Kolmogrov-Smirnoff Gamma GOF Test**		
110					5% K-S Critical Value	0.0974				Data Not Gamma Distributed at 5% Significance Level		
111	**Data Not Gamma Distributed at 5% Significance Level**											

North Pit UCL Calculations
0 to 10-feet below ground surface
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	A	B	C	D	E	F	G	H	I	J	K	L
112												
113	**Gamma Statistics**											
114					k hat (MLE)	0.532			k star (bias corrected MLE)			0.522
115					Theta hat (MLE)	148.5			Theta star (bias corrected MLE)			151.3
116					nu hat (MLE)	100			nu star (bias corrected)			98.15
117					MLE Mean (bias corrected)	78.97			MLE Sd (bias corrected)			109.3
118									Approximate Chi Square Value (0.05)			76.3
119					Adjusted Level of Significance	0.0474			Adjusted Chi Square Value			76
120												
121	**Assuming Gamma Distribution**											
122			95% Approximate Gamma UCL (use when n>=50))			101.6			95% Adjusted Gamma UCL (use when n<50)			102
123												
124	**Lognormal GOF Test**											
125					Shapiro Wilk Test Statistic	0.879			**Shapiro Wilk Lognormal GOF Test**			
126					5% Shapiro Wilk P Value	1.412E-10			Data Not Lognormal at 5% Significance Level			
127					Lilliefors Test Statistic	0.183			**Lilliefors Lognormal GOF Test**			
128					5% Lilliefors Critical Value	0.0914			Data Not Lognormal at 5% Significance Level			
129	**Data Not Lognormal at 5% Significance Level**											
130												
131	**Lognormal Statistics**											
132					Minimum of Logged Data	1.593			Mean of logged Data			3.186
133					Maximum of Logged Data	7.496			SD of logged Data			1.322
134												
135	**Assuming Lognormal Distribution**											
136					95% H-UCL	82.71			90% Chebyshev (MVUE) UCL			87.74
137					95% Chebyshev (MVUE) UCL	101.6			97.5% Chebyshev (MVUE) UCL			120.9
138					99% Chebyshev (MVUE) UCL	158.8						
139												
140	**Nonparametric Distribution Free UCL Statistics**											
141	**Data do not follow a Discernible Distribution (0.05)**											
142												
143	**Nonparametric Distribution Free UCLs**											
144					95% CLT UCL	116.2			95% Jackknife UCL			116.6
145					95% Standard Bootstrap UCL	116			95% Bootstrap-t UCL			165.3
146					95% Hall's Bootstrap UCL	237.5			95% Percentile Bootstrap UCL			121.4
147					95% BCA Bootstrap UCL	136.3						
148					90% Chebyshev(Mean, Sd) UCL	146.9			95% Chebyshev(Mean, Sd) UCL			177.7
149					97.5% Chebyshev(Mean, Sd) UCL	220.4			99% Chebyshev(Mean, Sd) UCL			304.2
150												
151	**Suggested UCL to Use**											
152					**95% Chebyshev (Mean, Sd) UCL**	**177.7**						
153												
154	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
155	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
156	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
157	For additional insight the user may want to consult a statistician.											
158												
159												
160	**Mercury**											
161	**General Statistics**											
162					Total Number of Observations	99			Number of Distinct Observations			98

North Pit UCL Calculations
0 to 10-feet below ground surface
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	A	B	C	D	E	F	G	H	I	J	K	L
163										Number of Missing Observations		1
164					Minimum	0.00125					Mean	2.393
165					Maximum	58.1					Median	0.0723
166					SD	7.505					Std. Error of Mean	0.754
167					Coefficient of Variation	3.136					Skewness	5.372
168												
169	**Normal GOF Test**											
170					Shapiro Wilk Test Statistic	0.376	**Shapiro Wilk GOF Test**					
171					5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level					
172					Lilliefors Test Statistic	0.375	**Lilliefors GOF Test**					
173					5% Lilliefors Critical Value	0.089	Data Not Normal at 5% Significance Level					
174	**Data Not Normal at 5% Significance Level**											
175												
176	**Assuming Normal Distribution**											
177	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
178					95% Student's-t UCL	3.645				95% Adjusted-CLT UCL (Chen-1995)		4.069
179										95% Modified-t UCL (Johnson-1978)		3.713
180												
181	**Gamma GOF Test**											
182					A-D Test Statistic	6.525	**Anderson-Darling Gamma GOF Test**					
183					5% A-D Critical Value	0.902	Data Not Gamma Distributed at 5% Significance Level					
184					K-S Test Statistic	0.217	**Kolmogrov-Smirnoff Gamma GOF Test**					
185					5% K-S Critical Value	0.0991	Data Not Gamma Distributed at 5% Significance Level					
186	**Data Not Gamma Distributed at 5% Significance Level**											
187												
188	**Gamma Statistics**											
189					k hat (MLE)	0.23				k star (bias corrected MLE)		0.23
190					Theta hat (MLE)	10.4				Theta star (bias corrected MLE)		10.41
191					nu hat (MLE)	45.56				nu star (bias corrected)		45.51
192					MLE Mean (bias corrected)	2.393				MLE Sd (bias corrected)		4.991
193										Approximate Chi Square Value (0.05)		31.03
194					Adjusted Level of Significance	0.0476				Adjusted Chi Square Value		30.86
195												
196	**Assuming Gamma Distribution**											
197					95% Approximate Gamma UCL (use when n>=50))	3.509				95% Adjusted Gamma UCL (use when n<50)		3.529
198												
199	**Lognormal GOF Test**											
200					Shapiro Wilk Test Statistic	0.942	**Shapiro Wilk Lognormal GOF Test**					
201					5% Shapiro Wilk P Value	4.1576E-4	Data Not Lognormal at 5% Significance Level					
202					Lilliefors Test Statistic	0.0942	**Lilliefors Lognormal GOF Test**					
203					5% Lilliefors Critical Value	0.089	Data Not Lognormal at 5% Significance Level					
204	**Data Not Lognormal at 5% Significance Level**											
205												
206	**Lognormal Statistics**											
207					Minimum of Logged Data	-6.685				Mean of logged Data		-2.256
208					Maximum of Logged Data	4.062				SD of logged Data		2.724
209												
210	**Assuming Lognormal Distribution**											
211					95% H-UCL	14.28				90% Chebyshev (MVUE) UCL		9.014
212					95% Chebyshev (MVUE) UCL	11.45				97.5% Chebyshev (MVUE) UCL		14.82
213					99% Chebyshev (MVUE) UCL	21.46						

214												
215	**Nonparametric Distribution Free UCL Statistics**											
216	**Data do not follow a Discernible Distribution (0.05)**											
217												
218	**Nonparametric Distribution Free UCLs**											
219					95% CLT UCL	3.633				95% Jackknife UCL	3.645	
220					95% Standard Bootstrap UCL	3.664				95% Bootstrap-t UCL	4.683	
221					95% Hall's Bootstrap UCL	4.771				95% Percentile Bootstrap UCL	3.782	
222					95% BCA Bootstrap UCL	4.115						
223					90% Chebyshev(Mean, Sd) UCL	4.656				95% Chebyshev(Mean, Sd) UCL	5.681	
224					97.5% Chebyshev(Mean, Sd) UCL	7.103				99% Chebyshev(Mean, Sd) UCL	9.898	
225												
226	**Suggested UCL to Use**											
227					**95% Chebyshev (Mean, Sd) UCL**	**5.681**						
228												
229	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
230	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
231	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
232	For additional insight the user may want to consult a statistician.											
233												
234	**Benzo(a)pyrene**											
235	**General Statistics**											
236					Total Number of Observations	93				Number of Distinct Observations	58	
237										Number of Missing Observations	1	
238					Number of Detects	54				Number of Non-Detects	39	
239					Number of Distinct Detects	44				Number of Distinct Non-Detects	15	
240					Minimum Detect	0.0039				Minimum Non-Detect	0.0018	
241					Maximum Detect	0.38				Maximum Non-Detect	0.13	
242					Variance Detects	0.00623				Percent Non-Detects	41.94%	
243					Mean Detects	0.0707				SD Detects	0.0789	
244					Median Detects	0.046				CV Detects	1.117	
245					Skewness Detects	2.438				Kurtosis Detects	6.821	
246					Mean of Logged Detects	-3.144				SD of Logged Detects	1.034	
247												
248	**Normal GOF Test on Detects Only**											
249					Shapiro Wilk Test Statistic	0.72				**Normal GOF Test on Detected Observations Only**		
250					5% Shapiro Wilk P Value	5.820E-13				Detected Data Not Normal at 5% Significance Level		
251					Lilliefors Test Statistic	0.254				**Lilliefors GOF Test**		
252					5% Lilliefors Critical Value	0.121				Detected Data Not Normal at 5% Significance Level		
253	**Detected Data Not Normal at 5% Significance Level**											
254												
255	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
256					Mean	0.0422				Standard Error of Mean	0.00718	
257					SD	0.0685				95% KM (BCA) UCL	0.0548	
258					95% KM (t) UCL	0.0541				95% KM (Percentile Bootstrap) UCL	0.0545	
259					95% KM (z) UCL	0.054				95% KM Bootstrap t UCL	0.0589	
260					90% KM Chebyshev UCL	0.0637				95% KM Chebyshev UCL	0.0735	
261					97.5% KM Chebyshev UCL	0.087				99% KM Chebyshev UCL	0.114	
262												
263	**Gamma GOF Tests on Detected Observations Only**											
264					A-D Test Statistic	0.636				**Anderson-Darling GOF Test**		

	A	B	C	D	E	F	G	H	I	J	K	L
265					5% A-D Critical Value	0.776	Detected data appear Gamma Distributed at 5% Significance Level					
266					K-S Test Statistic	0.133	**Kolmogrov-Smirnoff GOF**					
267					5% K-S Critical Value	0.124	Detected Data Not Gamma Distributed at 5% Significance Level					
268	**Detected data follow Appr. Gamma Distribution at 5% Significance Level**											
269												
270	**Gamma Statistics on Detected Data Only**											
271					k hat (MLE)	1.151			k star (bias corrected MLE)			1.099
272					Theta hat (MLE)	0.0614			Theta star (bias corrected MLE)			0.0643
273					nu hat (MLE)	124.3			nu star (bias corrected)			118.7
274					MLE Mean (bias corrected)	0.0707			MLE Sd (bias corrected)			0.0674
275												
276	**Gamma Kaplan-Meier (KM) Statistics**											
277					k hat (KM)	0.38			nu hat (KM)			70.71
278					Approximate Chi Square Value (70.71, α)	52.35			Adjusted Chi Square Value (70.71, β)			52.1
279					95% Gamma Approximate KM-UCL (use when n>=50)	0.057			95% Gamma Adjusted KM-UCL (use when n<50)			0.0573
280												
281	**Gamma ROS Statistics using Imputed Non-Detects**											
282	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
283	GROS may not be used when kstar of detected data is small such as < 0.1											
284	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
285	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
286					Minimum	0.0039			Mean			0.0452
287					Maximum	0.38			Median			0.013
288					SD	0.067			CV			1.482
289					k hat (MLE)	0.887			k star (bias corrected MLE)			0.865
290					Theta hat (MLE)	0.051			Theta star (bias corrected MLE)			0.0523
291					nu hat (MLE)	165			nu star (bias corrected)			161
292					MLE Mean (bias corrected)	0.0452			MLE Sd (bias corrected)			0.0486
293									Adjusted Level of Significance (β)			0.0474
294					Approximate Chi Square Value (160.97, α)	132.6			Adjusted Chi Square Value (160.97, β)			132.2
295					**95% Gamma Approximate UCL (use when n>=50)**	**0.0549**			95% Gamma Adjusted UCL (use when n<50)			0.0551
296												
297	**Lognormal GOF Test on Detected Observations Only**											
298					Lilliefors Test Statistic	0.0706	**Lilliefors GOF Test**					
299					5% Lilliefors Critical Value	0.121	Detected Data appear Lognormal at 5% Significance Level					
300	**Detected Data appear Lognormal at 5% Significance Level**											
301												
302	**Lognormal ROS Statistics Using Imputed Non-Detects**											
303					Mean in Original Scale	0.043			Mean in Log Scale			-4.132
304					SD in Original Scale	0.0682			SD in Log Scale			1.461
305					95% t UCL (assumes normality of ROS data)	0.0548			95% Percentile Bootstrap UCL			0.0547
306					95% BCA Bootstrap UCL	0.0581			95% Bootstrap t UCL			0.0589
307					95% H-UCL (Log ROS)	0.0709						
308												
309	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
310					KM Mean (logged)	-4.434			95% H-UCL (KM -Log)			0.0938
311					KM SD (logged)	1.738			95% Critical H Value (KM-Log)			3.07
312					KM Standard Error of Mean (logged)	0.184						
313												
314	**DL/2 Statistics**											
315	**DL/2 Normal**						**DL/2 Log-Transformed**					

North Pit UCL Calculations
0 to 10-feet below ground surface
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	A	B	C	D	E	F	G	H	I	J	K	L
316					Mean in Original Scale	0.0428				Mean in Log Scale		-4.481
317					SD in Original Scale	0.0687				SD in Log Scale		1.864
318					95% t UCL (Assumes normality)	0.0547				95% H-Stat UCL		0.12
319	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
320												
321	**Nonparametric Distribution Free UCL Statistics**											
322	**Detected Data appear Approximate Gamma Distributed at 5% Significance Level**											
323												
324	**Suggested UCL to Use**											
325					95% KM (t) UCL	0.0541				95% GROS Approximate Gamma UCL		0.0549
326					95% Approximate Gamma KM-UCL	0.057						
327												
328	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
329	Recommendations are based upon data size, data distribution, and skewness.											
330	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
331	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
332												
333	**Bis(2-ethylhexyl)phthalate**											
334	**General Statistics**											
335					Total Number of Observations	94				Number of Distinct Observations		49
336					Number of Detects	22				Number of Non-Detects		72
337					Number of Distinct Detects	19				Number of Distinct Non-Detects		31
338					Minimum Detect	0.008				Minimum Non-Detect		0.0018
339					Maximum Detect	84				Maximum Non-Detect		0.37
340					Variance Detects	319.9				Percent Non-Detects		76.6%
341					Mean Detects	3.931				SD Detects		17.89
342					Median Detects	0.015				CV Detects		4.55
343					Skewness Detects	4.688				Kurtosis Detects		21.99
344					Mean of Logged Detects	-3.34				SD of Logged Detects		2.207
345												
346	**Normal GOF Test on Detects Only**											
347					Shapiro Wilk Test Statistic	0.229	**Shapiro Wilk GOF Test**					
348					5% Shapiro Wilk Critical Value	0.911	Detected Data Not Normal at 5% Significance Level					
349					Lilliefors Test Statistic	0.515	**Lilliefors GOF Test**					
350					5% Lilliefors Critical Value	0.189	Detected Data Not Normal at 5% Significance Level					
351	**Detected Data Not Normal at 5% Significance Level**											
352												
353	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
354					Mean	0.922				Standard Error of Mean		0.91
355					SD	8.616				95% KM (BCA) UCL		2.719
356					95% KM (t) UCL	2.433				95% KM (Percentile Bootstrap) UCL		2.709
357					95% KM (z) UCL	2.418				95% KM Bootstrap t UCL		88.39
358					90% KM Chebyshev UCL	3.651				**95% KM Chebyshev UCL**		**4.887**
359					97.5% KM Chebyshev UCL	6.602				99% KM Chebyshev UCL		9.972
360												
361	**Gamma GOF Tests on Detected Observations Only**											
362					A-D Test Statistic	5.785	**Anderson-Darling GOF Test**					
363					5% A-D Critical Value	0.933	Detected Data Not Gamma Distributed at 5% Significance Level					
364					K-S Test Statistic	0.428	**Kolmogrov-Smirnoff GOF**					
365					5% K-S Critical Value	0.208	Detected Data Not Gamma Distributed at 5% Significance Level					
366	**Detected Data Not Gamma Distributed at 5% Significance Level**											

North Pit UCL Calculations
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	A	B	C	D	E	F	G	H	I	J	K	L
367												
368	**Gamma Statistics on Detected Data Only**											
369					k hat (MLE)	0.161			k star (bias corrected MLE)			0.17
370					Theta hat (MLE)	24.35			Theta star (bias corrected MLE)			23.16
371					nu hat (MLE)	7.104			nu star (bias corrected)			7.468
372					MLE Mean (bias corrected)	3.931			MLE Sd (bias corrected)			9.541
373												
374	**Gamma Kaplan-Meier (KM) Statistics**											
375					k hat (KM)	0.0114			nu hat (KM)			2.152
376					Approximate Chi Square Value (2.15, α)	0.173			Adjusted Chi Square Value (2.15, β)			0.168
377					95% Gamma Approximate KM-UCL (use when n>=50)	11.46			95% Gamma Adjusted KM-UCL (use when n<50)			11.81
378	Gamma (KM) may not be used when k hat (KM) is < 0.1											
379												
380	**Gamma ROS Statistics using Imputed Non-Detects**											
381	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
382	GROS may not be used when kstar of detected data is small such as < 0.1											
383	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
384	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
385					Minimum	0.008			Mean			0.928
386					Maximum	84			Median			0.01
387					SD	8.662			CV			9.337
388					k hat (MLE)	0.177			k star (bias corrected MLE)			0.179
389					Theta hat (MLE)	5.238			Theta star (bias corrected MLE)			5.196
390					nu hat (MLE)	33.29			nu star (bias corrected)			33.56
391					MLE Mean (bias corrected)	0.928			MLE Sd (bias corrected)			2.195
392									Adjusted Level of Significance (β)			0.0474
393					Approximate Chi Square Value (33.56, α)	21.32			Adjusted Chi Square Value (33.56, β)			21.16
394					95% Gamma Approximate UCL (use when n>=50)	1.461			95% Gamma Adjusted UCL (use when n<50)			1.471
395												
396	**Lognormal GOF Test on Detected Observations Only**											
397					Shapiro Wilk Test Statistic	0.651			**Shapiro Wilk GOF Test**			
398					5% Shapiro Wilk Critical Value	0.911			Detected Data Not Lognormal at 5% Significance Level			
399					Lilliefors Test Statistic	0.286			**Lilliefors GOF Test**			
400					5% Lilliefors Critical Value	0.189			Detected Data Not Lognormal at 5% Significance Level			
401	**Detected Data Not Lognormal at 5% Significance Level**											
402												
403	**Lognormal ROS Statistics Using Imputed Non-Detects**											
404					Mean in Original Scale	0.92			Mean in Log Scale			-8.2
405					SD in Original Scale	8.663			SD in Log Scale			3.27
406					95% t UCL (assumes normality of ROS data)	2.405			95% Percentile Bootstrap UCL			2.705
407					95% BCA Bootstrap UCL	3.615			95% Bootstrap t UCL			88.69
408					95% H-UCL (Log ROS)	0.327						
409												
410	**DL/2 Statistics**											
411	**DL/2 Normal**								**DL/2 Log-Transformed**			
412					Mean in Original Scale	0.929			Mean in Log Scale			-4.846
413					SD in Original Scale	8.662			SD in Log Scale			1.657
414					95% t UCL (Assumes normality)	2.414			95% H-Stat UCL			0.0517
415	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
416												
417	**Nonparametric Distribution Free UCL Statistics**											

North Pit UCL Calculations
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	A	B	C	D	E	F	G	H	I	J	K	L
418	**Data do not follow a Discernible Distribution at 5% Significance Level**											
419												
420	**Suggested UCL to Use**											
421					97.5% KM (Chebyshev) UCL	6.602						
422												
423	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
424	Recommendations are based upon data size, data distribution, and skewness.											
425	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
426	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
427												

North Pit Area UCL Calculations
Soil greater than 2-feet below ground surface
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1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation	6/13/2014 11:08:27 AM										
5	From File	North Area Greater than 2.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10	**Mercury**											
11	**General Statistics**											
12	Total Number of Observations	57					Number of Distinct Observations	57				
13	Number of Detects	55					Number of Non-Detects	2				
14	Number of Distinct Detects	55					Number of Distinct Non-Detects	2				
15	Minimum Detect	5.3100E-4					Minimum Non-Detect	2.6000E-4				
16	Maximum Detect	28.6					Maximum Non-Detect	3.6000E-4				
17	Variance Detects	15.02					Percent Non-Detects	3.509%				
18	Mean Detects	0.643					SD Detects	3.875				
19	Median Detects	0.00808					CV Detects	6.024				
20	Skewness Detects	7.219					Kurtosis Detects	52.9				
21	Mean of Logged Detects	-4.423					SD of Logged Detects	2.041				
22												
23	**Normal GOF Test on Detects Only**											
24	Shapiro Wilk Test Statistic	0.176					**Normal GOF Test on Detected Observations Only**					
25	5% Shapiro Wilk P Value	0					Detected Data Not Normal at 5% Significance Level					
26	Lilliefors Test Statistic	0.482					**Lilliefors GOF Test**					
27	5% Lilliefors Critical Value	0.119					Detected Data Not Normal at 5% Significance Level					
28	**Detected Data Not Normal at 5% Significance Level**											
29												
30	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
31	Mean	0.621					Standard Error of Mean	0.504				
32	SD	3.774					95% KM (BCA) UCL	1.655				
33	95% KM (t) UCL	1.464					95% KM (Percentile Bootstrap) UCL	1.604				
34	95% KM (z) UCL	1.45					95% KM Bootstrap t UCL	7.15				
35	90% KM Chebyshev UCL	2.134					**95% KM Chebyshev UCL**	**2.819**				
36	97.5% KM Chebyshev UCL	3.771					99% KM Chebyshev UCL	5.64				
37												
38	**Gamma GOF Tests on Detected Observations Only**											
39	A-D Test Statistic	11.26					**Anderson-Darling GOF Test**					
40	5% A-D Critical Value	0.926					Detected Data Not Gamma Distributed at 5% Significance Level					
41	K-S Test Statistic	0.356					**Kolmogrov-Smirnoff GOF**					
42	5% K-S Critical Value	0.134					Detected Data Not Gamma Distributed at 5% Significance Level					
43	**Detected Data Not Gamma Distributed at 5% Significance Level**											
44												
45	**Gamma Statistics on Detected Data Only**											
46	k hat (MLE)	0.187					k star (bias corrected MLE)	0.189				
47	Theta hat (MLE)	3.444					Theta star (bias corrected MLE)	3.409				
48	nu hat (MLE)	20.55					nu star (bias corrected)	20.76				
49	MLE Mean (bias corrected)	0.643					MLE Sd (bias corrected)	1.481				
50												
51	**Gamma Kaplan-Meier (KM) Statistics**											

North Pit Area UCL Calculations
Soil greater than 2-feet below ground surface
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52	k hat (KM)					0.0271	nu hat (KM)					3.085
53	Approximate Chi Square Value (3.08, α)					0.398	Adjusted Chi Square Value (3.08, β)					0.377
54	95% Gamma Approximate KM-UCL (use when n>=50)					4.812	95% Gamma Adjusted KM-UCL (use when n<50)					5.084
55	Gamma (KM) may not be used when k hat (KM) is < 0.1											
56												
57	**Gamma ROS Statistics using Imputed Non-Detects**											
58	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
59	GROS may not be used when kstar of detected data is small such as < 0.1											
60	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
61	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
62	Minimum					5.3100E-4	Mean					0.621
63	Maximum					28.6	Median					0.0082
64	SD					3.807	CV					6.13
65	k hat (MLE)					0.188	k star (bias corrected MLE)					0.19
66	Theta hat (MLE)					3.304	Theta star (bias corrected MLE)					3.273
67	nu hat (MLE)					21.43	nu star (bias corrected)					21.63
68	MLE Mean (bias corrected)					0.621	MLE Sd (bias corrected)					1.426
69							Adjusted Level of Significance (β)					0.0458
70	Approximate Chi Square Value (21.63, α)					12.06	Adjusted Chi Square Value (21.63, β)					11.88
71	95% Gamma Approximate UCL (use when n>=50)					1.114	95% Gamma Adjusted UCL (use when n<50)					1.131
72												
73	**Lognormal GOF Test on Detected Observations Only**											
74	Lilliefors Test Statistic					0.17	**Lilliefors GOF Test**					
75	5% Lilliefors Critical Value					0.119	Detected Data Not Lognormal at 5% Significance Level					
76	**Detected Data Not Lognormal at 5% Significance Level**											
77												
78	**Lognormal ROS Statistics Using Imputed Non-Detects**											
79	Mean in Original Scale					0.621	Mean in Log Scale					-4.588
80	SD in Original Scale					3.807	SD in Log Scale					2.186
81	95% t UCL (assumes normality of ROS data)					1.464	95% Percentile Bootstrap UCL					1.578
82	95% BCA Bootstrap UCL					2.173	95% Bootstrap t UCL					7.19
83	95% H-UCL (Log ROS)					0.365						
84												
85	**DL/2 Statistics**											
86	**DL/2 Normal**						**DL/2 Log-Transformed**					
87	Mean in Original Scale					0.621	Mean in Log Scale					-4.576
88	SD in Original Scale					3.807	SD in Log Scale					2.162
89	95% t UCL (Assumes normality)					1.464	95% H-Stat UCL					0.342
90	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
91												
92	**Nonparametric Distribution Free UCL Statistics**											
93	**Data do not follow a Discernible Distribution at 5% Significance Level**											
94												
95	**Suggested UCL to Use**											
96	99% KM (Chebyshev) UCL					5.64						
97												
98	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
99	Recommendations are based upon data size, data distribution, and skewness.											
100	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
101	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
102												

Subsurface Waste UCL Calculations
Waste greater than 2 feet to 10-feet below ground surface
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1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3			User Selected Options									
4			Date/Time of Computation	6/16/2014 6:38:07 PM								
5			From File	Waste All UCL Input 20140616.xls								
6			Full Precision	OFF								
7			Confidence Coefficient	95%								
8			Number of Bootstrap Operations	2000								
9												
10	**Arsenic**											
11	**General Statistics**											
12					Total Number of Observations	9			Number of Distinct Observations	9		
13									Number of Missing Observations	0		
14					Minimum	1.35			Mean	4.809		
15					Maximum	12.7			Median	3.72		
16					SD	3.343			Std. Error of Mean	1.114		
17					Coefficient of Variation	0.695			Skewness	1.839		
18	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
19	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
20	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
21	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
22												
23	**Normal GOF Test**											
24					Shapiro Wilk Test Statistic	0.821			**Shapiro Wilk GOF Test**			
25					5% Shapiro Wilk Critical Value	0.829			Data Not Normal at 5% Significance Level			
26					Lilliefors Test Statistic	0.225			**Lilliefors GOF Test**			
27					5% Lilliefors Critical Value	0.295			Data appear Normal at 5% Significance Level			
28	**Data appear Approximate Normal at 5% Significance Level**											
29												
30	**Assuming Normal Distribution**											
31					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
32					95% Student's-t UCL	6.881			95% Adjusted-CLT UCL (Chen-1995)	7.372		
33									95% Modified-t UCL (Johnson-1978)	6.995		
34												
35	**Gamma GOF Test**											
36					A-D Test Statistic	0.298			**Anderson-Darling Gamma GOF Test**			
37					5% A-D Critical Value	0.727			Detected data appear Gamma Distributed at 5% Significance Level			
38					K-S Test Statistic	0.158			**Kolmogrov-Smirnoff Gamma GOF Test**			
39					5% K-S Critical Value	0.282			Detected data appear Gamma Distributed at 5% Significance Level			
40	**Detected data appear Gamma Distributed at 5% Significance Level**											
41												
42	**Gamma Statistics**											
43					k hat (MLE)	2.847			k star (bias corrected MLE)	1.972		
44					Theta hat (MLE)	1.689			Theta star (bias corrected MLE)	2.438		
45					nu hat (MLE)	51.25			nu star (bias corrected)	35.5		
46					MLE Mean (bias corrected)	4.809			MLE Sd (bias corrected)	3.424		
47									Approximate Chi Square Value (0.05)	22.87		
48					Adjusted Level of Significance	0.0231			Adjusted Chi Square Value	20.75		
49												
50	**Assuming Gamma Distribution**											
51					95% Approximate Gamma UCL (use when n>=50))	7.466			95% Adjusted Gamma UCL (use when n<50)	8.226		

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52												
53	**Lognormal GOF Test**											
54					Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk Lognormal GOF Test**					
55					5% Shapiro Wilk Critical Value	0.829	Data appear Lognormal at 5% Significance Level					
56					Lilliefors Test Statistic	0.176	**Lilliefors Lognormal GOF Test**					
57					5% Lilliefors Critical Value	0.295	Data appear Lognormal at 5% Significance Level					
58	**Data appear Lognormal at 5% Significance Level**											
59												
60	**Lognormal Statistics**											
61					Minimum of Logged Data	0.3	Mean of logged Data	1.385				
62					Maximum of Logged Data	2.542	SD of logged Data	0.645				
63												
64	**Assuming Lognormal Distribution**											
65					95% H-UCL	8.743	90% Chebyshev (MVUE) UCL	7.944				
66					95% Chebyshev (MVUE) UCL	9.373	97.5% Chebyshev (MVUE) UCL	11.36				
67					99% Chebyshev (MVUE) UCL	15.25						
68												
69	**Nonparametric Distribution Free UCL Statistics**											
70	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
71												
72	**Nonparametric Distribution Free UCLs**											
73					95% CLT UCL	6.642	95% Jackknife UCL	6.881				
74					95% Standard Bootstrap UCL	6.524	95% Bootstrap-t UCL	8.689				
75					95% Hall's Bootstrap UCL	15.42	95% Percentile Bootstrap UCL	6.683				
76					95% BCA Bootstrap UCL	7.294						
77					90% Chebyshev(Mean, Sd) UCL	8.152	95% Chebyshev(Mean, Sd) UCL	9.667				
78					97.5% Chebyshev(Mean, Sd) UCL	11.77	99% Chebyshev(Mean, Sd) UCL	15.9				
79												
80	**Suggested UCL to Use**											
81					95% Student's-t UCL	6.881						
82	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
84	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
85	For additional insight the user may want to consult a statistician.											
86												
87	**Mercury**											
88	**General Statistics**											
89					Total Number of Observations	9	Number of Distinct Observations	9				
90					Number of Detects	8	Number of Non-Detects	1				
91					Number of Distinct Detects	8	Number of Distinct Non-Detects	1				
92					Minimum Detect	0.00215	Minimum Non-Detect	2.7000E-4				
93					Maximum Detect	5.27	Maximum Non-Detect	2.7000E-4				
94					Variance Detects	3.365	Percent Non-Detects	11.11%				
95					Mean Detects	0.735	SD Detects	1.834				
96					Median Detects	0.0618	CV Detects	2.495				
97					Skewness Detects	2.816	Kurtosis Detects	7.948				
98					Mean of Logged Detects	-2.627	SD of Logged Detects	2.337				
99												
100	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
101	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
102	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											

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	A	B	C	D	E	F	G	H	I	J	K	L
103	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
104												
105	**Normal GOF Test on Detects Only**											
106					Shapiro Wilk Test Statistic	0.459	**Shapiro Wilk GOF Test**					
107					5% Shapiro Wilk Critical Value	0.818	Detected Data Not Normal at 5% Significance Level					
108					Lilliefors Test Statistic	0.48	**Lilliefors GOF Test**					
109					5% Lilliefors Critical Value	0.313	Detected Data Not Normal at 5% Significance Level					
110	**Detected Data Not Normal at 5% Significance Level**											
111												
112	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
113					Mean	0.654				Standard Error of Mean		0.582
114					SD	1.634				95% KM (BCA) UCL		1.796
115					95% KM (t) UCL	1.736				95% KM (Percentile Bootstrap) UCL		1.797
116					95% KM (z) UCL	1.611				95% KM Bootstrap t UCL		18.54
117					90% KM Chebyshev UCL	2.4				**95% KM Chebyshev UCL**		**3.192**
118					97.5% KM Chebyshev UCL	4.29				99% KM Chebyshev UCL		6.447
119												
120	**Gamma GOF Tests on Detected Observations Only**											
121					A-D Test Statistic	0.828	**Anderson-Darling GOF Test**					
122					5% A-D Critical Value	0.798	Detected Data Not Gamma Distributed at 5% Significance Level					
123					K-S Test Statistic	0.328	**Kolmogrov-Smirnoff GOF**					
124					5% K-S Critical Value	0.317	Detected Data Not Gamma Distributed at 5% Significance Level					
125	**Detected Data Not Gamma Distributed at 5% Significance Level**											
126												
127	**Gamma Statistics on Detected Data Only**											
128					k hat (MLE)	0.298				k star (bias corrected MLE)		0.269
129					Theta hat (MLE)	2.47				Theta star (bias corrected MLE)		2.729
130					nu hat (MLE)	4.763				nu star (bias corrected)		4.31
131					MLE Mean (bias corrected)	0.735				MLE Sd (bias corrected)		1.417
132												
133	**Gamma Kaplan-Meier (KM) Statistics**											
134					k hat (KM)	0.16				nu hat (KM)		2.879
135					Approximate Chi Square Value (2.88, α)	0.338				Adjusted Chi Square Value (2.88, β)		0.213
136					95% Gamma Approximate KM-UCL (use when n>=50)	5.574				95% Gamma Adjusted KM-UCL (use when n<50)		8.847
137												
138	**Gamma ROS Statistics using Imputed Non-Detects**											
139	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
140	GROS may not be used when kstar of detected data is small such as < 0.1											
141	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
142	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
143					Minimum	0.00215				Mean		0.655
144					Maximum	5.27				Median		0.0507
145					SD	1.733				CV		2.647
146					k hat (MLE)	0.287				k star (bias corrected MLE)		0.265
147					Theta hat (MLE)	2.283				Theta star (bias corrected MLE)		2.468
148					nu hat (MLE)	5.161				nu star (bias corrected)		4.774
149					MLE Mean (bias corrected)	0.655				MLE Sd (bias corrected)		1.271
150										Adjusted Level of Significance (β)		0.0231
151					Approximate Chi Square Value (4.77, α)	1.049				Adjusted Chi Square Value (4.77, β)		0.732
152					95% Gamma Approximate UCL (use when n>=50)	2.979				95% Gamma Adjusted UCL (use when n<50)		4.27
153												

	A	B	C	D	E	F	G	H	I	J	K	L
154	**Lognormal GOF Test on Detected Observations Only**											
155					Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk GOF Test**					
156					5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level					
157					Lilliefors Test Statistic	0.188	**Lilliefors GOF Test**					
158					5% Lilliefors Critical Value	0.313	Detected Data appear Lognormal at 5% Significance Level					
159	**Detected Data appear Lognormal at 5% Significance Level**											
160												
161	**Lognormal ROS Statistics Using Imputed Non-Detects**											
162					Mean in Original Scale	0.654				Mean in Log Scale		-3.259
163					SD in Original Scale	1.733				SD in Log Scale		2.895
164					95% t UCL (assumes normality of ROS data)	1.728				95% Percentile Bootstrap UCL		1.796
165					95% BCA Bootstrap UCL	2.381				95% Bootstrap t UCL		18.53
166					95% H-UCL (Log ROS)	9809						
167												
168	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
169					KM Mean (logged)	-3.248				95% H-UCL (KM -Log)		2149
170					KM SD (logged)	2.709				95% Critical H Value (KM-Log)		7.573
171					KM Standard Error of Mean (logged)	0.965						
172												
173	**DL/2 Statistics**											
174	**DL/2 Normal**						**DL/2 Log-Transformed**					
175					Mean in Original Scale	0.654				Mean in Log Scale		-3.325
176					SD in Original Scale	1.733				SD in Log Scale		3.028
177					95% t UCL (Assumes normality)	1.728				95% H-Stat UCL		29065
178	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
179												
180	**Nonparametric Distribution Free UCL Statistics**											
181	**Detected Data appear Lognormal Distributed at 5% Significance Level**											
182												
183	**Suggested UCL to Use**											
184					99% KM (Chebyshev) UCL	6.447						
185	**Warning: Recommended UCL exceeds the maximum observation**											
186	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
187	Recommendations are based upon data size, data distribution, and skewness.											
188	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
189	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
190												
191	**Heptachlor Epoxide**											
192	**General Statistics**											
193					Total Number of Observations	9				Number of Distinct Observations		9
194					Number of Detects	5				Number of Non-Detects		4
195					Number of Distinct Detects	5				Number of Distinct Non-Detects		4
196					Minimum Detect	0.016				Minimum Non-Detect		0.0019
197					Maximum Detect	3.8				Maximum Non-Detect		0.046
198					Variance Detects	2.295				Percent Non-Detects		44.44%
199					Mean Detects	1.231				SD Detects		1.515
200					Median Detects	0.73				CV Detects		1.23
201					Skewness Detects	1.708				Kurtosis Detects		3.037
202					Mean of Logged Detects	-0.805				SD of Logged Detects		2.073
203	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
204	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											

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	A	B	C	D	E	F	G	H	I	J	K	L
205	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
206	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
207												
208	**Normal GOF Test on Detects Only**											
209					Shapiro Wilk Test Statistic	0.826	**Shapiro Wilk GOF Test**					
210					5% Shapiro Wilk Critical Value	0.762	Detected Data appear Normal at 5% Significance Level					
211					Lilliefors Test Statistic	0.282	**Lilliefors GOF Test**					
212					5% Lilliefors Critical Value	0.396	Detected Data appear Normal at 5% Significance Level					
213	**Detected Data appear Normal at 5% Significance Level**											
214												
215	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
216					Mean	0.687				Standard Error of Mean		0.439
217					SD	1.179				95% KM (BCA) UCL		1.362
218					95% KM (t) UCL	1.504				95% KM (Percentile Bootstrap) UCL		1.42
219					95% KM (z) UCL	1.41				95% KM Bootstrap t UCL		2.652
220					90% KM Chebyshev UCL	2.005				95% KM Chebyshev UCL		2.602
221					97.5% KM Chebyshev UCL	3.431				99% KM Chebyshev UCL		5.059
222												
223	**Gamma GOF Tests on Detected Observations Only**											
224					A-D Test Statistic	0.179	**Anderson-Darling GOF Test**					
225					5% A-D Critical Value	0.705	Detected data appear Gamma Distributed at 5% Significance Level					
226					K-S Test Statistic	0.141	**Kolmogrov-Smirnoff GOF**					
227					5% K-S Critical Value	0.369	Detected data appear Gamma Distributed at 5% Significance Level					
228	**Detected data appear Gamma Distributed at 5% Significance Level**											
229												
230	**Gamma Statistics on Detected Data Only**											
231					k hat (MLE)	0.609				k star (bias corrected MLE)		0.377
232					Theta hat (MLE)	2.022				Theta star (bias corrected MLE)		3.267
233					nu hat (MLE)	6.088				nu star (bias corrected)		3.769
234					MLE Mean (bias corrected)	1.231				MLE Sd (bias corrected)		2.006
235												
236	**Gamma Kaplan-Meier (KM) Statistics**											
237					k hat (KM)	0.34				nu hat (KM)		6.116
238					Approximate Chi Square Value (6.12, α)	1.699				Adjusted Chi Square Value (6.12, β)		1.256
239					95% Gamma Approximate KM-UCL (use when n>=50)	2.473				95% Gamma Adjusted KM-UCL (use when n<50)		3.347
240												
241	**Gamma ROS Statistics using Imputed Non-Detects**											
242	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
243	GROS may not be used when kstar of detected data is small such as < 0.1											
244	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
245	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
246					Minimum	0.01				Mean		0.688
247					Maximum	3.8				Median		0.016
248					SD	1.25				CV		1.815
249					k hat (MLE)	0.322				k star (bias corrected MLE)		0.288
250					Theta hat (MLE)	2.141				Theta star (bias corrected MLE)		2.387
251					nu hat (MLE)	5.788				nu star (bias corrected)		5.192
252					MLE Mean (bias corrected)	0.688				MLE Sd (bias corrected)		1.282
253										Adjusted Level of Significance (β)		0.0231
254					Approximate Chi Square Value (5.19, α)	1.242				Adjusted Chi Square Value (5.19, β)		0.884
255					95% Gamma Approximate UCL (use when n>=50)	2.878				95% Gamma Adjusted UCL (use when n<50)		4.042

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	A	B	C	D	E	F	G	H	I	J	K	L
256												
257	**Lognormal GOF Test on Detected Observations Only**											
258					Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk GOF Test**					
259					5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level					
260					Lilliefors Test Statistic	0.23	**Lilliefors GOF Test**					
261					5% Lilliefors Critical Value	0.396	Detected Data appear Lognormal at 5% Significance Level					
262	**Detected Data appear Lognormal at 5% Significance Level**											
263												
264	**Lognormal ROS Statistics Using Imputed Non-Detects**											
265					Mean in Original Scale	0.687				Mean in Log Scale	-2.836	
266					SD in Original Scale	1.251				SD in Log Scale	2.868	
267				95% t UCL (assumes normality of ROS data)		1.462				95% Percentile Bootstrap UCL	1.415	
268					95% BCA Bootstrap UCL	1.659				95% Bootstrap t UCL	3.523	
269					95% H-UCL (Log ROS)	11920						
270												
271	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
272					KM Mean (logged)	-2.877				95% H-UCL (KM -Log)	5697	
273					KM SD (logged)	2.784				95% Critical H Value (KM-Log)	7.773	
274					KM Standard Error of Mean (logged)	1.099						
275												
276	**DL/2 Statistics**											
277	**DL/2 Normal**						**DL/2 Log-Transformed**					
278					Mean in Original Scale	0.689				Mean in Log Scale	-2.669	
279					SD in Original Scale	1.249				SD in Log Scale	2.782	
280					95% t UCL (Assumes normality)	1.463				95% H-Stat UCL	6911	
281	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
282												
283	**Nonparametric Distribution Free UCL Statistics**											
284	**Detected Data appear Normal Distributed at 5% Significance Level**											
285												
286	**Suggested UCL to Use**											
287					95% KM (t) UCL	1.504				95% KM (Percentile Bootstrap) UCL	1.42	
288	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
289	Recommendations are based upon data size, data distribution, and skewness.											
290	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
291	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
292												
293	**1,3,5-Trimethylbenzene**											
294	**General Statistics**											
295					Total Number of Observations	9				Number of Distinct Observations	8	
296										Number of Missing Observations	0	
297					Minimum	0.014				Mean	26.41	
298					Maximum	140				Median	7.6	
299					SD	45.2				Std. Error of Mean	15.07	
300					Coefficient of Variation	1.711				Skewness	2.444	
301												
302	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
303	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
304	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
305	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
306												

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	A	B	C	D	E	F	G	H	I	J	K	L
307	**Normal GOF Test**											
308					Shapiro Wilk Test Statistic	0.639	**Shapiro Wilk GOF Test**					
309					5% Shapiro Wilk Critical Value	0.829	Data Not Normal at 5% Significance Level					
310					Lilliefors Test Statistic	0.323	**Lilliefors GOF Test**					
311					5% Lilliefors Critical Value	0.295	Data Not Normal at 5% Significance Level					
312	**Data Not Normal at 5% Significance Level**											
313												
314	**Assuming Normal Distribution**											
315	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
316					95% Student's-t UCL	54.43				95% Adjusted-CLT UCL (Chen-1995)		64.31
317										95% Modified-t UCL (Johnson-1978)		56.47
318												
319	**Gamma GOF Test**											
320					A-D Test Statistic	0.205	**Anderson-Darling Gamma GOF Test**					
321					5% A-D Critical Value	0.794	Detected data appear Gamma Distributed at 5% Significance Level					
322					K-S Test Statistic	0.177	**Kolmogrov-Smirnoff Gamma GOF Test**					
323					5% K-S Critical Value	0.299	Detected data appear Gamma Distributed at 5% Significance Level					
324	**Detected data appear Gamma Distributed at 5% Significance Level**											
325												
326	**Gamma Statistics**											
327					k hat (MLE)	0.371				k star (bias corrected MLE)		0.321
328					Theta hat (MLE)	71.25				Theta star (bias corrected MLE)		82.23
329					nu hat (MLE)	6.671				nu star (bias corrected)		5.781
330					MLE Mean (bias corrected)	26.41				MLE Sd (bias corrected)		46.6
331										Approximate Chi Square Value (0.05)		1.529
332					Adjusted Level of Significance	0.0231				Adjusted Chi Square Value		1.116
333												
334	**Assuming Gamma Distribution**											
335					95% Approximate Gamma UCL (use when n>=50)	99.85				95% Adjusted Gamma UCL (use when n<50)		136.8
336												
337	**Lognormal GOF Test**											
338					Shapiro Wilk Test Statistic	0.917	**Shapiro Wilk Lognormal GOF Test**					
339					5% Shapiro Wilk Critical Value	0.829	Data appear Lognormal at 5% Significance Level					
340					Lilliefors Test Statistic	0.245	**Lilliefors Lognormal GOF Test**					
341					5% Lilliefors Critical Value	0.295	Data appear Lognormal at 5% Significance Level					
342	**Data appear Lognormal at 5% Significance Level**											
343												
344	**Lognormal Statistics**											
345					Minimum of Logged Data	-4.269				Mean of logged Data		1.476
346					Maximum of Logged Data	4.942				SD of logged Data		2.808
347												
348	**Assuming Lognormal Distribution**											
349					95% H-UCL	538451				90% Chebyshev (MVUE) UCL		245.4
350					95% Chebyshev (MVUE) UCL	324.8				97.5% Chebyshev (MVUE) UCL		434.9
351					99% Chebyshev (MVUE) UCL	651.3						
352												
353	**Nonparametric Distribution Free UCL Statistics**											
354	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
355												
356	**Nonparametric Distribution Free UCLs**											
357					95% CLT UCL	51.19				95% Jackknife UCL		54.43

Subsurface Waste UCL Calculations
Waste greater than 2 feet to 10-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
358					95% Standard Bootstrap UCL	49.94				95% Bootstrap-t UCL		142.1
359					95% Hall's Bootstrap UCL	139.9				95% Percentile Bootstrap UCL		53.64
360					95% BCA Bootstrap UCL	66.36						
361					90% Chebyshev(Mean, Sd) UCL	71.61				95% Chebyshev(Mean, Sd) UCL		92.08
362					97.5% Chebyshev(Mean, Sd) UCL	120.5				99% Chebyshev(Mean, Sd) UCL		176.3
363												
364					**Suggested UCL to Use**							
365					95% Adjusted Gamma UCL	136.8						
366	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
367	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
368	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
369	For additional insight the user may want to consult a statistician.											
370												
371	**Benzene**											
372	**General Statistics**											
373					Total Number of Observations	9				Number of Distinct Observations		9
374										Number of Missing Observations		0
375					Minimum	0.073				Mean		39.51
376					Maximum	240				Median		12
377					SD	77.05				Std. Error of Mean		25.68
378					Coefficient of Variation	1.95				Skewness		2.752
379	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
380	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
381	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
382	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
383												
384	**Normal GOF Test**											
385					Shapiro Wilk Test Statistic	0.547	**Shapiro Wilk GOF Test**					
386					5% Shapiro Wilk Critical Value	0.829	Data Not Normal at 5% Significance Level					
387					Lilliefors Test Statistic	0.403	**Lilliefors GOF Test**					
388					5% Lilliefors Critical Value	0.295	Data Not Normal at 5% Significance Level					
389	**Data Not Normal at 5% Significance Level**											
390												
391	**Assuming Normal Distribution**											
392	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
393					95% Student's-t UCL	87.27				95% Adjusted-CLT UCL (Chen-1995)		106.9
394										95% Modified-t UCL (Johnson-1978)		91.2
395												
396	**Gamma GOF Test**											
397					A-D Test Statistic	0.517	**Anderson-Darling Gamma GOF Test**					
398					5% A-D Critical Value	0.783	Detected data appear Gamma Distributed at 5% Significance Level					
399					K-S Test Statistic	0.287	**Kolmogrov-Smirnoff Gamma GOF Test**					
400					5% K-S Critical Value	0.296	Detected data appear Gamma Distributed at 5% Significance Level					
401	**Detected data appear Gamma Distributed at 5% Significance Level**											
402												
403	**Gamma Statistics**											
404					k hat (MLE)	0.435				k star (bias corrected MLE)		0.364
405					Theta hat (MLE)	90.78				Theta star (bias corrected MLE)		108.5
406					nu hat (MLE)	7.834				nu star (bias corrected)		6.556
407					MLE Mean (bias corrected)	39.51				MLE Sd (bias corrected)		65.47
408										Approximate Chi Square Value (0.05)		1.93

Subsurface Waste UCL Calculations
Waste greater than 2 feet to 10-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
409	Adjusted Level of Significance					0.0231	Adjusted Chi Square Value					1.447
410												
411	**Assuming Gamma Distribution**											
412	95% Approximate Gamma UCL (use when n>=50)					134.2	95% Adjusted Gamma UCL (use when n<50)					178.9
413												
414	**Lognormal GOF Test**											
415	Shapiro Wilk Test Statistic					0.905	**Shapiro Wilk Lognormal GOF Test**					
416	5% Shapiro Wilk Critical Value					0.829	Data appear Lognormal at 5% Significance Level					
417	Lilliefors Test Statistic					0.212	**Lilliefors Lognormal GOF Test**					
418	5% Lilliefors Critical Value					0.295	Data appear Lognormal at 5% Significance Level					
419	**Data appear Lognormal at 5% Significance Level**											
420												
421	**Lognormal Statistics**											
422	Minimum of Logged Data					-2.617	Mean of logged Data					2.185
423	Maximum of Logged Data					5.481	SD of logged Data					2.223
424												
425	**Assuming Lognormal Distribution**											
426	95% H-UCL					14760	90% Chebyshev (MVUE) UCL					180.7
427	95% Chebyshev (MVUE) UCL					236.7	97.5% Chebyshev (MVUE) UCL					314.3
428	99% Chebyshev (MVUE) UCL					466.8						
429												
430	**Nonparametric Distribution Free UCL Statistics**											
431	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
432												
433	**Nonparametric Distribution Free UCLs**											
434	95% CLT UCL					81.75	95% Jackknife UCL					87.27
435	95% Standard Bootstrap UCL					77.73	95% Bootstrap-t UCL					485.3
436	95% Hall's Bootstrap UCL					379.6	95% Percentile Bootstrap UCL					87.37
437	95% BCA Bootstrap UCL					111.6						
438	90% Chebyshev(Mean, Sd) UCL					116.6	95% Chebyshev(Mean, Sd) UCL					151.5
439	97.5% Chebyshev(Mean, Sd) UCL					199.9	99% Chebyshev(Mean, Sd) UCL					295.1
440												
441	**Suggested UCL to Use**											
442	95% Adjusted Gamma UCL					178.9						
443	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
444	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
445	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
446	For additional insight the user may want to consult a statistician.											
447												
448	**Ethylbenzene**											
449	**General Statistics**											
450	Total Number of Observations					9	Number of Distinct Observations					9
451							Number of Missing Observations					0
452	Minimum					1.9	Mean					79.89
453	Maximum					250	Median					46
454	SD					84.42	Std. Error of Mean					28.14
455	Coefficient of Variation					1.057	Skewness					1.173
456												
457	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
458	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
459	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											

Subsurface Waste UCL Calculations
Waste greater than 2 feet to 10-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
460	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
461												
462	**Normal GOF Test**											
463					Shapiro Wilk Test Statistic	0.873	**Shapiro Wilk GOF Test**					
464					5% Shapiro Wilk Critical Value	0.829	Data appear Normal at 5% Significance Level					
465					Lilliefors Test Statistic	0.212	**Lilliefors GOF Test**					
466					5% Lilliefors Critical Value	0.295	Data appear Normal at 5% Significance Level					
467	**Data appear Normal at 5% Significance Level**											
468												
469	**Assuming Normal Distribution**											
470	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
471					95% Student's-t UCL	132.2				95% Adjusted-CLT UCL (Chen-1995)		137.9
472										95% Modified-t UCL (Johnson-1978)		134
473												
474	**Gamma GOF Test**											
475					A-D Test Statistic	0.244	**Anderson-Darling Gamma GOF Test**					
476					5% A-D Critical Value	0.756	Detected data appear Gamma Distributed at 5% Significance Level					
477					K-S Test Statistic	0.154	**Kolmogrov-Smirnoff Gamma GOF Test**					
478					5% K-S Critical Value	0.29	Detected data appear Gamma Distributed at 5% Significance Level					
479	**Detected data appear Gamma Distributed at 5% Significance Level**											
480												
481	**Gamma Statistics**											
482					k hat (MLE)	0.693				k star (bias corrected MLE)		0.536
483					Theta hat (MLE)	115.3				Theta star (bias corrected MLE)		149.1
484					nu hat (MLE)	12.47				nu star (bias corrected)		9.645
485					MLE Mean (bias corrected)	79.89				MLE Sd (bias corrected)		109.1
486										Approximate Chi Square Value (0.05)		3.721
487					Adjusted Level of Significance	0.0231				Adjusted Chi Square Value		2.987
488												
489	**Assuming Gamma Distribution**											
490					95% Approximate Gamma UCL (use when n>=50))	207.1				95% Adjusted Gamma UCL (use when n<50)		258
491												
492	**Lognormal GOF Test**											
493					Shapiro Wilk Test Statistic	0.881	**Shapiro Wilk Lognormal GOF Test**					
494					5% Shapiro Wilk Critical Value	0.829	Data appear Lognormal at 5% Significance Level					
495					Lilliefors Test Statistic	0.195	**Lilliefors Lognormal GOF Test**					
496					5% Lilliefors Critical Value	0.295	Data appear Lognormal at 5% Significance Level					
497	**Data appear Lognormal at 5% Significance Level**											
498												
499	**Lognormal Statistics**											
500					Minimum of Logged Data	0.642				Mean of logged Data		3.507
501					Maximum of Logged Data	5.521				SD of logged Data		1.773
502												
503	**Assuming Lognormal Distribution**											
504					95% H-UCL	3979				90% Chebyshev (MVUE) UCL		324.6
505					95% Chebyshev (MVUE) UCL	419.2				97.5% Chebyshev (MVUE) UCL		550.5
506					99% Chebyshev (MVUE) UCL	808.3						
507												
508	**Nonparametric Distribution Free UCL Statistics**											
509	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
510												

	A	B	C	D	E	F	G	H	I	J	K	L
511	**Nonparametric Distribution Free UCLs**											
512					95% CLT UCL	126.2				95% Jackknife UCL		132.2
513					95% Standard Bootstrap UCL	123.6				95% Bootstrap-t UCL		159
514					95% Hall's Bootstrap UCL	175				95% Percentile Bootstrap UCL		126
515					95% BCA Bootstrap UCL	134.2						
516					90% Chebyshev(Mean, Sd) UCL	164.3				95% Chebyshev(Mean, Sd) UCL		202.5
517					97.5% Chebyshev(Mean, Sd) UCL	255.6				99% Chebyshev(Mean, Sd) UCL		359.9
518												
519	**Suggested UCL to Use**											
520					95% Student's-t UCL	132.2						
521	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
522	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
523	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
524	For additional insight the user may want to consult a statistician.											
525												
526	**1-Methylnaphthalene**											
527	**General Statistics**											
528					Total Number of Observations	9				Number of Distinct Observations		9
529										Number of Missing Observations		0
530					Minimum	2.1				Mean		55.14
531					Maximum	250				Median		20
532					SD	83.43				Std. Error of Mean		27.81
533					Coefficient of Variation	1.513				Skewness		2.004
534	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
535	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
536	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
537	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
538												
539	**Normal GOF Test**											
540					Shapiro Wilk Test Statistic	0.701				**Shapiro Wilk GOF Test**		
541					5% Shapiro Wilk Critical Value	0.829				Data Not Normal at 5% Significance Level		
542					Lilliefors Test Statistic	0.321				**Lilliefors GOF Test**		
543					5% Lilliefors Critical Value	0.295				Data Not Normal at 5% Significance Level		
544	**Data Not Normal at 5% Significance Level**											
545												
546	**Assuming Normal Distribution**											
547	**95% Normal UCL**									**95% UCLs (Adjusted for Skewness)**		
548					95% Student's-t UCL	106.9				95% Adjusted-CLT UCL (Chen-1995)		120.7
549										95% Modified-t UCL (Johnson-1978)		110
550												
551	**Gamma GOF Test**											
552					A-D Test Statistic	0.37				**Anderson-Darling Gamma GOF Test**		
553					5% A-D Critical Value	0.766				Detected data appear Gamma Distributed at 5% Significance Level		
554					K-S Test Statistic	0.168				**Kolmogrov-Smirnoff Gamma GOF Test**		
555					5% K-S Critical Value	0.293				Detected data appear Gamma Distributed at 5% Significance Level		
556	**Detected data appear Gamma Distributed at 5% Significance Level**											
557												
558	**Gamma Statistics**											
559					k hat (MLE)	0.567				k star (bias corrected MLE)		0.452
560					Theta hat (MLE)	97.27				Theta star (bias corrected MLE)		122
561					nu hat (MLE)	10.2				nu star (bias corrected)		8.136

	A	B	C	D	E	F	G	H	I	J	K	L
562	MLE Mean (bias corrected)					55.14	MLE Sd (bias corrected)					82.02
563							Approximate Chi Square Value (0.05)					2.814
564	Adjusted Level of Significance					0.0231	Adjusted Chi Square Value					2.198
565												
566	**Assuming Gamma Distribution**											
567	95% Approximate Gamma UCL (use when n>=50)					159.4	95% Adjusted Gamma UCL (use when n<50)					204.1
568												
569	**Lognormal GOF Test**											
570	Shapiro Wilk Test Statistic					0.956	**Shapiro Wilk Lognormal GOF Test**					
571	5% Shapiro Wilk Critical Value					0.829	Data appear Lognormal at 5% Significance Level					
572	Lilliefors Test Statistic					0.137	**Lilliefors Lognormal GOF Test**					
573	5% Lilliefors Critical Value					0.295	Data appear Lognormal at 5% Significance Level					
574	**Data appear Lognormal at 5% Significance Level**											
575												
576	**Lognormal Statistics**											
577	Minimum of Logged Data					0.742	Mean of logged Data					2.911
578	Maximum of Logged Data					5.521	SD of logged Data					1.669
579												
580	**Assuming Lognormal Distribution**											
581	95% H-UCL					1302	90% Chebyshev (MVUE) UCL					151.9
582	95% Chebyshev (MVUE) UCL					195.3	97.5% Chebyshev (MVUE) UCL					255.5
583	99% Chebyshev (MVUE) UCL					373.8						
584												
585	**Nonparametric Distribution Free UCL Statistics**											
586	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
587												
588	**Nonparametric Distribution Free UCLs**											
589	95% CLT UCL					100.9	95% Jackknife UCL					106.9
590	95% Standard Bootstrap UCL					98.46	95% Bootstrap-t UCL					254.3
591	95% Hall's Bootstrap UCL					333.9	95% Percentile Bootstrap UCL					100.2
592	95% BCA Bootstrap UCL					120.7						
593	90% Chebyshev(Mean, Sd) UCL					138.6	95% Chebyshev(Mean, Sd) UCL					176.4
594	97.5% Chebyshev(Mean, Sd) UCL					228.8	99% Chebyshev(Mean, Sd) UCL					331.8
595												
596	**Suggested UCL to Use**											
597	95% Adjusted Gamma UCL					204.1						
598												
599	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
600	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
601	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
602	For additional insight the user may want to consult a statistician.											
603												
604	**Benzo(a)anthracene**											
605	**General Statistics**											
606	Total Number of Observations					9	Number of Distinct Observations					9
607							Number of Missing Observations					0
608	Minimum					0.055	Mean					2.736
609	Maximum					9.8	Median					0.71
610	SD					3.38	Std. Error of Mean					1.127
611	Coefficient of Variation					1.235	Skewness					1.332
612	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											

	A	B	C	D	E	F	G	H	I	J	K	L
613	guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.											
614	For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).											
615	Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0											
616												
617	Normal GOF Test											
618					Shapiro Wilk Test Statistic	0.805	Shapiro Wilk GOF Test					
619					5% Shapiro Wilk Critical Value	0.829	Data Not Normal at 5% Significance Level					
620					Lilliefors Test Statistic	0.281	Lilliefors GOF Test					
621					5% Lilliefors Critical Value	0.295	Data appear Normal at 5% Significance Level					
622	Data appear Approximate Normal at 5% Significance Level											
623												
624	Assuming Normal Distribution											
625	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
626					95% Student's-t UCL	4.831				95% Adjusted-CLT UCL (Chen-1995)		5.124
627										95% Modified-t UCL (Johnson-1978)		4.915
628												
629	Gamma GOF Test											
630					A-D Test Statistic	0.292	Anderson-Darling Gamma GOF Test					
631					5% A-D Critical Value	0.763	Detected data appear Gamma Distributed at 5% Significance Level					
632					K-S Test Statistic	0.208	Kolmogrov-Smirnoff Gamma GOF Test					
633					5% K-S Critical Value	0.292	Detected data appear Gamma Distributed at 5% Significance Level					
634	Detected data appear Gamma Distributed at 5% Significance Level											
635												
636	Gamma Statistics											
637					k hat (MLE)	0.597				k star (bias corrected MLE)		0.472
638					Theta hat (MLE)	4.582				Theta star (bias corrected MLE)		5.795
639					nu hat (MLE)	10.75				nu star (bias corrected)		8.498
640					MLE Mean (bias corrected)	2.736				MLE Sd (bias corrected)		3.982
641										Approximate Chi Square Value (0.05)		3.027
642					Adjusted Level of Significance	0.0231				Adjusted Chi Square Value		2.381
643												
644	Assuming Gamma Distribution											
645					95% Approximate Gamma UCL (use when n>=50))	7.682				95% Adjusted Gamma UCL (use when n<50)		9.764
646												
647	Lognormal GOF Test											
648					Shapiro Wilk Test Statistic	0.948	Shapiro Wilk Lognormal GOF Test					
649					5% Shapiro Wilk Critical Value	0.829	Data appear Lognormal at 5% Significance Level					
650					Lilliefors Test Statistic	0.154	Lilliefors Lognormal GOF Test					
651					5% Lilliefors Critical Value	0.295	Data appear Lognormal at 5% Significance Level					
652	Data appear Lognormal at 5% Significance Level											
653												
654	Lognormal Statistics											
655					Minimum of Logged Data	-2.9				Mean of logged Data		-0.029
656					Maximum of Logged Data	2.282				SD of logged Data		1.784
657												
658	Assuming Lognormal Distribution											
659					95% H-UCL	122.9				90% Chebyshev (MVUE) UCL		9.628
660					95% Chebyshev (MVUE) UCL	12.44				97.5% Chebyshev (MVUE) UCL		16.34
661					99% Chebyshev (MVUE) UCL	24						
662												
663	Nonparametric Distribution Free UCL Statistics											

	A	B	C	D	E	F	G	H	I	J	K	L
664	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
665												
666	**Nonparametric Distribution Free UCLs**											
667	95% CLT UCL					4.589	95% Jackknife UCL					4.831
668	95% Standard Bootstrap UCL					4.471	95% Bootstrap-t UCL					6.05
669	95% Hall's Bootstrap UCL					4.676	95% Percentile Bootstrap UCL					4.566
670	95% BCA Bootstrap UCL					5.107						
671	90% Chebyshev(Mean, Sd) UCL					6.116	95% Chebyshev(Mean, Sd) UCL					7.647
672	97.5% Chebyshev(Mean, Sd) UCL					9.772	99% Chebyshev(Mean, Sd) UCL					13.95
673												
674	**Suggested UCL to Use**											
675	95% Student's-t UCL					4.831						
676	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
677	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
678	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
679	For additional insight the user may want to consult a statistician.											
680												
681	**Benzo(a)pyrene**											
682	**General Statistics**											
683	Total Number of Observations					9	Number of Distinct Observations					9
684							Number of Missing Observations					0
685	Minimum					0.037	Mean					2.525
686	Maximum					11	Median					0.76
687	SD					3.612	Std. Error of Mean					1.204
688	Coefficient of Variation					1.431	Skewness					1.925
689	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
690	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
691	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
692	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
693												
694	**Normal GOF Test**											
695	Shapiro Wilk Test Statistic					0.734	**Shapiro Wilk GOF Test**					
696	5% Shapiro Wilk Critical Value					0.829	Data Not Normal at 5% Significance Level					
697	Lilliefors Test Statistic					0.289	**Lilliefors GOF Test**					
698	5% Lilliefors Critical Value					0.295	Data appear Normal at 5% Significance Level					
699	**Data appear Approximate Normal at 5% Significance Level**											
700												
701	**Assuming Normal Distribution**											
702	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
703	95% Student's-t UCL					4.763	95% Adjusted-CLT UCL (Chen-1995)					5.33
704							95% Modified-t UCL (Johnson-1978)					4.892
705												
706	**Gamma GOF Test**											
707	A-D Test Statistic					0.246	**Anderson-Darling Gamma GOF Test**					
708	5% A-D Critical Value					0.769	Detected data appear Gamma Distributed at 5% Significance Level					
709	K-S Test Statistic					0.149	**Kolmogrov-Smirnoff Gamma GOF Test**					
710	5% K-S Critical Value					0.294	Detected data appear Gamma Distributed at 5% Significance Level					
711	**Detected data appear Gamma Distributed at 5% Significance Level**											
712												
713	**Gamma Statistics**											
714	k hat (MLE)					0.524	k star (bias corrected MLE)					0.423

	A	B	C	D	E	F	G	H	I	J	K	L
715					Theta hat (MLE)	4.821				Theta star (bias corrected MLE)		5.965
716					nu hat (MLE)	9.426				nu star (bias corrected)		7.618
717					MLE Mean (bias corrected)	2.525				MLE Sd (bias corrected)		3.881
718										Approximate Chi Square Value (0.05)		2.516
719					Adjusted Level of Significance	0.0231				Adjusted Chi Square Value		1.942
720												
721					**Assuming Gamma Distribution**							
722			95% Approximate Gamma UCL (use when n>=50))			7.645			95% Adjusted Gamma UCL (use when n<50)			9.903
723												
724					**Lognormal GOF Test**							
725					Shapiro Wilk Test Statistic	0.964			**Shapiro Wilk Lognormal GOF Test**			
726					5% Shapiro Wilk Critical Value	0.829			Data appear Lognormal at 5% Significance Level			
727					Lilliefors Test Statistic	0.148			**Lilliefors Lognormal GOF Test**			
728					5% Lilliefors Critical Value	0.295			Data appear Lognormal at 5% Significance Level			
729					**Data appear Lognormal at 5% Significance Level**							
730												
731					**Lognormal Statistics**							
732					Minimum of Logged Data	-3.297				Mean of logged Data		-0.278
733					Maximum of Logged Data	2.398				SD of logged Data		1.914
734												
735					**Assuming Lognormal Distribution**							
736					95% H-UCL	193.3				90% Chebyshev (MVUE) UCL		9.24
737					95% Chebyshev (MVUE) UCL	11.99				97.5% Chebyshev (MVUE) UCL		15.81
738					99% Chebyshev (MVUE) UCL	23.32						
739												
740					**Nonparametric Distribution Free UCL Statistics**							
741					**Data appear to follow a Discernible Distribution at 5% Significance Level**							
742												
743					**Nonparametric Distribution Free UCLs**							
744					95% CLT UCL	4.505				95% Jackknife UCL		4.763
745					95% Standard Bootstrap UCL	4.347				95% Bootstrap-t UCL		6.92
746					95% Hall's Bootstrap UCL	6.475				95% Percentile Bootstrap UCL		4.52
747					95% BCA Bootstrap UCL	5.254						
748					90% Chebyshev(Mean, Sd) UCL	6.136				95% Chebyshev(Mean, Sd) UCL		7.773
749					97.5% Chebyshev(Mean, Sd) UCL	10.04				99% Chebyshev(Mean, Sd) UCL		14.5
750												
751					**Suggested UCL to Use**							
752					95% Student's-t UCL	4.763						
753					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
754					These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)							
755					and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.							
756					For additional insight the user may want to consult a statistician.							
757												
758					**Benzo(b)fluoranthene**							
759					**General Statistics**							
760					Total Number of Observations	9				Number of Distinct Observations		9
761					Number of Detects	8				Number of Non-Detects		1
762					Number of Distinct Detects	8				Number of Distinct Non-Detects		1
763					Minimum Detect	0.012				Minimum Non-Detect		0.19
764					Maximum Detect	4.6				Maximum Non-Detect		0.19
765					Variance Detects	2.727				Percent Non-Detects		11.11%

Subsurface Waste UCL Calculations
Waste greater than 2 feet to 10-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
766					Mean Detects	0.974					SD Detects	1.651
767					Median Detects	0.19					CV Detects	1.696
768					Skewness Detects	1.963					Kurtosis Detects	3.357
769					Mean of Logged Detects	-1.52					SD of Logged Detects	1.986
770	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
771	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
772	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
773	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
774												
775	**Normal GOF Test on Detects Only**											
776					Shapiro Wilk Test Statistic	0.66	**Shapiro Wilk GOF Test**					
777					5% Shapiro Wilk Critical Value	0.818	Detected Data Not Normal at 5% Significance Level					
778					Lilliefors Test Statistic	0.393	**Lilliefors GOF Test**					
779					5% Lilliefors Critical Value	0.313	Detected Data Not Normal at 5% Significance Level					
780	**Detected Data Not Normal at 5% Significance Level**											
781												
782	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
783					Mean	0.873					Standard Error of Mean	0.529
784					SD	1.484					95% KM (BCA) UCL	1.839
785					95% KM (t) UCL	1.856					95% KM (Percentile Bootstrap) UCL	1.844
786					95% KM (z) UCL	1.743					95% KM Bootstrap t UCL	9.91
787					90% KM Chebyshev UCL	2.46					95% KM Chebyshev UCL	3.178
788					97.5% KM Chebyshev UCL	4.176					99% KM Chebyshev UCL	6.136
789												
790	**Gamma GOF Tests on Detected Observations Only**											
791					A-D Test Statistic	0.48	**Anderson-Darling GOF Test**					
792					5% A-D Critical Value	0.774	Detected data appear Gamma Distributed at 5% Significance Level					
793					K-S Test Statistic	0.259	**Kolmogrov-Smirnoff GOF**					
794					5% K-S Critical Value	0.312	Detected data appear Gamma Distributed at 5% Significance Level					
795	**Detected data appear Gamma Distributed at 5% Significance Level**											
796												
797	**Gamma Statistics on Detected Data Only**											
798					k hat (MLE)	0.435					k star (bias corrected MLE)	0.355
799					Theta hat (MLE)	2.241					Theta star (bias corrected MLE)	2.743
800					nu hat (MLE)	6.954					nu star (bias corrected)	5.68
801					MLE Mean (bias corrected)	0.974					MLE Sd (bias corrected)	1.635
802												
803	**Gamma Kaplan-Meier (KM) Statistics**											
804					k hat (KM)	0.346					nu hat (KM)	6.226
805					Approximate Chi Square Value (6.23, α)	1.756					Adjusted Chi Square Value (6.23, β)	1.303
806					95% Gamma Approximate KM-UCL (use when n>=50)	3.094					95% Gamma Adjusted KM-UCL (use when n<50)	4.171
807												
808	**Gamma ROS Statistics using Imputed Non-Detects**											
809	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
810	GROS may not be used when kstar of detected data is small such as < 0.1											
811	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
812	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
813					Minimum	0.01					Mean	0.867
814					Maximum	4.6					Median	0.12
815					SD	1.578					CV	1.82
816					k hat (MLE)	0.385					k star (bias corrected MLE)	0.331

	A	B	C	D	E	F	G	H	I	J	K	L
817					Theta hat (MLE)	2.252				Theta star (bias corrected MLE)		2.621
818					nu hat (MLE)	6.928				nu star (bias corrected)		5.952
819					MLE Mean (bias corrected)	0.867				MLE Sd (bias corrected)		1.507
820										Adjusted Level of Significance (β)		0.0231
821					Approximate Chi Square Value (5.95, α)	1.616				Adjusted Chi Square Value (5.95, β)		1.187
822					95% Gamma Approximate UCL (use when n>=50)	3.194				95% Gamma Adjusted UCL (use when n<50)		4.347
823												
824	**Lognormal GOF Test on Detected Observations Only**											
825					Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk GOF Test**					
826					5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level					
827					Lilliefors Test Statistic	0.146	**Lilliefors GOF Test**					
828					5% Lilliefors Critical Value	0.313	Detected Data appear Lognormal at 5% Significance Level					
829	**Detected Data appear Lognormal at 5% Significance Level**											
830												
831	**Lognormal ROS Statistics Using Imputed Non-Detects**											
832					Mean in Original Scale	0.871				Mean in Log Scale		-1.687
833					SD in Original Scale	1.575				SD in Log Scale		1.924
834					95% t UCL (assumes normality of ROS data)	1.848				95% Percentile Bootstrap UCL		1.814
835					95% BCA Bootstrap UCL	2.323				95% Bootstrap t UCL		10.6
836					95% H-UCL (Log ROS)	49.97						
837												
838	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
839					KM Mean (logged)	-1.69				95% H-UCL (KM -Log)		31.38
840					KM SD (logged)	1.84				95% Critical H Value (KM-Log)		5.294
841					KM Standard Error of Mean (logged)	0.666						
842												
843	**DL/2 Statistics**											
844	**DL/2 Normal**						**DL/2 Log-Transformed**					
845					Mean in Original Scale	0.876				Mean in Log Scale		-1.613
846					SD in Original Scale	1.572				SD in Log Scale		1.878
847					95% t UCL (Assumes normality)	1.851				95% H-Stat UCL		41.75
848	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
849												
850	**Nonparametric Distribution Free UCL Statistics**											
851	**Detected Data appear Gamma Distributed at 5% Significance Level**											
852												
853	**Suggested UCL to Use**											
854					95% KM (Chebyshev) UCL	3.178				95% GROS Adjusted Gamma UCL		4.347
855					95% Adjusted Gamma KM-UCL	4.171						
856	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
857	Recommendations are based upon data size, data distribution, and skewness.											
858	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
859	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
860												
861	**Dibenz(a,h)anthracene**											
862	**General Statistics**											
863					Total Number of Observations	9				Number of Distinct Observations		8
864					Number of Detects	5				Number of Non-Detects		4
865					Number of Distinct Detects	5				Number of Distinct Non-Detects		3
866					Minimum Detect	0.0088				Minimum Non-Detect		0.0028
867					Maximum Detect	3.7				Maximum Non-Detect		0.13

Subsurface Waste UCL Calculations
Waste greater than 2 feet to 10-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
868					Variance Detects	2.461					Percent Non-Detects	44.44%
869					Mean Detects	1.056					SD Detects	1.569
870					Median Detects	0.15					CV Detects	1.486
871					Skewness Detects	1.705					Kurtosis Detects	2.636
872					Mean of Logged Detects	-1.436					SD of Logged Detects	2.343
873	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
874	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
875	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
876	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
877												
878	**Normal GOF Test on Detects Only**											
879					Shapiro Wilk Test Statistic	0.762	**Shapiro Wilk GOF Test**					
880					5% Shapiro Wilk Critical Value	0.762	Detected Data Not Normal at 5% Significance Level					
881					Lilliefors Test Statistic	0.318	**Lilliefors GOF Test**					
882					5% Lilliefors Critical Value	0.396	Detected Data appear Normal at 5% Significance Level					
883	**Detected Data appear Approximate Normal at 5% Significance Level**											
884												
885	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
886					Mean	0.591					Standard Error of Mean	0.435
887					SD	1.168					95% KM (BCA) UCL	1.379
888					95% KM (t) UCL	1.401					95% KM (Percentile Bootstrap) UCL	1.279
889					95% KM (z) UCL	1.307					95% KM Bootstrap t UCL	9.858
890					90% KM Chebyshev UCL	1.897					95% KM Chebyshev UCL	2.489
891					97.5% KM Chebyshev UCL	3.309					99% KM Chebyshev UCL	4.922
892												
893	**Gamma GOF Tests on Detected Observations Only**											
894					A-D Test Statistic	0.277	**Anderson-Darling GOF Test**					
895					5% A-D Critical Value	0.72	Detected data appear Gamma Distributed at 5% Significance Level					
896					K-S Test Statistic	0.27	**Kolmogrov-Smirnoff GOF**					
897					5% K-S Critical Value	0.374	Detected data appear Gamma Distributed at 5% Significance Level					
898	**Detected data appear Gamma Distributed at 5% Significance Level**											
899												
900	**Gamma Statistics on Detected Data Only**											
901					k hat (MLE)	0.436					k star (bias corrected MLE)	0.308
902					Theta hat (MLE)	2.424					Theta star (bias corrected MLE)	3.433
903					nu hat (MLE)	4.356					nu star (bias corrected)	3.076
904					MLE Mean (bias corrected)	1.056					MLE Sd (bias corrected)	1.904
905												
906	**Gamma Kaplan-Meier (KM) Statistics**											
907					k hat (KM)	0.256					nu hat (KM)	4.615
908					Approximate Chi Square Value (4.62, α)	0.979					Adjusted Chi Square Value (4.62, β)	0.677
909					95% Gamma Approximate KM-UCL (use when n>=50)	2.788					95% Gamma Adjusted KM-UCL (use when n<50)	4.031
910												
911	**Gamma ROS Statistics using Imputed Non-Detects**											
912	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
913	GROS may not be used when kstar of detected data is small such as < 0.1											
914	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
915	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
916					Minimum	0.0088					Mean	0.591
917					Maximum	3.7					Median	0.01
918					SD	1.239					CV	2.096

	A	B	C	D	E	F	G	H	I	J	K	L
919					k hat (MLE)	0.298				k star (bias corrected MLE)		0.273
920					Theta hat (MLE)	1.985				Theta star (bias corrected MLE)		2.168
921					nu hat (MLE)	5.36				nu star (bias corrected)		4.907
922					MLE Mean (bias corrected)	0.591				MLE Sd (bias corrected)		1.132
923										Adjusted Level of Significance (β)		0.0231
924					Approximate Chi Square Value (4.91, α)	1.109				Adjusted Chi Square Value (4.91, β)		0.779
925				95% Gamma Approximate UCL (use when n>=50)		2.614				95% Gamma Adjusted UCL (use when n<50)		3.722
926												
927					**Lognormal GOF Test on Detected Observations Only**							
928					Shapiro Wilk Test Statistic	0.959			**Shapiro Wilk GOF Test**			
929					5% Shapiro Wilk Critical Value	0.762			Detected Data appear Lognormal at 5% Significance Level			
930					Lilliefors Test Statistic	0.185			**Lilliefors GOF Test**			
931					5% Lilliefors Critical Value	0.396			Detected Data appear Lognormal at 5% Significance Level			
932					**Detected Data appear Lognormal at 5% Significance Level**							
933												
934					**Lognormal ROS Statistics Using Imputed Non-Detects**							
935					Mean in Original Scale	0.588				Mean in Log Scale		-3.546
936					SD in Original Scale	1.24				SD in Log Scale		3.108
937				95% t UCL (assumes normality of ROS data)		1.357				95% Percentile Bootstrap UCL		1.282
938					95% BCA Bootstrap UCL	1.692				95% Bootstrap t UCL		11.31
939					95% H-UCL (Log ROS)	47982						
940												
941					**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**							
942					KM Mean (logged)	-3.149				95% H-UCL (KM -Log)		668.9
943					KM SD (logged)	2.544				95% Critical H Value (KM-Log)		7.137
944					KM Standard Error of Mean (logged)	0.981						
945												
946					**DL/2 Statistics**							
947					**DL/2 Normal**				**DL/2 Log-Transformed**			
948					Mean in Original Scale	0.597				Mean in Log Scale		-2.78
949					SD in Original Scale	1.236				SD in Log Scale		2.495
950					95% t UCL (Assumes normality)	1.363				95% H-Stat UCL		675.4
951					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
952												
953					**Nonparametric Distribution Free UCL Statistics**							
954					**Detected Data appear Approximate Normal Distributed at 5% Significance Level**							
955												
956					**Suggested UCL to Use**							
957					95% KM (t) UCL	1.401				95% KM (Percentile Bootstrap) UCL		1.279
958	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
959	Recommendations are based upon data size, data distribution, and skewness.											
960	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
961	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
962												
963	**Naphthalene (8270)**											
964	**General Statistics**											
965					Total Number of Observations	9				Number of Distinct Observations		9
966										Number of Missing Observations		0
967					Minimum	0.43				Mean		26.91
968					Maximum	97				Median		15
969					SD	36				Std. Error of Mean		12

Subsurface Waste UCL Calculations
Waste greater than 2 feet to 10-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
970					Coefficient of Variation	1.338					Skewness	1.444
971	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
972	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
973	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
974	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
975												
976	**Normal GOF Test**											
977					Shapiro Wilk Test Statistic	0.752	**Shapiro Wilk GOF Test**					
978					5% Shapiro Wilk Critical Value	0.829	Data Not Normal at 5% Significance Level					
979					Lilliefors Test Statistic	0.299	**Lilliefors GOF Test**					
980					5% Lilliefors Critical Value	0.295	Data Not Normal at 5% Significance Level					
981	**Data Not Normal at 5% Significance Level**											
982												
983	**Assuming Normal Distribution**											
984				**95% Normal UCL**			**95% UCLs (Adjusted for Skewness)**					
985					95% Student's-t UCL	49.23				95% Adjusted-CLT UCL (Chen-1995)		52.82
986										95% Modified-t UCL (Johnson-1978)		50.19
987												
988	**Gamma GOF Test**											
989					A-D Test Statistic	0.31	**Anderson-Darling Gamma GOF Test**					
990					5% A-D Critical Value	0.77	Detected data appear Gamma Distributed at 5% Significance Level					
991					K-S Test Statistic	0.169	**Kolmogrov-Smirnoff Gamma GOF Test**					
992					5% K-S Critical Value	0.294	Detected data appear Gamma Distributed at 5% Significance Level					
993	**Detected data appear Gamma Distributed at 5% Significance Level**											
994												
995	**Gamma Statistics**											
996					k hat (MLE)	0.506				k star (bias corrected MLE)		0.411
997					Theta hat (MLE)	53.18				Theta star (bias corrected MLE)		65.41
998					nu hat (MLE)	9.109				nu star (bias corrected)		7.406
999					MLE Mean (bias corrected)	26.91				MLE Sd (bias corrected)		41.96
1000										Approximate Chi Square Value (0.05)		2.396
1001					Adjusted Level of Significance	0.0231				Adjusted Chi Square Value		1.84
1002												
1003	**Assuming Gamma Distribution**											
1004			95% Approximate Gamma UCL (use when n>=50)			83.18				95% Adjusted Gamma UCL (use when n<50)		108.3
1005												
1006	**Lognormal GOF Test**											
1007					Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk Lognormal GOF Test**					
1008					5% Shapiro Wilk Critical Value	0.829	Data appear Lognormal at 5% Significance Level					
1009					Lilliefors Test Statistic	0.186	**Lilliefors Lognormal GOF Test**					
1010					5% Lilliefors Critical Value	0.295	Data appear Lognormal at 5% Significance Level					
1011	**Data appear Lognormal at 5% Significance Level**											
1012												
1013	**Lognormal Statistics**											
1014					Minimum of Logged Data	-0.844				Mean of logged Data		2.04
1015					Maximum of Logged Data	4.575				SD of logged Data		2.011
1016												
1017	**Assuming Lognormal Distribution**											
1018					95% H-UCL	3440				90% Chebyshev (MVUE) UCL		110
1019					95% Chebyshev (MVUE) UCL	143.2				97.5% Chebyshev (MVUE) UCL		189.3
1020					99% Chebyshev (MVUE) UCL	279.8						

Subsurface Waste UCL Calculations
Waste greater than 2 feet to 10-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
1021												
1022	**Nonparametric Distribution Free UCL Statistics**											
1023	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
1024												
1025	**Nonparametric Distribution Free UCLs**											
1026					95% CLT UCL	46.65				95% Jackknife UCL		49.23
1027					95% Standard Bootstrap UCL	45.6				95% Bootstrap-t UCL		90.55
1028					95% Hall's Bootstrap UCL	173.8				95% Percentile Bootstrap UCL		47.6
1029					95% BCA Bootstrap UCL	51.47						
1030					90% Chebyshev(Mean, Sd) UCL	62.91				95% Chebyshev(Mean, Sd) UCL		79.22
1031					97.5% Chebyshev(Mean, Sd) UCL	101.9				99% Chebyshev(Mean, Sd) UCL		146.3
1032												
1033	**Suggested UCL to Use**											
1034					95% Adjusted Gamma UCL	108.3						
1035												
1036	**Recommended UCL exceeds the maximum observation**											
1037	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1038	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
1039	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
1040	For additional insight the user may want to consult a statistician.											
1041												

Subsurface Waste UCL Calculations
Waste > 2-feet below ground surface
Brine Service Company Superfund Site

1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3			User Selected Options									
4			Date/Time of Computation	6/13/2014 2:16:50 PM								
5			From File	South Area Waste All Outdoor Air								
6			Full Precision	OFF								
7			Confidence Coefficient	95%								
8			Number of Bootstrap Operations	2000								
9												
10	**Mercury**											
11	**General Statistics**											
12						Total Number of Observations	20			Number of Distinct Observations	20	
13						Number of Detects	19			Number of Non-Detects	1	
14						Number of Distinct Detects	19			Number of Distinct Non-Detects	1	
15						Minimum Detect	0.0012			Minimum Non-Detect	2.7000E-4	
16						Maximum Detect	5.27			Maximum Non-Detect	2.7000E-4	
17						Variance Detects	1.389			Percent Non-Detects	5%	
18						Mean Detects	0.438			SD Detects	1.178	
19						Median Detects	0.183			CV Detects	2.689	
20						Skewness Detects	4.256			Kurtosis Detects	18.37	
21						Mean of Logged Detects	-2.388			SD of Logged Detects	2.037	
22												
23	**Normal GOF Test on Detects Only**											
24						Shapiro Wilk Test Statistic	0.346			**Shapiro Wilk GOF Test**		
25						5% Shapiro Wilk Critical Value	0.901			Detected Data Not Normal at 5% Significance Level		
26						Lilliefors Test Statistic	0.433			**Lilliefors GOF Test**		
27						5% Lilliefors Critical Value	0.203			Detected Data Not Normal at 5% Significance Level		
28	**Detected Data Not Normal at 5% Significance Level**											
29												
30	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
31						Mean	0.416			Standard Error of Mean	0.258	
32						SD	1.122			95% KM (BCA) UCL	0.937	
33						95% KM (t) UCL	0.862			95% KM (Percentile Bootstrap) UCL	0.91	
34						95% KM (z) UCL	0.84			95% KM Bootstrap t UCL	3.1	
35						90% KM Chebyshev UCL	1.19			95% KM Chebyshev UCL	1.54	
36						97.5% KM Chebyshev UCL	2.026			99% KM Chebyshev UCL	2.981	
37												
38	**Gamma GOF Tests on Detected Observations Only**											
39						A-D Test Statistic	1.111			**Anderson-Darling GOF Test**		
40						5% A-D Critical Value	0.819			Detected Data Not Gamma Distributed at 5% Significance Level		
41						K-S Test Statistic	0.23			**Kolmogrov-Smirnoff GOF**		
42						5% K-S Critical Value	0.212			Detected Data Not Gamma Distributed at 5% Significance Level		
43	**Detected Data Not Gamma Distributed at 5% Significance Level**											
44												
45	**Gamma Statistics on Detected Data Only**											
46						k hat (MLE)	0.418			k star (bias corrected MLE)	0.387	
47						Theta hat (MLE)	1.048			Theta star (bias corrected MLE)	1.132	
48						nu hat (MLE)	15.89			nu star (bias corrected)	14.71	
49						MLE Mean (bias corrected)	0.438			MLE Sd (bias corrected)	0.704	
50												
51	**Gamma Kaplan-Meier (KM) Statistics**											

Subsurface Waste UCL Calculations
Waste > 2-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
52					k hat (KM)	0.138					nu hat (KM)	5.508
53					Approximate Chi Square Value (5.51, α)	1.394					Adjusted Chi Square Value (5.51, β)	1.238
54					95% Gamma Approximate KM-UCL (use when n>=50)	1.645					95% Gamma Adjusted KM-UCL (use when n<50)	1.852
55												
56					**Gamma ROS Statistics using Imputed Non-Detects**							
57					GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs							
58					GROS may not be used when kstar of detected data is small such as < 0.1							
59					For such situations, GROS method tends to yield inflated values of UCLs and BTVs							
60					For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates							
61					Minimum	0.0012					Mean	0.417
62					Maximum	5.27					Median	0.171
63					SD	1.151					CV	2.761
64					k hat (MLE)	0.405					k star (bias corrected MLE)	0.377
65					Theta hat (MLE)	1.03					Theta star (bias corrected MLE)	1.105
66					nu hat (MLE)	16.18					nu star (bias corrected)	15.09
67					MLE Mean (bias corrected)	0.417					MLE Sd (bias corrected)	0.679
68											Adjusted Level of Significance (β)	0.038
69					Approximate Chi Square Value (15.09, α)	7.322					Adjusted Chi Square Value (15.09, β)	6.897
70					95% Gamma Approximate UCL (use when n>=50)	0.859					95% Gamma Adjusted UCL (use when n<50)	0.912
71												
72					**Lognormal GOF Test on Detected Observations Only**							
73					Shapiro Wilk Test Statistic	0.908					**Shapiro Wilk GOF Test**	
74					5% Shapiro Wilk Critical Value	0.901					Detected Data appear Lognormal at 5% Significance Level	
75					Lilliefors Test Statistic	0.185					**Lilliefors GOF Test**	
76					5% Lilliefors Critical Value	0.203					Detected Data appear Lognormal at 5% Significance Level	
77					**Detected Data appear Lognormal at 5% Significance Level**							
78												
79					**Lognormal ROS Statistics Using Imputed Non-Detects**							
80					Mean in Original Scale	0.416					Mean in Log Scale	-2.626
81					SD in Original Scale	1.151					SD in Log Scale	2.25
82					95% t UCL (assumes normality of ROS data)	0.861					95% Percentile Bootstrap UCL	0.915
83					95% BCA Bootstrap UCL	1.195					95% Bootstrap t UCL	3.095
84					95% H-UCL (Log ROS)	10.64						
85												
86					**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**							
87					KM Mean (logged)	-2.679					95% H-UCL (KM -Log)	13.22
88					KM SD (logged)	2.313					95% Critical H Value (KM-Log)	4.876
89					KM Standard Error of Mean (logged)	0.531						
90												
91					**DL/2 Statistics**							
92					**DL/2 Normal**						**DL/2 Log-Transformed**	
93					Mean in Original Scale	0.416					Mean in Log Scale	-2.714
94					SD in Original Scale	1.151					SD in Log Scale	2.461
95					95% t UCL (Assumes normality)	0.861					95% H-Stat UCL	25.11
96					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
97												
98					**Nonparametric Distribution Free UCL Statistics**							
99					**Detected Data appear Lognormal Distributed at 5% Significance Level**							
100												
101					**Suggested UCL to Use**							
102					**99% KM (Chebyshev) UCL**	**2.981**						

Subsurface Waste UCL Calculations
Waste > 2-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
103												
104	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
105	Recommendations are based upon data size, data distribution, and skewness.											
106	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
107	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
108												
109	**Heptachlor epoxide**											
110	**General Statistics**											
111	Total Number of Observations					20	Number of Distinct Observations					16
112	Number of Detects					11	Number of Non-Detects					9
113	Number of Distinct Detects					9	Number of Distinct Non-Detects					7
114	Minimum Detect					0.016	Minimum Non-Detect					3.9000E-4
115	Maximum Detect					3.8	Maximum Non-Detect					0.041
116	Variance Detects					1.686	Percent Non-Detects					45%
117	Mean Detects					1.218	SD Detects					1.298
118	Median Detects					0.73	CV Detects					1.066
119	Skewness Detects					0.993	Kurtosis Detects					-0.242
120	Mean of Logged Detects					-0.666	SD of Logged Detects					1.692
121												
122	**Normal GOF Test on Detects Only**											
123	Shapiro Wilk Test Statistic					0.849	**Shapiro Wilk GOF Test**					
124	5% Shapiro Wilk Critical Value					0.85	Detected Data Not Normal at 5% Significance Level					
125	Lilliefors Test Statistic					0.212	**Lilliefors GOF Test**					
126	5% Lilliefors Critical Value					0.267	Detected Data appear Normal at 5% Significance Level					
127	**Detected Data appear Approximate Normal at 5% Significance Level**											
128												
129	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
130	Mean					0.67	Standard Error of Mean					0.258
131	SD					1.1	95% KM (BCA) UCL					1.134
132	95% KM (t) UCL					1.116	95% KM (Percentile Bootstrap) UCL					1.102
133	95% KM (z) UCL					1.095	95% KM Bootstrap t UCL					1.356
134	90% KM Chebyshev UCL					1.444	95% KM Chebyshev UCL					1.794
135	97.5% KM Chebyshev UCL					2.281	99% KM Chebyshev UCL					3.236
136												
137	**Gamma GOF Tests on Detected Observations Only**											
138	A-D Test Statistic					0.236	**Anderson-Darling GOF Test**					
139	5% A-D Critical Value					0.766	Detected data appear Gamma Distributed at 5% Significance Level					
140	K-S Test Statistic					0.149	**Kolmogrov-Smirnoff GOF**					
141	5% K-S Critical Value					0.266	Detected data appear Gamma Distributed at 5% Significance Level					
142	**Detected data appear Gamma Distributed at 5% Significance Level**											
143												
144	**Gamma Statistics on Detected Data Only**											
145	k hat (MLE)					0.7	k star (bias corrected MLE)					0.57
146	Theta hat (MLE)					1.738	Theta star (bias corrected MLE)					2.136
147	nu hat (MLE)					15.41	nu star (bias corrected)					12.54
148	MLE Mean (bias corrected)					1.218	MLE Sd (bias corrected)					1.613
149												
150	**Gamma Kaplan-Meier (KM) Statistics**											
151	k hat (KM)					0.372	nu hat (KM)					14.86
152	Approximate Chi Square Value (14.86, α)					7.165	Adjusted Chi Square Value (14.86, β)					6.745
153	95% Gamma Approximate KM-UCL (use when n>=50)					1.39	95% Gamma Adjusted KM-UCL (use when n<50)					1.477

Subsurface Waste UCL Calculations
Waste > 2-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
154												
155	**Gamma ROS Statistics using Imputed Non-Detects**											
156	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
157	GROS may not be used when kstar of detected data is small such as < 0.1											
158	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
159	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
160					Minimum	0.01				Mean		0.674
161					Maximum	3.8				Median		0.053
162					SD	1.126				CV		1.67
163					k hat (MLE)	0.332				k star (bias corrected MLE)		0.315
164					Theta hat (MLE)	2.032				Theta star (bias corrected MLE)		2.138
165					nu hat (MLE)	13.27				nu star (bias corrected)		12.61
166					MLE Mean (bias corrected)	0.674				MLE Sd (bias corrected)		1.201
167										Adjusted Level of Significance (β)		0.038
168					Approximate Chi Square Value (12.61, α)	5.635				Adjusted Chi Square Value (12.61, β)		5.269
169					95% Gamma Approximate UCL (use when n>=50)	1.51				**95% Gamma Adjusted UCL (use when n<50)**		**1.614**
170												
171	**Lognormal GOF Test on Detected Observations Only**											
172					Shapiro Wilk Test Statistic	0.933				**Shapiro Wilk GOF Test**		
173					5% Shapiro Wilk Critical Value	0.85				Detected Data appear Lognormal at 5% Significance Level		
174					Lilliefors Test Statistic	0.163				**Lilliefors GOF Test**		
175					5% Lilliefors Critical Value	0.267				Detected Data appear Lognormal at 5% Significance Level		
176	**Detected Data appear Lognormal at 5% Significance Level**											
177												
178	**Lognormal ROS Statistics Using Imputed Non-Detects**											
179					Mean in Original Scale	0.674				Mean in Log Scale		-2.548
180					SD in Original Scale	1.126				SD in Log Scale		2.488
181					95% t UCL (assumes normality of ROS data)	1.109				95% Percentile Bootstrap UCL		1.09
182					95% BCA Bootstrap UCL	1.18				95% Bootstrap t UCL		1.36
183					95% H-UCL (Log ROS)	33.7						
184												
185	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
186					KM Mean (logged)	-3.819				95% H-UCL (KM -Log)		12672
187					KM SD (logged)	3.723				95% Critical H Value (KM-Log)		7.415
188					KM Standard Error of Mean (logged)	0.885						
189												
190	**DL/2 Statistics**											
191					**DL/2 Normal**					**DL/2 Log-Transformed**		
192					Mean in Original Scale	0.672				Mean in Log Scale		-3.246
193					SD in Original Scale	1.127				SD in Log Scale		3.358
194					95% t UCL (Assumes normality)	1.108				95% H-Stat UCL		2128
195	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
196												
197	**Nonparametric Distribution Free UCL Statistics**											
198	**Detected Data appear Approximate Normal Distributed at 5% Significance Level**											
199												
200	**Suggested UCL to Use**											
201					95% KM (t) UCL	1.116				95% KM (Percentile Bootstrap) UCL		1.102
202												
203	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
204	Recommendations are based upon data size, data distribution, and skewness.											

205	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
206	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
207												
208	**1,3,5-Trimethylbenzene**											
209	**General Statistics**											
210					Total Number of Observations	20			Number of Distinct Observations			18
211									Number of Missing Observations			0
212					Minimum	0.014			Mean			19.94
213					Maximum	140			Median			7.9
214					SD	31.66			Std. Error of Mean			7.078
215					Coefficient of Variation	1.587			Skewness			3.156
216												
217	**Normal GOF Test**											
218					Shapiro Wilk Test Statistic	0.61			**Shapiro Wilk GOF Test**			
219					5% Shapiro Wilk Critical Value	0.905			Data Not Normal at 5% Significance Level			
220					Lilliefors Test Statistic	0.264			**Lilliefors GOF Test**			
221					5% Lilliefors Critical Value	0.198			Data Not Normal at 5% Significance Level			
222	**Data Not Normal at 5% Significance Level**											
223												
224	**Assuming Normal Distribution**											
225					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
226					95% Student's-t UCL	32.18			95% Adjusted-CLT UCL (Chen-1995)			36.92
227									95% Modified-t UCL (Johnson-1978)			33.01
228												
229	**Gamma GOF Test**											
230					A-D Test Statistic	0.253			**Anderson-Darling Gamma GOF Test**			
231					5% A-D Critical Value	0.803			Detected data appear Gamma Distributed at 5% Significance Level			
232					K-S Test Statistic	0.0998			**Kolmogrov-Smirnoff Gamma GOF Test**			
233					5% K-S Critical Value	0.205			Detected data appear Gamma Distributed at 5% Significance Level			
234	**Detected data appear Gamma Distributed at 5% Significance Level**											
235												
236	**Gamma Statistics**											
237					k hat (MLE)	0.498			k star (bias corrected MLE)			0.456
238					Theta hat (MLE)	40.08			Theta star (bias corrected MLE)			43.71
239					nu hat (MLE)	19.9			nu star (bias corrected)			18.25
240					MLE Mean (bias corrected)	19.94			MLE Sd (bias corrected)			29.53
241									Approximate Chi Square Value (0.05)			9.571
242					Adjusted Level of Significance	0.038			Adjusted Chi Square Value			9.076
243												
244	**Assuming Gamma Distribution**											
245					95% Approximate Gamma UCL (use when n>=50)	38.02			95% Adjusted Gamma UCL (use when n<50)			40.1
246												
247	**Lognormal GOF Test**											
248					Shapiro Wilk Test Statistic	0.885			**Shapiro Wilk Lognormal GOF Test**			
249					5% Shapiro Wilk Critical Value	0.905			Data Not Lognormal at 5% Significance Level			
250					Lilliefors Test Statistic	0.175			**Lilliefors Lognormal GOF Test**			
251					5% Lilliefors Critical Value	0.198			Data appear Lognormal at 5% Significance Level			
252	**Data appear Approximate Lognormal at 5% Significance Level**											
253												
254	**Lognormal Statistics**											
255					Minimum of Logged Data	-4.269			Mean of logged Data			1.715

256	Maximum of Logged Data					4.942	SD of logged Data					2.249
257												
258	**Assuming Lognormal Distribution**											
259	95% H-UCL					811.9	90% Chebyshev (MVUE) UCL					141.4
260	95% Chebyshev (MVUE) UCL					183.1	97.5% Chebyshev (MVUE) UCL					241
261	99% Chebyshev (MVUE) UCL					354.6						
262												
263	**Nonparametric Distribution Free UCL Statistics**											
264	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
265												
266	**Nonparametric Distribution Free UCLs**											
267	95% CLT UCL					31.59	95% Jackknife UCL					32.18
268	95% Standard Bootstrap UCL					31.23	95% Bootstrap-t UCL					45.56
269	95% Hall's Bootstrap UCL					75.77	95% Percentile Bootstrap UCL					32.23
270	95% BCA Bootstrap UCL					38.07						
271	90% Chebyshev(Mean, Sd) UCL					41.18	95% Chebyshev(Mean, Sd) UCL					50.8
272	97.5% Chebyshev(Mean, Sd) UCL					64.15	99% Chebyshev(Mean, Sd) UCL					90.37
273												
274	**Suggested UCL to Use**											
275	**95% Adjusted Gamma UCL**					**40.1**						
276												
277	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
278	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
279	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
280	For additional insight the user may want to consult a statistician.											
281												
282	**Benzene**											
283	**General Statistics**											
284	Total Number of Observations					20	Number of Distinct Observations					18
285							Number of Missing Observations					0
286	Minimum					0.073	Mean					33.32
287	Maximum					240	Median					17.5
288	SD					52.58	Std. Error of Mean					11.76
289	Coefficient of Variation					1.578	Skewness					3.503
290												
291	**Normal GOF Test**											
292	Shapiro Wilk Test Statistic					0.565	**Shapiro Wilk GOF Test**					
293	5% Shapiro Wilk Critical Value					0.905	Data Not Normal at 5% Significance Level					
294	Lilliefors Test Statistic					0.28	**Lilliefors GOF Test**					
295	5% Lilliefors Critical Value					0.198	Data Not Normal at 5% Significance Level					
296	**Data Not Normal at 5% Significance Level**											
297												
298	**Assuming Normal Distribution**											
299	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
300	95% Student's-t UCL					53.65	95% Adjusted-CLT UCL (Chen-1995)					62.49
301							95% Modified-t UCL (Johnson-1978)					55.18
302												
303	**Gamma GOF Test**											
304	A-D Test Statistic					0.342	**Anderson-Darling Gamma GOF Test**					
305	5% A-D Critical Value					0.787	Detected data appear Gamma Distributed at 5% Significance Level					
306	K-S Test Statistic					0.117	**Kolmogrov-Smirnoff Gamma GOF Test**					

Subsurface Waste UCL Calculations
Waste > 2-feet below ground surface
Brine Service Company Superfund Site

	A	B	C	D	E	F	G	H	I	J	K	L
307					5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level					
308	**Detected data appear Gamma Distributed at 5% Significance Level**											
309												
310	**Gamma Statistics**											
311					k hat (MLE)	0.666				k star (bias corrected MLE)		0.599
312					Theta hat (MLE)	50.05				Theta star (bias corrected MLE)		55.61
313					nu hat (MLE)	26.63				nu star (bias corrected)		23.97
314					MLE Mean (bias corrected)	33.32				MLE Sd (bias corrected)		43.05
315										Approximate Chi Square Value (0.05)		13.82
316					Adjusted Level of Significance	0.038				Adjusted Chi Square Value		13.21
317												
318	**Assuming Gamma Distribution**											
319			95% Approximate Gamma UCL (use when n>=50)			57.77			95% Adjusted Gamma UCL (use when n<50)			60.43
320												
321	**Lognormal GOF Test**											
322					Shapiro Wilk Test Statistic	0.899	**Shapiro Wilk Lognormal GOF Test**					
323					5% Shapiro Wilk Critical Value	0.905	Data Not Lognormal at 5% Significance Level					
324					Lilliefors Test Statistic	0.183	**Lilliefors Lognormal GOF Test**					
325					5% Lilliefors Critical Value	0.198	Data appear Lognormal at 5% Significance Level					
326	**Data appear Approximate Lognormal at 5% Significance Level**											
327												
328	**Lognormal Statistics**											
329					Minimum of Logged Data	-2.617				Mean of logged Data		2.592
330					Maximum of Logged Data	5.481				SD of logged Data		1.716
331												
332	**Assuming Lognormal Distribution**											
333					95% H-UCL	259.7				90% Chebyshev (MVUE) UCL		119.8
334					95% Chebyshev (MVUE) UCL	151.5				97.5% Chebyshev (MVUE) UCL		195.5
335					99% Chebyshev (MVUE) UCL	281.9						
336												
337	**Nonparametric Distribution Free UCL Statistics**											
338	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
339												
340	**Nonparametric Distribution Free UCLs**											
341					95% CLT UCL	52.66				95% Jackknife UCL		53.65
342					95% Standard Bootstrap UCL	52.67				95% Bootstrap-t UCL		85.53
343					95% Hall's Bootstrap UCL	125				95% Percentile Bootstrap UCL		52.78
344					95% BCA Bootstrap UCL	64.3						
345					90% Chebyshev(Mean, Sd) UCL	68.59				95% Chebyshev(Mean, Sd) UCL		84.56
346					97.5% Chebyshev(Mean, Sd) UCL	106.7				99% Chebyshev(Mean, Sd) UCL		150.3
347												
348	**Suggested UCL to Use**											
349					**95% Adjusted Gamma UCL**	**60.43**						
350												
351	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
352	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
353	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
354	For additional insight the user may want to consult a statistician.											
355												

Analytical Background Soil Data Summary for April 2012 Monthly Report

Brine Services Superfund Site

Analyte	CAS No.	Units	Sample Location Depth Interval Sample Date	BGSS01 1-2 ft 3/21/2012	BGSS02 1-2 ft 3/21/2012	BGSS03 0-0.5 ft 3/21/2012	BGSS04 1-2 ft 3/21/2012	BGSS05 1-2 ft 3/21/2012	BGSS06 0-0.5 ft 3/21/2012	BGSS06 0-0.5 ft 3/21/2012	BGSS07 1-2 ft 3/21/2012	BGSS08 1-2 ft 3/21/2012	BGSS09 0-0.5 ft 3/21/2012	BGSS10 0-0.5 ft 3/21/2012	BGSS11 0-0.5 ft 3/21/2012	BGSS12 1-2 ft 3/21/2012	BGSS13 0-0.5 ft 3/21/2012
METALS																	
Aluminum	7429-90-5	mg/kg		**10300**	**7230**	**2180**	**6080**	**1640**	**1890**	**1820**	**1800**	**8790**	**1400**	**1430**	**3180**	**11400**	**1150**
Antimony	7440-36-0	mg/kg		*<0.2*	*<0.22*	*<0.19*	*<0.21*	*<0.19*	*<0.2*	*<0.18*	*<0.2*	*<0.21*	*<0.21*	*<0.2*	*<0.2*	*<0.2*	*<0.2*
Arsenic	7440-38-2	mg/kg		**2.28**	**1.66**	**1.27**	**1.21**	**1.18**	**1.19**	**1.12**	**1.53**	**1.56**	**0.833**	**0.983**	**1.35**	**1.79**	**0.747**
Barium	7440-39-3	mg/kg		**26.6**	**51.5**	**25.9**	**35.7**	**10.3**	**35.4**	**41.1**	**19**	**18.2**	**23.4**	**19.4**	**51.7**	**49**	**23.2**
Beryllium	7440-41-7	mg/kg		**0.552**	**0.366 J**	**0.136 J**	**0.313 J**	**0.134 J**	**0.132 J**	**0.141 J**	**0.13 J**	**0.426 J**	**0.112 J**	**0.0911 J**	**0.168 J**	**0.553**	**0.0839 J**
Cadmium	7440-43-9	mg/kg		**0.0643 J**	**0.0818 J**	**1.02**	**0.0735 J**	*<0.047*	**1.25**	**1.44**	**0.948**	**0.085 J**	**1.06**	**0.552**	**1.42**	*<0.05*	**0.749**
Chromium	7440-47-3	mg/kg		**5.45**	**4.15**	**2.06**	**3.51**	**1.64**	**2.57**	**2.54**	**1.94**	**4.89**	**2.04**	**1.62**	**3.14**	**6.04**	**1.63**
Cobalt	7440-48-4	mg/kg		**2.42**	**1.08**	**0.967**	**1.51**	**1.11**	**1.55**	**1.49**	**0.998**	**0.963**	**1.13**	**0.788**	**1.21**	**3.19**	**0.774**
Copper	7440-50-8	mg/kg		**2.83**	**2**	**3.43**	**2.1**	**1.13**	**4.58**	**4.97**	**3.11**	**1.68**	**4**	**2.25**	**5.92**	**3.35**	**2.72**
Lead	7439-92-1	mg/kg		**6.05**	**4.4**	**13.7**	**3.63**	**2.83**	**16.3**	**18.3**	**8.81**	**4.57**	**16.9**	**6.3**	**16.5**	**5.22**	**9.63**
Manganese	7439-96-5	mg/kg		**38.1**	**32.7**	**48.8**	**43.3**	**66.2**	**113**	**116**	**59.6**	**22**	**72.9**	**44.8**	**65.6**	**45.8**	**55.8**
Nickel	7440-02-0	mg/kg		**3.98**	**2.7**	**1.38**	**2.57**	**1.06**	**1.42**	**1.51**	**1.23**	**2.69**	**0.996**	**0.968**	**2.11**	**4.31**	**1.07**
Selenium	7782-49-2	mg/kg		**0.89**	**0.772**	**0.31 J**	**0.581**	**0.323 J**	**0.721**	**0.516**	**0.415 J**	**0.563**	**0.412 J**	**0.376 J**	**0.549**	**0.887**	**0.371 J**
Silver	7440-22-4	mg/kg		*<0.079*	*<0.087*	*<0.075*	*<0.082*	*<0.075*	*<0.081*	**0.0792 J**	*<0.079*	*<0.086*	*<0.084*	*<0.08*	**0.0828 J**	*<0.08*	*<0.08*
Thallium	7440-28-0	mg/kg		**0.0951 J**	*<0.076*	*<0.066*	**0.119 J**	*<0.066*	*<0.071*	**0.0923 J**	*<0.069*	**0.0777 J**	*<0.073*	*<0.07*	*<0.071*	**0.107 J**	*<0.07*
Vanadium	7440-62-2	mg/kg		**11.2**	**9.01**	**4.79**	**6.13**	**4.59**	**5.23**	**5.02**	**5.14**	**8.56**	**4.06**	**4.1**	**6.62**	**10.8**	**3.84**
Zinc	7440-66-6	mg/kg		**16.4**	**14.8**	**77.4**	**13.9**	**4.65**	**89.2**	**97.8**	**54.4**	**13.9**	**71.3**	**37.6**	**102**	**17**	**52**
Mercury	7439-97-6	mg/kg		**0.00841**	**0.01**	**0.0445**	**0.00827**	**0.00671**	**0.0334**	**0.0289**	**0.0251**	**0.0242**	**0.0444**	**0.0135**	**0.0193**	**0.00658**	**0.0269**
Cyanide	57-12-5	mg/kg		*<0.68*	*<0.71*	*<0.64*	*<0.66*	*<0.63*	*<0.64*	*<0.62*	*<0.63*	*<0.7*	*<0.66*	**1.56 J**	*<0.66*	*<0.68*	*<0.65*
PESTICIDES AND PCBS																	
4,4´-DDD	72-54-8	mg/kg		*<0.00056*	*<0.00059*	*<0.00053*	*<0.00055*	**0.0019 J**	*<0.00054*	*<0.00051*	*<0.00052*	*<0.00058*	*<0.00055*	*<0.00054*	*<0.00055*	*<0.00057*	*<0.00054*
4 4´-DDE	72-55-9	mg/kg		*<0.00056*	*<0.00059*	*<0.00053*	*<0.00055*	**0.001 J**	*<0.00054*	*<0.00051*	*<0.00052*	*<0.00058*	*<0.00055*	**0.009**	*<0.00055*	*<0.00057*	*<0.00054*
4 4´-DDT	50-29-3	mg/kg		*<0.00056*	*<0.00059*	*<0.00053*	*<0.00055*	**0.0042**	*<0.00054*	*<0.00051*	*<0.00052*	*<0.00058*	*<0.00055*	*<0.00054*	*<0.00055*	*<0.00057*	*<0.00054*
Aldrin	309-00-2	mg/kg		*<0.00034*	*<0.00035*	*<0.00032*	*<0.00033*	*<0.00031*	*<0.00032*	*<0.00031*	*<0.00031*	*<0.00035*	*<0.00033*	*<0.00032*	*<0.00033*	*<0.00034*	*<0.00032*
alpha-BHC	319-84-6	mg/kg		*<0.00034*	*<0.00035*	*<0.00032*	*<0.00033*	*<0.00031*	*<0.00032*	*<0.00031*	*<0.00031*	*<0.00035*	*<0.00033*	*<0.00032*	*<0.00033*	*<0.00034*	*<0.00032*
alpha-Chlordane	5103-71-9	mg/kg		*<0.00022*	*<0.00023*	*<0.00021*	*<0.00022*	*<0.00021*	*<0.00021*	*<0.00021*	*<0.00021*	*<0.00023*	*<0.00022*	*<0.00021*	*<0.00022*	*<0.00023*	*<0.00022*
beta-BHC	319-85-7	mg/kg		*<0.00034*	*<0.00035*	*<0.00032*	*<0.00033*	*<0.00031*	*<0.00032*	*<0.00031*	*<0.00031*	*<0.00035*	*<0.00033*	*<0.00032*	*<0.00033*	*<0.00034*	*<0.00032*
delta-BHC	319-86-8	mg/kg		*<0.00022*	*<0.00023*	*<0.00021*	*<0.00022*	*<0.00021*	*<0.00021*	*<0.00021*	*<0.00021*	*<0.00023*	*<0.00022*	*<0.00021*	*<0.00022*	*<0.00023*	*<0.00022*
Dieldrin	60-57-1	mg/kg		*<0.00056*	*<0.00059*	*<0.00053*	*<0.00055*	*<0.00052*	*<0.00054*	*<0.00051*	*<0.00052*	*<0.00058*	*<0.00055*	*<0.00054*	*<0.00055*	*<0.00057*	*<0.00054*
Endosulfan I	959-98-8	mg/kg		*<0.00034*	*<0.00035*	*<0.00032*	*<0.00033*	*<0.00031*	*<0.00032*	*<0.00031*	*<0.00031*	*<0.00035*	*<0.00033*	*<0.00032*	*<0.00033*	*<0.00034*	*<0.00032*
Endosulfan II	33213-65-9	mg/kg		*<0.00067*	*<0.0007*	*<0.00064*	*<0.00066*	*<0.00063*	*<0.00064*	*<0.00062*	*<0.00063*	*<0.0007*	*<0.00066*	*<0.00064*	*<0.00066*	*<0.00068*	*<0.00065*
Endosulfan sulfate	1031-07-8	mg/kg		*<0.00067*	*<0.0007*	*<0.00064*	*<0.00066*	*<0.00063*	*<0.00064*	*<0.00062*	*<0.00063*	*<0.0007*	*<0.00066*	*<0.00064*	*<0.00066*	*<0.00068*	*<0.00065*
Endrin	72-20-8	mg/kg		*<0.00067*	*<0.0007*	*<0.00064*	*<0.00066*	*<0.00063*	*<0.00064*	*<0.00062*	*<0.00063*	*<0.0007*	*<0.00066*	*<0.00064*	*<0.00066*	*<0.00068*	*<0.00065*
Endrin aldehyde	7421-93-4	mg/kg		*<0.00067*	*<0.0007*	*<0.00064*	*<0.00066*	*<0.00063*	*<0.00064*	*<0.00062*	*<0.00063*	*<0.0007*	*<0.00066*	*<0.00064*	*<0.00066*	*<0.00068*	*<0.00065*
gamma-BHC	58-89-9	mg/kg		*<0.00022*	*<0.00023*	*<0.00021*	*<0.00022*	*<0.00021*	*<0.00021*	*<0.00021*	*<0.00021*	*<0.00023*	*<0.00022*	*<0.00021*	*<0.00022*	*<0.00023*	*<0.00022*
gamma-Chlordane	5103-74-2	mg/kg		*<0.00022*	*<0.00023*	*<0.00021*	*<0.00022*	*<0.00021*	*<0.00021*	*<0.00021*	*<0.00021*	*<0.00023*	*<0.00022*	*<0.00021*	*<0.00022*	*<0.00023*	*<0.00022*
Heptachlor	76-44-8	mg/kg		*<0.00034*	*<0.00035*	*<0.00032*	*<0.00033*	*<0.00031*	*<0.00032*	*<0.00031*	*<0.00031*	*<0.00035*	*<0.00033*	**0.0017 J**	*<0.00033*	*<0.00034*	*<0.00032*
Heptachlor epoxide	1024-57-3	mg/kg		*<0.00034*	*<0.00035*	*<0.00032*	*<0.00033*	**0.0013 J**	*<0.00032*	*<0.00031*	*<0.00031*	*<0.00035*	*<0.00033*	*<0.00032*	*<0.00033*	*<0.00034*	*<0.00032*
Methoxychlor	72-43-5	mg/kg		*<0.0038*	*<0.004*	*<0.0036*	*<0.0038*	*<0.0036*	*<0.0036*	*<0.0035*	*<0.0036*	*<0.004*	*<0.0037*	*<0.0036*	*<0.0037*	*<0.0039*	*<0.0037*
Toxaphene	8001-35-2	mg/kg		*<0.0054*	*<0.0056*	*<0.0051*	*<0.0053*	*<0.005*	*<0.0051*	*<0.0049*	*<0.005*	*<0.0056*	*<0.0052*	*<0.0051*	*<0.0052*	*<0.0055*	*<0.0052*
Aroclor 1016	12674-11-2	mg/kg		*<0.0027*	*<0.0028*	*<0.0025*	*<0.0027*	*<0.0025*	*<0.0026*	*<0.0025*	*<0.0025*	*<0.0028*	*<0.0026*	*<0.0026*	*<0.0026*	*<0.0027*	*<0.0026*
Aroclor 1221	11104-28-2	mg/kg		*<0.0027*	*<0.0028*	*<0.0025*	*<0.0027*	*<0.0025*	*<0.0026*	*<0.0025*	*<0.0025*	*<0.0028*	*<0.0026*	*<0.0026*	*<0.0026*	*<0.0027*	*<0.0026*
Aroclor 1232	11141-16-5	mg/kg		*<0.0027*	*<0.0028*	*<0.0025*	*<0.0027*	*<0.0025*	*<0.0026*	*<0.0025*	*<0.0025*	*<0.0028*	*<0.0026*	*<0.0026*	*<0.0026*	*<0.0027*	*<0.0026*
Aroclor 1242	53469-21-9	mg/kg		*<0.0027*	*<0.0028*	*<0.0025*	*<0.0027*	*<0.0025*	*<0.0026*	*<0.0025*	*<0.0025*	*<0.0028*	*<0.0026*	*<0.0026*	*<0.0026*	*<0.0027*	*<0.0026*
Aroclor 1248	12672-29-6	mg/kg		*<0.0027*	*<0.0028*	*<0.0025*	*<0.0027*	*<0.0025*	*<0.0026*	*<0.0025*	*<0.0025*	*<0.0028*	*<0.0026*	*<0.0026*	*<0.0026*	*<0.0027*	*<0.0026*
Aroclor 1254	11097-69-1	mg/kg		*<0.0027*	*<0.0028*	*<0.0025*	*<0.0027*	**0.047**	*<0.0026*	*<0.0025*	*<0.0025*	*<0.0028*	*<0.0026*	*<0.0026*	*<0.0026*	*<0.0027*	*<0.0026*
Aroclor 1260	11096-82-5	mg/kg		*<0.002*	*<0.0021*	*<0.0019*	*<0.002*	*<0.0019*	*<0.0019*	*<0.0019*	*<0.0019*	*<0.0021*	*<0.002*	*<0.0019*	*<0.002*	*<0.002*	*<0.0019*
SEMIVOLATILE ORGANIC COMPOUNDS																	
1,1´-Biphenyl	92-52-4	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
1-Methylnaphthalene	90-12-0	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
2,4,5-Trichlorophenol	95-95-4	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
2 4 6-Trichlorophenol	88-06-2	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
2,4-Dichlorophenol	120-83-2	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
2 4-Dimethylphenol	105-67-9	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
2 4-Dinitrophenol	51-28-5	mg/kg		*<0.0037*	*<0.0039*	*<0.0035*	*<0.0036*	*<0.0035*	*<0.0035*	*<0.0034*	*<0.0035*	*<0.0038*	*<0.0036*	*<0.0035*	*<0.0036*	*<0.0037*	*<0.0036*
2 4-Dinitrotoluene	121-14-2	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
2 6-Dinitrotoluene	606-20-2	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
2-Chloronaphthalene	91-58-7	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
2-Chlorophenol	95-57-8	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
2-Methylnaphthalene	91-57-6	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	**0.0018 J**	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
2-Methylphenol	95-48-7	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
2-Nitroaniline	88-74-4	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
2-Nitrophenol	88-75-5	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
3&4-Methylphenol	106-44-5	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
3 3´-Dichlorobenzidine	91-94-1	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
3-Nitroaniline	99-09-2	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
4-Bromophenyl phenyl ether	101-55-3	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
4-Chloro-3-methylphenol	59-50-7	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
4-Chloroaniline	106-47-8	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
4-Nitroaniline	100-01-6	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
4-Nitrophenol	100-02-7	mg/kg		*<0.0037*	*<0.0039*	*<0.0035*	*<0.0036*	*<0.0035*	*<0.0035*	*<0.0034*	*<0.0035*	*<0.0038*	*<0.0036*	*<0.0035*	*<0.0036*	*<0.0037*	*<0.0036*
Acenaphthene	83-32-9	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Acenaphthylene	208-96-8	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Acetophenone	98-86-2	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Anthracene	120-12-7	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Benz(a)anthracene	56-55-3	mg/kg		*<0.0018*	*<0.0019*	**0.0033 J**	*<0.0018*	*<0.0017*	**0.0061 J**	**0.0086**	**0.002 J**	*<0.0019*	**0.0075**	**0.002 J**	**0.0076**	*<0.0018*	**0.0036 J**
Benzaldehyde	100-52-7	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Benzo(a)pyrene	50-32-8	mg/kg		*<0.0018*	*<0.0019*	**0.004 J**	*<0.0018*	*<0.0017*	**0.0088**	**0.012**	**0.0021 J**	*<0.0019*	**0.0092**	**0.0027 J**	**0.01**	*<0.0018*	**0.0063 J**
Benzo(b)fluoranthene	205-99-2	mg/kg		*<0.0018*	*<0.0019*	**0.0054 J**	*<0.0018*	*<0.0017*	**0.0096**	**0.013**	**0.0037 J**	*<0.0019*	**0.011**	**0.0038 J**	**0.014**	*<0.0018*	**0.0085**
Benzo(g h i)perylene	191-24-2	mg/kg		*<0.0019*	*<0.002*	**0.0036 J**	*<0.0019*	*<0.0018*	**0.0086**	**0.012**	**0.0027 J**	*<0.002*	**0.0074**	**0.0035 J**	**0.011**	*<0.0019*	**0.0057 J**
Benzo(k)fluoranthene	207-08-9	mg/kg		*<0.0018*	*<0.0019*	**0.0024 J**	*<0.0018*	*<0.0017*	**0.0044 J**	**0.0055 J**	*<0.0017*	*<0.0019*	**0.0041 J**	**0.0022 J**	**0.0044 J**	*<0.0018*	**0.0031 J**
Bis(2-chloroethoxy)methane	111-91-1	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Bis(2-chloroethyl)ether	111-44-4	mg/kg		*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*

Data are unvalidated.
Bold indicates detection above sample detection limit
J - Estimated data

Analytical Background Soil Data Summary for April 2012 Monthly Report

Brine Services Superfund Site

	Sample Location		BGSS01	BGSS02	BGSS03	BGSS04	BGSS05	BGSS06	BGSS06	BGSS07	BGSS08	BGSS09	BGSS10	BGSS11	BGSS12	BGSS13
	Depth Interval		1-2 ft	1-2 ft	0-0.5 ft	1-2 ft	1-2 ft	0-0.5 ft	0-0.5 ft	1-2 ft	1-2 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	0-0.5 ft
	Sample Date		3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012
Analyte	**CAS No.**	**Units**														
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	*<0.0018*	*<0.0019*	**0.0041 J**	**0.0079**	*<0.0017*	**0.0048 J**	**0.0073**	*<0.0017*	*<0.0019*	**0.0047 J**	*<0.0017*	**0.0097**	*<0.0018*	**0.0049 J**
Butyl benzyl phthalate	85-68-7	mg/kg	*<0.0032*	*<0.0033*	**0.0043 J**	*<0.0031*	*<0.0029*	*<0.003*	*<0.0029*	*<0.0029*	*<0.0033*	*<0.0031*	*<0.003*	*<0.0031*	*<0.0032*	*<0.003*
Caprolactam	105-60-2	mg/kg	*<0.0023*	*<0.0023*	*<0.0021*	*<0.0022*	*<0.0021*	*<0.0021*	*<0.0021*	*<0.0021*	*<0.0023*	*<0.0022*	*<0.0021*	*<0.0022*	*<0.0023*	*<0.0022*
Carbazole	86-74-8	mg/kg	*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Chrysene	218-01-9	mg/kg	*<0.0018*	*<0.0019*	**0.0043 J**	*<0.0018*	*<0.0017*	**0.0084**	**0.011**	**0.002 J**	*<0.0019*	**0.011**	**0.003 J**	**0.012**	*<0.0018*	**0.0063 J**
Dibenz(a h)anthracene	53-70-3	mg/kg	*<0.0023*	*<0.0023*	*<0.0021*	*<0.0022*	*<0.0021*	**0.003 J**	**0.0039 J**	*<0.0021*	*<0.0023*	*<0.0022*	*<0.0021*	**0.0031 J**	*<0.0023*	*<0.0022*
Dibenzofuran	132-64-9	mg/kg	*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Diethyl phthalate	84-66-2	mg/kg	*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Dimethyl phthalate	131-11-3	mg/kg	*<0.0023*	*<0.0023*	*<0.0021*	*<0.0022*	*<0.0021*	*<0.0021*	*<0.0021*	*<0.0021*	*<0.0023*	*<0.0022*	*<0.0021*	*<0.0022*	*<0.0023*	*<0.0022*
Di-n-butyl phthalate	84-74-2	mg/kg	*<0.0023*	*<0.0023*	*<0.0021*	*<0.0022*	*<0.0021*	**0.021**	**0.024**	*<0.0021*	*<0.0023*	*<0.0022*	**0.0033 J**	**0.011**	*<0.0023*	*<0.0022*
Di-n-octyl phthalate	117-84-0	mg/kg	*<0.0023*	*<0.0023*	*<0.0021*	*<0.0022*	*<0.0021*	*<0.0021*	*<0.0021*	*<0.0021*	*<0.0023*	*<0.0022*	*<0.0021*	*<0.0022*	*<0.0023*	*<0.0022*
Fluoranthene	206-44-0	mg/kg	*<0.0018*	*<0.0019*	**0.0055 J**	*<0.0018*	*<0.0017*	**0.0097**	**0.015**	**0.0032 J**	*<0.0019*	**0.012**	**0.0047 J**	**0.013**	*<0.0018*	**0.008**
Fluorene	86-73-7	mg/kg	*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Hexachlorobenzene	118-74-1	mg/kg	*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Hexachlorobutadiene	87-68-3	mg/kg	*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Hexachlorocyclopentadiene	77-47-4	mg/kg	*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Hexachloroethane	67-72-1	mg/kg	*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	*<0.0018*	*<0.0019*	**0.003 J**	*<0.0018*	*<0.0017*	**0.0072**	**0.0086**	**0.0022 J**	*<0.0019*	**0.0065 J**	**0.0027 J**	**0.0095**	*<0.0018*	**0.0052 J**
Isophorone	78-59-1	mg/kg	*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Naphthalene	91-20-3	mg/kg	*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
Nitrobenzene	98-95-3	mg/kg	*<0.0018*	*<0.0019*	*<0.0017*	*<0.0018*	*<0.0017*	*<0.0017*	*<0.0016*	*<0.0017*	*<0.0019*	*<0.0017*	*<0.0017*	*<0.0017*	*<0.0018*	*<0.0017*
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	*<0.0023*	*<0.0023*	*<0.0021*	*<0.0022*	*<0.0021*	*<0.0021*	*<0.0021*	*<0.0021*	*<0.0023*	*<0.0022*	*<0.0021*	*<0.0022*	*<0.0023*	*<0.0022*
N-Nitrosodiphenylamine	86-30-6	mg/kg	*<0.0023*	*<0.0023*	*<0.0021*	*<0.0022*	*<0.0021*	*<0.0021*	*<0.0021*	*<0.0021*	*<0.0023*	*<0.0022*	*<0.0021*	*<0.0022*	*<0.0023*	*<0.0022*
Pentachlorophenol	87-86-5	mg/kg	*<0.002*	*<0.0021*	*<0.0019*	*<0.002*	*<0.0019*	*<0.0019*	*<0.0019*	*<0.0019*	*<0.0021*	*<0.002*	*<0.0019*	*<0.002*	*<0.002*	*<0.0019*
Phenanthrene	85-01-8	mg/kg	*<0.0028*	*<0.0029*	*<0.0027*	*<0.0028*	*<0.0026*	**0.004 J**	**0.0054 J**	*<0.0026*	*<0.0029*	**0.0049 J**	*<0.0027*	**0.0051 J**	*<0.0028*	**0.0034 J**
Phenol	108-95-2	mg/kg	*<0.0023*	*<0.0023*	*<0.0021*	*<0.0022*	*<0.0021*	*<0.0021*	*<0.0021*	*<0.0021*	*<0.0023*	*<0.0022*	*<0.0021*	*<0.0022*	*<0.0023*	*<0.0022*
Pyrene	129-00-0	mg/kg	*<0.0018*	*<0.0019*	**0.0048 J**	*<0.0018*	*<0.0017*	**0.0098**	**0.014**	**0.0026 J**	*<0.0019*	**0.011**	**0.0037 J**	**0.014**	*<0.0018*	**0.0073**

Data are unvalidated.
Bold indicates detection above sample detection limit
J - Estimated data

Soil Background Statistics
Brine Services Company Superfund Site

	General Background Statistics for Full Data Sets
User Selected Options	
From File	Sheet1.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	90%
Different or Future K Values	1
Number of Bootstrap Operations	2000

Aluminum

General Statistics			
Total Number of Observations	13	Number of Distinct Observations	13
Tolerance Factor	2.155		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	1150	Minimum	7.048
Maximum	**11400**	Maximum	9.341
Second Largest	10300	Second Largest	9.24
First Quartile	1640	First Quartile	7.402
Median	2180	Median	7.687
Third Quartile	7230	Third Quartile	8.886
Mean	4495	Mean	8.076
SD	3758	SD	0.85
Coefficient of Variation	0.836		
Skewness	0.848		

Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.811	Shapiro Wilk Test Statistic	0.869
Shapiro Wilk Critical Value	0.866	Shapiro Wilk Critical Value	0.866
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	12593	95% UTL with 90% Coverage	20115
95% UPL (t)	11445	95% UPL (t)	15513
90% Percentile (z)	9311	90% Percentile (z)	9570
95% Percentile (z)	10676	95% Percentile (z)	13035
99% Percentile (z)	13237	99% Percentile (z)	23271
Gamma Distribution Test		**Data Distribution Test**	
k star	1.315	**Data appear Lognormal at 5% Significance Level**	
Theta Star	3419		
MLE of Mean	4495		
MLE of Standard Deviation	3920		
nu star	34.19		
A-D Test Statistic	0.882	**Nonparametric Statistics**	
5% A-D Critical Value	0.748	90% Percentile	9998
K-S Test Statistic	0.248	95% Percentile	10740
5% K-S Critical Value	0.24	99% Percentile	11268
Data not Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	11400
90% Percentile	9674	95% Percentile Bootstrap UTL with 90% Coverage	11400
95% Percentile	12242	95% BCA Bootstrap UTL with 90% Coverage	11400
99% Percentile	18093	95% UPL	11400
		95% Chebyshev UPL	21493
95% WH Approx. Gamma UPL	13169	Upper Threshold Limit Based upon IQR	15615
95% HW Approx. Gamma UPL	13592		
95% WH Approx. Gamma UTL with 90% Coverage	15592		
95% HW Approx. Gamma UTL with 90% Coverage	16362		

Soil Background Statistics
Brine Services Company Superfund Site

Arsenic

General Statistics			
Total Number of Observations	13	Number of Distinct Observations	13
Tolerance Factor	2.155		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	0.747	Minimum	-0.292
Maximum	**2.28**	Maximum	0.824
Second Largest	1.79	Second Largest	0.582
First Quartile	1.155	First Quartile	0.144
Median	1.27	Median	0.239
Third Quartile	1.56	Third Quartile	0.445
Mean	1.35	Mean	0.256
SD	0.417	SD	0.31
Coefficient of Variation	0.309		
Skewness	0.695		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.962	Shapiro Wilk Test Statistic	0.985
Shapiro Wilk Critical Value	0.866	Shapiro Wilk Critical Value	0.866
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	2.249	95% UTL with 90% Coverage	2.518
95% UPL (t)	2.122	95% UPL (t)	2.291
90% Percentile (z)	1.885	90% Percentile (z)	1.921
95% Percentile (z)	2.036	95% Percentile (z)	2.15
99% Percentile (z)	2.321	99% Percentile (z)	2.655
Gamma Distribution Test		**Data Distribution Test**	
k star	8.966	**Data appear Normal at 5% Significance Level**	
Theta Star	0.151		
MLE of Mean	1.35		
MLE of Standard Deviation	0.451		
nu star	233.1		
A-D Test Statistic	0.15	**Nonparametric Statistics**	
5% A-D Critical Value	0.734	90% Percentile	1.764
K-S Test Statistic	0.107	95% Percentile	1.986
5% K-S Critical Value	0.237	99% Percentile	2.221
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	2.28
90% Percentile	1.95	95% Percentile Bootstrap UTL with 90% Coverage	2.28
95% Percentile	2.167	95% BCA Bootstrap UTL with 90% Coverage	2.182
99% Percentile	2.613	95% UPL	2.28
		95% Chebyshev UPL	3.237
95% WH Approx. Gamma UPL	2.212	Upper Threshold Limit Based upon IQR	2.168
95% HW Approx. Gamma UPL	2.229		
95% WH Approx. Gamma UTL with 90% Coverage	2.392		
95% HW Approx. Gamma UTL with 90% Coverage	2.418		

Soil Background Statistics
Brine Services Company Superfund Site

Barium

General Statistics											
Total Number of Observations	13					Number of Distinct Observations	13				
Tolerance Factor	2.155										
Raw Statistics						**Log-Transformed Statistics**					
Minimum	10.3					Minimum	2.332				
Maximum	**51.7**					Maximum	3.945				
Second Largest	51.5					Second Largest	3.942				
First Quartile	19.4					First Quartile	2.965				
Median	25.9					Median	3.254				
Third Quartile	38.25					Third Quartile	3.644				
Mean	30.17					Mean	3.306				
SD	13.76					SD	0.479				
Coefficient of Variation	0.456										
Skewness	0.533										
Background Statistics											
Normal Distribution Test						**Lognormal Distribution Test**					
Shapiro Wilk Test Statistic	0.901					Shapiro Wilk Test Statistic	0.94				
Shapiro Wilk Critical Value	0.866					Shapiro Wilk Critical Value	0.866				
Data appear Normal at 5% Significance Level						**Data appear Lognormal at 5% Significance Level**					
Assuming Normal Distribution						**Assuming Lognormal Distribution**					
95% UTL with 90% Coverage	59.83					95% UTL with 90% Coverage	76.57				
95% UPL (t)	55.62					95% UPL (t)	66.14				
90% Percentile (z)	47.8					90% Percentile (z)	50.38				
95% Percentile (z)	52.8					95% Percentile (z)	59.96				
99% Percentile (z)	62.18					99% Percentile (z)	83.12				
Gamma Distribution Test						**Data Distribution Test**					
k star	3.981					**Data appear Normal at 5% Significance Level**					
Theta Star	7.577										
MLE of Mean	30.17										
MLE of Standard Deviation	15.12										
nu star	103.5										
A-D Test Statistic	0.387					**Nonparametric Statistics**					
5% A-D Critical Value	0.736					90% Percentile	51				
K-S Test Statistic	0.167					95% Percentile	51.58				
5% K-S Critical Value	0.237					99% Percentile	51.68				
Data appear Gamma Distributed at 5% Significance Level											
Assuming Gamma Distribution						95% UTL with 90% Coverage	51.7				
90% Percentile	50.43					95% Percentile Bootstrap UTL with 90% Coverage	51.7				
95% Percentile	58.55					95% BCA Bootstrap UTL with 90% Coverage	51.7				
99% Percentile	75.88					95% UPL	51.7				
						95% Chebyshev UPL	92.42				
95% WH Approx. Gamma UPL	60.66					Upper Threshold Limit Based upon IQR	66.53				
95% HW Approx. Gamma UPL	61.74										
95% WH Approx. Gamma UTL with 90% Coverage	67.68										
95% HW Approx. Gamma UTL with 90% Coverage	69.39										

Soil Background Statistics
Brine Services Company Superfund Site

Beryllium

General Statistics											
Total Number of Observations	13					Number of Distinct Observations	13				
Tolerance Factor	2.155										
Raw Statistics						**Log-Transformed Statistics**					
Minimum	0.0839					Minimum	-2.478				
Maximum	**0.553**					Maximum	-0.592				
Second Largest	0.552					Second Largest	-0.594				
First Quartile	0.13					First Quartile	-2.04				
Median	0.137					Median	-1.991				
Third Quartile	0.366					Third Quartile	-1.005				
Mean	0.246					Mean	-1.622				
SD	0.174					SD	0.682				
Coefficient of Variation	0.707										
Skewness	0.909										
Background Statistics											
Normal Distribution Test						**Lognormal Distribution Test**					
Shapiro Wilk Test Statistic	0.808					Shapiro Wilk Test Statistic	0.878				
Shapiro Wilk Critical Value	0.866					Shapiro Wilk Critical Value	0.866				
Data not Normal at 5% Significance Level						**Data appear Lognormal at 5% Significance Level**					
Assuming Normal Distribution						**Assuming Lognormal Distribution**					
95% UTL with 90% Coverage	0.621					95% UTL with 90% Coverage	0.858				
95% UPL (t)	0.568					95% UPL (t)	0.697				
90% Percentile (z)	0.469					90% Percentile (z)	0.473				
95% Percentile (z)	0.533					95% Percentile (z)	0.606				
99% Percentile (z)	0.651					99% Percentile (z)	0.965				
Gamma Distribution Test						**Data Distribution Test**					
k star	1.91					**Data appear Lognormal at 5% Significance Level**					
Theta Star	0.129										
MLE of Mean	0.246										
MLE of Standard Deviation	0.178										
nu star	49.65										
A-D Test Statistic	0.869					**Nonparametric Statistics**					
5% A-D Critical Value	0.741					90% Percentile	0.527				
K-S Test Statistic	0.268					95% Percentile	0.552				
5% K-S Critical Value	0.239					99% Percentile	0.553				
Data not Gamma Distributed at 5% Significance Level											
Assuming Gamma Distribution						95% UTL with 90% Coverage	0.553				
90% Percentile	0.484					95% Percentile Bootstrap UTL with 90% Coverage	0.553				
95% Percentile	0.593					95% BCA Bootstrap UTL with 90% Coverage	0.553				
99% Percentile	0.834					95% UPL	0.553				
						95% Chebyshev UPL	1.034				
95% WH Approx. Gamma UPL	0.627					Upper Threshold Limit Based upon IQR	0.72				
95% HW Approx. Gamma UPL	0.641										
95% WH Approx. Gamma UTL with 90% Coverage	0.726										
95% HW Approx. Gamma UTL with 90% Coverage	0.751										

Soil Background Statistics
Brine Services Company Superfund Site

Cadmium

General Statistics			
Total Number of Observations	13	Number of Distinct Observations	13
Tolerance Factor	2.155		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	0.047	Minimum	-3.058
Maximum	**1.42**	Maximum	0.351
Second Largest	1.345	Second Largest	0.296
First Quartile	0.0735	First Quartile	-2.61
Median	0.552	Median	-0.594
Third Quartile	1.02	Third Quartile	0.0198
Mean	0.577	Mean	-1.276
SD	0.537	SD	1.429
Coefficient of Variation	0.931		
Skewness	0.327		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.834	Shapiro Wilk Test Statistic	0.802
Shapiro Wilk Critical Value	0.866	Shapiro Wilk Critical Value	0.866
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	1.734	95% UTL with 90% Coverage	6.069
95% UPL (t)	1.57	95% UPL (t)	3.923
90% Percentile (z)	1.265	90% Percentile (z)	1.742
95% Percentile (z)	1.46	95% Percentile (z)	2.928
99% Percentile (z)	1.826	99% Percentile (z)	7.753
Gamma Distribution Test		**Data Distribution Test**	
k star	0.679	**Data do not follow a Discernable Distribution (0.05)**	
Theta Star	0.849		
MLE of Mean	0.577		
MLE of Standard Deviation	0.7		
nu star	17.65		
A-D Test Statistic	1.12	**Nonparametric Statistics**	
5% A-D Critical Value	0.767	90% Percentile	1.288
K-S Test Statistic	0.282	95% Percentile	1.375
5% K-S Critical Value	0.245	99% Percentile	1.411
Data not Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	1.42
90% Percentile	1.458	95% Percentile Bootstrap UTL with 90% Coverage	1.42
95% Percentile	1.984	95% BCA Bootstrap UTL with 90% Coverage	1.42
99% Percentile	3.244	95% UPL	1.42
		95% Chebyshev UPL	3.006
95% WH Approx. Gamma UPL	2.236	Upper Threshold Limit Based upon IQR	2.44
95% HW Approx. Gamma UPL	2.457		
95% WH Approx. Gamma UTL with 90% Coverage	2.769		
95% HW Approx. Gamma UTL with 90% Coverage	3.144		

Soil Background Statistics
Brine Services Company Superfund Site

Chromium

General Statistics											
Total Number of Observations	13					Number of Distinct Observations	13				
Tolerance Factor	2.155										
Raw Statistics						**Log-Transformed Statistics**					
Minimum	1.62					Minimum	0.482				
Maximum	**6.04**					Maximum	1.798				
Second Largest	5.45					Second Largest	1.696				
First Quartile	1.94					First Quartile	0.663				
Median	2.555					Median	0.938				
Third Quartile	4.15					Third Quartile	1.423				
Mean	3.128					Mean	1.031				
SD	1.554					SD	0.481				
Coefficient of Variation	0.497										
Skewness	0.771										
Background Statistics											
Normal Distribution Test						**Lognormal Distribution Test**					
Shapiro Wilk Test Statistic	0.87					Shapiro Wilk Test Statistic	0.9				
Shapiro Wilk Critical Value	0.866					Shapiro Wilk Critical Value	0.866				
Data appear Normal at 5% Significance Level						**Data appear Lognormal at 5% Significance Level**					
Assuming Normal Distribution						**Assuming Lognormal Distribution**					
95% UTL with 90% Coverage	6.476					95% UTL with 90% Coverage	7.913				
95% UPL (t)	6.002					95% UPL (t)	6.831				
90% Percentile (z)	5.119					90% Percentile (z)	5.197				
95% Percentile (z)	5.683					95% Percentile (z)	6.19				
99% Percentile (z)	6.742					99% Percentile (z)	8.594				
Gamma Distribution Test						**Data Distribution Test**					
k star	3.698					**Data appear Normal at 5% Significance Level**					
Theta Star	0.846										
MLE of Mean	3.128										
MLE of Standard Deviation	1.627										
nu star	96.14										
A-D Test Statistic	0.561					**Nonparametric Statistics**					
5% A-D Critical Value	0.736					90% Percentile	5.338				
K-S Test Statistic	0.217					95% Percentile	5.686				
5% K-S Critical Value	0.237					99% Percentile	5.969				
Data appear Gamma Distributed at 5% Significance Level											
Assuming Gamma Distribution						95% UTL with 90% Coverage	6.04				
90% Percentile	5.309					95% Percentile Bootstrap UTL with 90% Coverage	6.04				
95% Percentile	6.192					95% BCA Bootstrap UTL with 90% Coverage	5.922				
99% Percentile	8.087					95% UPL	6.04				
						95% Chebyshev UPL	10.16				
95% WH Approx. Gamma UPL	6.427					Upper Threshold Limit Based upon IQR	7.465				
95% HW Approx. Gamma UPL	6.51										
95% WH Approx. Gamma UTL with 90% Coverage	7.195										
95% HW Approx. Gamma UTL with 90% Coverage	7.34										

Cobalt

General Statistics			
Total Number of Observations	13	Number of Distinct Observations	13
Tolerance Factor	2.155		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	0.774	Minimum	-0.256
Maximum	**3.19**	Maximum	1.16
Second Largest	2.42	Second Largest	0.884
First Quartile	0.967	First Quartile	-0.0336
Median	1.11	Median	0.104
Third Quartile	1.51	Third Quartile	0.412
Mean	1.358	Mean	0.215
SD	0.698	SD	0.414
Coefficient of Variation	0.514		
Skewness	1.95		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.747	Shapiro Wilk Test Statistic	0.873
Shapiro Wilk Critical Value	0.866	Shapiro Wilk Critical Value	0.866
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	2.863	95% UTL with 90% Coverage	3.03
95% UPL (t)	2.65	95% UPL (t)	2.67
90% Percentile (z)	2.253	90% Percentile (z)	2.11
95% Percentile (z)	2.507	95% Percentile (z)	2.453
99% Percentile (z)	2.983	99% Percentile (z)	3.253
Gamma Distribution Test		**Data Distribution Test**	
k star	4.407	**Data appear Lognormal at 5% Significance Level**	
Theta Star	0.308		
MLE of Mean	1.358		
MLE of Standard Deviation	0.647		
nu star	114.6		
A-D Test Statistic	0.913	**Nonparametric Statistics**	
5% A-D Critical Value	0.736	90% Percentile	2.24
K-S Test Statistic	0.243	95% Percentile	2.728
5% K-S Critical Value	0.237	99% Percentile	3.098
Data not Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	3.19
90% Percentile	2.225	95% Percentile Bootstrap UTL with 90% Coverage	3.19
95% Percentile	2.567	95% BCA Bootstrap UTL with 90% Coverage	3.036
99% Percentile	3.294	95% UPL	3.19
		95% Chebyshev UPL	4.517
95% WH Approx. Gamma UPL	2.644	Upper Threshold Limit Based upon IQR	2.325
95% HW Approx. Gamma UPL	2.648		
95% WH Approx. Gamma UTL with 90% Coverage	2.937		
95% HW Approx. Gamma UTL with 90% Coverage	2.956		

Soil Background Statistics
Brine Services Company Superfund Site

Copper

General Statistics			
Total Number of Observations	13	Number of Distinct Observations	13
Tolerance Factor	2.155		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	1.13	Minimum	0.122
Maximum	**5.92**	Maximum	1.778
Second Largest	4.775	Second Largest	1.563
First Quartile	2.1	First Quartile	0.742
Median	2.83	Median	1.04
Third Quartile	3.43	Third Quartile	1.233
Mean	3.023	Mean	1.018
SD	1.314	SD	0.446
Coefficient of Variation	0.435		
Skewness	0.833		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.955	Shapiro Wilk Test Statistic	0.99
Shapiro Wilk Critical Value	0.866	Shapiro Wilk Critical Value	0.866
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	5.854	95% UTL with 90% Coverage	7.232
95% UPL (t)	5.452	95% UPL (t)	6.311
90% Percentile (z)	4.706	90% Percentile (z)	4.899
95% Percentile (z)	5.183	95% Percentile (z)	5.761
99% Percentile (z)	6.079	99% Percentile (z)	7.806
Gamma Distribution Test		**Data Distribution Test**	
k star	4.532	**Data appear Normal at 5% Significance Level**	
Theta Star	0.667		
MLE of Mean	3.023		
MLE of Standard Deviation	1.42		
nu star	117.8		
A-D Test Statistic	0.117	**Nonparametric Statistics**	
5% A-D Critical Value	0.736	90% Percentile	4.62
K-S Test Statistic	0.096	95% Percentile	5.233
5% K-S Critical Value	0.237	99% Percentile	5.783
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	5.92
90% Percentile	4.925	95% Percentile Bootstrap UTL with 90% Coverage	5.92
95% Percentile	5.672	95% BCA Bootstrap UTL with 90% Coverage	5.691
99% Percentile	7.259	95% UPL	5.92
		95% Chebyshev UPL	8.965
95% WH Approx. Gamma UPL	5.857	Upper Threshold Limit Based upon IQR	5.425
95% HW Approx. Gamma UPL	5.947		
95% WH Approx. Gamma UTL with 90% Coverage	6.498		
95% HW Approx. Gamma UTL with 90% Coverage	6.641		

Soil Background Statistics
Brine Services Company Superfund Site

Lead

General Statistics			
Total Number of Observations	13	Number of Distinct Observations	13
Tolerance Factor	2.155		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	2.83	Minimum	1.04
Maximum	**17.3**	Maximum	2.851
Second Largest	16.9	Second Largest	2.827
First Quartile	4.57	First Quartile	1.52
Median	6.3	Median	1.841
Third Quartile	13.7	Third Quartile	2.617
Mean	8.911	Mean	2.013
SD	5.385	SD	0.622
Coefficient of Variation	0.604		
Skewness	0.637		

Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.858	Shapiro Wilk Test Statistic	0.927
Shapiro Wilk Critical Value	0.866	Shapiro Wilk Critical Value	0.866
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	20.51	95% UTL with 90% Coverage	28.6
95% UPL (t)	18.87	95% UPL (t)	23.65
90% Percentile (z)	15.81	90% Percentile (z)	16.61
95% Percentile (z)	17.77	95% Percentile (z)	20.82
99% Percentile (z)	21.44	99% Percentile (z)	31.82
Gamma Distribution Test		**Data Distribution Test**	
k star	2.373	**Data appear Gamma Distributed at 5% Significance Level**	
Theta Star	3.755		
MLE of Mean	8.911		
MLE of Standard Deviation	5.784		
nu star	61.7		
A-D Test Statistic	0.501	**Nonparametric Statistics**	
5% A-D Critical Value	0.739	90% Percentile	16.82
K-S Test Statistic	0.183	95% Percentile	17.06
5% K-S Critical Value	0.238	99% Percentile	17.25
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	17.3
90% Percentile	16.66	95% Percentile Bootstrap UTL with 90% Coverage	17.3
95% Percentile	20.04	95% BCA Bootstrap UTL with 90% Coverage	17.3
99% Percentile	27.48	95% UPL	17.3
		95% Chebyshev UPL	33.27
95% WH Approx. Gamma UPL	21.09	Upper Threshold Limit Based upon IQR	27.4
95% HW Approx. Gamma UPL	21.58		
95% WH Approx. Gamma UTL with 90% Coverage	24.12		
95% HW Approx. Gamma UTL with 90% Coverage	24.95		

Manganese

General Statistics			
Total Number of Observations	13	Number of Distinct Observations	13
Tolerance Factor	2.155		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	22	Minimum	3.091
Maximum	**114.5**	Maximum	4.741
Second Largest	72.9	Second Largest	4.289
First Quartile	43.3	First Quartile	3.768
Median	48.8	Median	3.888
Third Quartile	65.6	Third Quartile	4.184
Mean	54.62	Mean	3.924
SD	23.01	SD	0.407
Coefficient of Variation	0.421		
Skewness	1.38		

Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.902	Shapiro Wilk Test Statistic	0.98
Shapiro Wilk Critical Value	0.866	Shapiro Wilk Critical Value	0.866
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	104.2	95% UTL with 90% Coverage	121.8
95% UPL (t)	97.18	95% UPL (t)	107.5
90% Percentile (z)	84.11	90% Percentile (z)	85.32
95% Percentile (z)	92.47	95% Percentile (z)	98.93
99% Percentile (z)	108.2	99% Percentile (z)	130.6
Gamma Distribution Test		**Data Distribution Test**	
k star	5.229	**Data appear Normal at 5% Significance Level**	
Theta Star	10.45		
MLE of Mean	54.62		
MLE of Standard Deviation	23.89		
nu star	135.9		
A-D Test Statistic	0.222	**Nonparametric Statistics**	
5% A-D Critical Value	0.735	90% Percentile	71.56
K-S Test Statistic	0.107	95% Percentile	89.54
5% K-S Critical Value	0.237	99% Percentile	109.5
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	114.5
90% Percentile	86.59	95% Percentile Bootstrap UTL with 90% Coverage	114.5
95% Percentile	98.91	95% BCA Bootstrap UTL with 90% Coverage	106.2
99% Percentile	124.9	95% UPL	114.5
		95% Chebyshev UPL	158.7
95% WH Approx. Gamma UPL	101.7	Upper Threshold Limit Based upon IQR	99.05
95% HW Approx. Gamma UPL	102.9		
95% WH Approx. Gamma UTL with 90% Coverage	112.2		
95% HW Approx. Gamma UTL with 90% Coverage	114.1		

Nickel

General Statistics			
Total Number of Observations	13	Number of Distinct Observations	13
Tolerance Factor	2.155		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	0.968	Minimum	-0.0325
Maximum	**4.31**	Maximum	1.461
Second Largest	3.98	Second Largest	1.381
First Quartile	1.07	First Quartile	0.0677
Median	1.465	Median	0.382
Third Quartile	2.69	Third Quartile	0.99
Mean	2.041	Mean	0.578
SD	1.141	SD	0.533
Coefficient of Variation	0.559		
Skewness	0.958		

Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.849	Shapiro Wilk Test Statistic	0.895
Shapiro Wilk Critical Value	0.866	Shapiro Wilk Critical Value	0.866
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	4.5	95% UTL with 90% Coverage	5.626
95% UPL (t)	4.151	95% UPL (t)	4.78
90% Percentile (z)	3.503	90% Percentile (z)	3.531
95% Percentile (z)	3.918	95% Percentile (z)	4.286
99% Percentile (z)	4.695	99% Percentile (z)	6.164
Gamma Distribution Test		**Data Distribution Test**	
k star	3.019	**Data appear Gamma Distributed at 5% Significance Level**	
Theta Star	0.676		
MLE of Mean	2.041		
MLE of Standard Deviation	1.174		
nu star	78.51		
A-D Test Statistic	0.627	**Nonparametric Statistics**	
5% A-D Critical Value	0.738	90% Percentile	3.724
K-S Test Statistic	0.209	95% Percentile	4.112
5% K-S Critical Value	0.238	99% Percentile	4.27
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	4.31
90% Percentile	3.615	95% Percentile Bootstrap UTL with 90% Coverage	4.31
95% Percentile	4.275	95% BCA Bootstrap UTL with 90% Coverage	4.31
99% Percentile	5.703	95% UPL	4.31
		95% Chebyshev UPL	7.202
95% WH Approx. Gamma UPL	4.458	Upper Threshold Limit Based upon IQR	5.12
95% HW Approx. Gamma UPL	4.523		
95% WH Approx. Gamma UTL with 90% Coverage	5.039		
95% HW Approx. Gamma UTL with 90% Coverage	5.154		

Selenium

General Statistics											
Total Number of Observations	13					Number of Distinct Observations	13				
Tolerance Factor	2.155										
Raw Statistics						**Log-Transformed Statistics**					
Minimum	0.31					Minimum	-1.171				
Maximum	**0.89**					Maximum	-0.117				
Second Largest	0.887					Second Largest	-0.12				
First Quartile	0.376					First Quartile	-0.978				
Median	0.549					Median	-0.6				
Third Quartile	0.619					Third Quartile	-0.48				
Mean	0.544					Mean	-0.672				
SD	0.203					SD	0.365				
Coefficient of Variation	0.373										
Skewness	0.671										
Background Statistics											
Normal Distribution Test						**Lognormal Distribution Test**					
Shapiro Wilk Test Statistic	0.893					Shapiro Wilk Test Statistic	0.928				
Shapiro Wilk Critical Value	0.866					Shapiro Wilk Critical Value	0.866				
Data appear Normal at 5% Significance Level						**Data appear Lognormal at 5% Significance Level**					
Assuming Normal Distribution						**Assuming Lognormal Distribution**					
95% UTL with 90% Coverage	0.98					95% UTL with 90% Coverage	1.121				
95% UPL (t)	0.918					95% UPL (t)	1.003				
90% Percentile (z)	0.803					90% Percentile (z)	0.815				
95% Percentile (z)	0.877					95% Percentile (z)	0.931				
99% Percentile (z)	1.015					99% Percentile (z)	1.194				
Gamma Distribution Test						**Data Distribution Test**					
k star	6.37					**Data appear Normal at 5% Significance Level**					
Theta Star	0.0853										
MLE of Mean	0.544										
MLE of Standard Deviation	0.215										
nu star	165.6										
A-D Test Statistic	0.427					**Nonparametric Statistics**					
5% A-D Critical Value	0.735					90% Percentile	0.864				
K-S Test Statistic	0.194					95% Percentile	0.888				
5% K-S Critical Value	0.237					99% Percentile	0.89				
Data appear Gamma Distributed at 5% Significance Level											
Assuming Gamma Distribution						95% UTL with 90% Coverage	0.89				
90% Percentile	0.831					95% Percentile Bootstrap UTL with 90% Coverage	0.89				
95% Percentile	0.939					95% BCA Bootstrap UTL with 90% Coverage	0.89				
99% Percentile	1.165					95% UPL	0.89				
						95% Chebyshev UPL	1.46				
95% WH Approx. Gamma UPL	0.964					Upper Threshold Limit Based upon IQR	0.982				
95% HW Approx. Gamma UPL	0.972										
95% WH Approx. Gamma UTL with 90% Coverage	1.055										
95% HW Approx. Gamma UTL with 90% Coverage	1.069										

Thallium

General Statistics			
Total Number of Observations	13	Number of Distinct Observations	11
Tolerance Factor	2.155		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	0.066	Minimum	-2.718
Maximum	0.119	Maximum	-2.129
Second Largest	0.107	Second Largest	-2.235
First Quartile	0.07	First Quartile	-2.659
Median	0.073	Median	-2.617
Third Quartile	0.0817	Third Quartile	-2.505
Mean	0.0801	Mean	-2.542
SD	0.0167	SD	0.189
Coefficient of Variation	0.208		
Skewness	1.51		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.791	Shapiro Wilk Test Statistic	0.83
Shapiro Wilk Critical Value	0.866	Shapiro Wilk Critical Value	0.866
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	0.116	95% UTL with 90% Coverage	0.118
95% UPL (t)	0.111	95% UPL (t)	0.112
90% Percentile (z)	0.102	90% Percentile (z)	0.1
95% Percentile (z)	0.108	95% Percentile (z)	0.107
99% Percentile (z)	0.119	99% Percentile (z)	0.122
Gamma Distribution Test		**Data Distribution Test**	
k star	22.11	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
Theta Star	0.00362		
MLE of Mean	0.0801		
MLE of Standard Deviation	0.017		
nu star	574.8		
A-D Test Statistic	1.028	**Nonparametric Statistics**	
5% A-D Critical Value	0.733	90% Percentile	0.105
K-S Test Statistic	0.232	95% Percentile	0.112
5% K-S Critical Value	0.236	99% Percentile	0.118
Data follow Appx. Gamma Distribution at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	0.119
90% Percentile	0.103	95% Percentile Bootstrap UTL with 90% Coverage	0.119
95% Percentile	0.11	95% BCA Bootstrap UTL with 90% Coverage	0.119
99% Percentile	0.125	95% UPL	0.119
		95% Chebyshev UPL	0.156
95% WH Approx. Gamma UPL	0.111	Upper Threshold Limit Based upon IQR	0.0991
95% HW Approx. Gamma UPL	0.111		
95% WH Approx. Gamma UTL with 90% Coverage	0.117		
95% HW Approx. Gamma UTL with 90% Coverage	0.118		

Vanadium

General Statistics			
Total Number of Observations	13	Number of Distinct Observations	13
Tolerance Factor	2.155		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	3.84	Minimum	1.345
Maximum	**11.2**	Maximum	2.416
Second Largest	10.8	Second Largest	2.38
First Quartile	4.59	First Quartile	1.524
Median	5.14	Median	1.637
Third Quartile	8.56	Third Quartile	2.147
Mean	6.459	Mean	1.797
SD	2.588	SD	0.377
Coefficient of Variation	0.401		
Skewness	0.872		

Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.858	Shapiro Wilk Test Statistic	0.903
Shapiro Wilk Critical Value	0.866	Shapiro Wilk Critical Value	0.866
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	12.04	95% UTL with 90% Coverage	13.59
95% UPL (t)	11.24	95% UPL (t)	12.11
90% Percentile (z)	9.775	90% Percentile (z)	9.778
95% Percentile (z)	10.72	95% Percentile (z)	11.21
99% Percentile (z)	12.48	99% Percentile (z)	14.5
Gamma Distribution Test		**Data Distribution Test**	
k star	5.811	**Data appear Gamma Distributed at 5% Significance Level**	
Theta Star	1.112		
MLE of Mean	6.459		
MLE of Standard Deviation	2.679		
nu star	151.1		
A-D Test Statistic	0.609	**Nonparametric Statistics**	
5% A-D Critical Value	0.735	90% Percentile	10.44
K-S Test Statistic	0.222	95% Percentile	10.96
5% K-S Critical Value	0.237	99% Percentile	11.15
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	11.2
90% Percentile	10.04	95% Percentile Bootstrap UTL with 90% Coverage	11.2
95% Percentile	11.4	95% BCA Bootstrap UTL with 90% Coverage	11.2
99% Percentile	14.26	95% UPL	11.2
		95% Chebyshev UPL	18.16
95% WH Approx. Gamma UPL	11.72	Upper Threshold Limit Based upon IQR	14.52
95% HW Approx. Gamma UPL	11.8		
95% WH Approx. Gamma UTL with 90% Coverage	12.87		
95% HW Approx. Gamma UTL with 90% Coverage	13.02		

Zinc

General Statistics			
Total Number of Observations	13	Number of Distinct Observations	12
Tolerance Factor	2.155		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	4.65	Minimum	1.537
Maximum	**102**	Maximum	4.625
Second Largest	93.5	Second Largest	4.538
First Quartile	14.8	First Quartile	2.695
Median	37.6	Median	3.627
Third Quartile	71.3	Third Quartile	4.267
Mean	43.76	Mean	3.421
SD	33.65	SD	0.957
Coefficient of Variation	0.769		
Skewness	0.528		

Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.885	Shapiro Wilk Test Statistic	0.911
Shapiro Wilk Critical Value	0.866	Shapiro Wilk Critical Value	0.866
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	116.3	95% UTL with 90% Coverage	240.7
95% UPL (t)	106	95% UPL (t)	179.7
90% Percentile (z)	86.89	90% Percentile (z)	104.3
95% Percentile (z)	99.11	95% Percentile (z)	147.7
99% Percentile (z)	122	99% Percentile (z)	283.5
Gamma Distribution Test		**Data Distribution Test**	
k star	1.24	**Data appear Normal at 5% Significance Level**	
Theta Star	35.29		
MLE of Mean	43.76		
MLE of Standard Deviation	39.3		
nu star	32.24		
A-D Test Statistic	0.544	**Nonparametric Statistics**	
5% A-D Critical Value	0.75	90% Percentile	90.28
K-S Test Statistic	0.229	95% Percentile	96.9
5% K-S Critical Value	0.241	99% Percentile	101
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	102
90% Percentile	95.54	95% Percentile Bootstrap UTL with 90% Coverage	102
95% Percentile	121.6	95% BCA Bootstrap UTL with 90% Coverage	100.3
99% Percentile	181.2	95% UPL	102
		95% Chebyshev UPL	196
95% WH Approx. Gamma UPL	131.7	Upper Threshold Limit Based upon IQR	156.1
95% HW Approx. Gamma UPL	139.1		
95% WH Approx. Gamma UTL with 90% Coverage	156.4		
95% HW Approx. Gamma UTL with 90% Coverage	168.5		

Mercury

General Statistics			
Total Number of Observations	13	Number of Distinct Observations	13
Tolerance Factor	2.155		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	0.00658	Minimum	-5.024
Maximum	**0.0445**	Maximum	-3.112
Second Largest	0.0444	Second Largest	-3.115
First Quartile	0.00841	First Quartile	-4.778
Median	0.0193	Median	-3.948
Third Quartile	0.0269	Third Quartile	-3.616
Mean	0.0207	Mean	-4.091
SD	0.0135	SD	0.697
Coefficient of Variation	0.651		
Skewness	0.702		

Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.88	Shapiro Wilk Test Statistic	0.91
Shapiro Wilk Critical Value	0.866	Shapiro Wilk Critical Value	0.866
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	0.0497	95% UTL with 90% Coverage	0.0751
95% UPL (t)	0.0456	95% UPL (t)	0.0607
90% Percentile (z)	0.038	90% Percentile (z)	0.0409
95% Percentile (z)	0.0428	95% Percentile (z)	0.0526
99% Percentile (z)	0.052	99% Percentile (z)	0.0847
Gamma Distribution Test		**Data Distribution Test**	
k star	1.979	**Data appear Normal at 5% Significance Level**	
Theta Star	0.0105		
MLE of Mean	0.0207		
MLE of Standard Deviation	0.0147		
nu star	51.45		
A-D Test Statistic	0.46	**Nonparametric Statistics**	
5% A-D Critical Value	0.741	90% Percentile	0.0418
K-S Test Statistic	0.174	95% Percentile	0.0444
5% K-S Critical Value	0.239	99% Percentile	0.0445
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	0.0445
90% Percentile	0.0403	95% Percentile Bootstrap UTL with 90% Coverage	0.0445
95% Percentile	0.0493	95% BCA Bootstrap UTL with 90% Coverage	0.0445
99% Percentile	0.069	95% UPL	0.0445
		95% Chebyshev UPL	0.0816
95% WH Approx. Gamma UPL	0.0522	Upper Threshold Limit Based upon IQR	0.0546
95% HW Approx. Gamma UPL	0.0538		
95% WH Approx. Gamma UTL with 90% Coverage	0.0603		
95% HW Approx. Gamma UTL with 90% Coverage	0.0629		

Total PAHs			
General Statistics			
Total Number of Observations	8	Number of Distinct Observations	8
Tolerance Factor	2.582	Number of Missing Values	5
Raw Statistics		**Log-Transformed Statistics**	
Minimum	0.0079	Minimum	-4.841
Maximum	**0.104**	Maximum	-2.263
Second Largest	0.0953	Second Largest	-2.351
First Quartile	0.0264	First Quartile	-3.646
Median	0.0469	Median	-3.087
Third Quartile	0.0873	Third Quartile	-2.44
Mean	0.0543	Mean	-3.194
SD	0.0366	SD	0.891
Coefficient of Variation	0.674		
Skewness	0.225		
Warning: There are only 8 Values in this data			
Note: It should be noted that even though bootstrap methods may be performed on this data set,			
the resulting calculations may not be reliable enough to draw conclusions			
The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.			
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.919	Shapiro Wilk Test Statistic	0.921
Shapiro Wilk Critical Value	0.818	Shapiro Wilk Critical Value	0.818
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	0.149	95% UTL with 90% Coverage	0.41
95% UPL (t)	0.128	95% UPL (t)	0.246
90% Percentile (z)	0.101	90% Percentile (z)	0.129
95% Percentile (z)	0.114	95% Percentile (z)	0.178
99% Percentile (z)	0.139	99% Percentile (z)	0.326
Gamma Distribution Test		**Data Distribution Test**	
k star	1.292	**Data appear Normal at 5% Significance Level**	
Theta Star	0.042		
MLE of Mean	0.0543		
MLE of Standard Deviation	0.0478		
nu star	20.67		
A-D Test Statistic	0.272	**Nonparametric Statistics**	
5% A-D Critical Value	0.725	90% Percentile	0.0979
K-S Test Statistic	0.191	95% Percentile	0.101
5% K-S Critical Value	0.298	99% Percentile	0.103
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	0.104
90% Percentile	0.117	95% Percentile Bootstrap UTL with 90% Coverage	0.104
95% Percentile	0.149	95% BCA Bootstrap UTL with 90% Coverage	0.104
99% Percentile	0.22	95% UPL	0.104
		95% Chebyshev UPL	0.223
95% WH Approx. Gamma UPL	0.168	Upper Threshold Limit Based upon IQR	0.179
95% HW Approx. Gamma UPL	0.18		
95% WH Approx. Gamma UTL with 90% Coverage	0.224		
95% HW Approx. Gamma UTL with 90% Coverage	0.248		

Comparison of Sediment Background, State Soil Background and Benchmarks
Brine Service Company Superfund Site

Metal	95% UPL for Sediment(FD averaged) (mg/Kg)	Sediment Benchmark FW	Sediment Benchmark MW
Aluminum	**15,908**	NA	NA
Antimony	All ND	**2**	NA
Arsenic	4.12	**9.79**	**8.2**
Barium	**547**	NA	NA
Beryllium	**0.92**	NA	NA
Cadmium	0.51	**0.99**	**1.2**
Chromium	11.6	**43.4**	**81**
Cobalt	**8.32**	**50**	NA
Copper	16.9	**31.6**	**34**
Lead	27.6	**35.8**	**46.7**
Manganese	**582**	460	NA
Nickel	12.4	**22.7**	**20.9**
Selenium	**0.75**	NA	NA
Silver	0.082	**1**	**1**
Thallium	**0.366**	NA	NA
Vanadium	**15.1**	NA	NA
Zinc	69.4	**121**	**150**
Mercury	0.11	**0.18**	**0.15**

Bold - Screening Criteria
Use Freshwater or Marine if benchmark available depending on sample location
Use background at all locations if no benchmark or for manganese

Sediment Data for Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Sample	Aluminum	D_Aluminum	Arsenic	D_Arsenic	Barium	D_Barium	Beryllium	D_Beryllium	Cadmium	D_Cadmium	Chromium	D_Chromium	Cobalt	D_Cobalt	Copper	D_Copper	Lead	D_Lead
EDBSS01-Avg	15700	1	3.055	1	171	1	0.899	1	0.352	1	11.1	1	6.72	1	13.6	1	20.8	1
EDBSS02	13000	1	4.15	1	205	1	0.813	1	0.449	1	11.2	1	8.33	1	18.7	1	27.7	1
EDBSD03	10700	1	2.81	1	454	1	0.671	1	0.445	1	7.75	1	6.89	1	10.9	1	21.1	1
EDBSS04	12300	1	3.99	1	118	1	0.664	1	0.2	1	8.06	1	4.88	1	8.04	1	16.2	1
EDBSD05	8250	1	2.73	1	131	1	0.472	1	0.178	1	5.65	1	3.83	1	4.94	1	7.76	1
EDBSD06-Avg	4565	1	2.07	1	97.35	1	0.29	1	0.118	1	3.29	1	2.135	1	2.845	1	4.25	1
EDBSD07	6960	1	2.21	1	123	1	0.4	1	0.135	1	4.73	1	2.79	1	4	1	5.8	1
EDBSD09	10500	1	2.53	1	150	1	0.545	1	0.153	1	5.9	1	3.73	1	5.7	1	7.95	1
EDBSD10	10500	1	2.72	1	200	1	0.527	1	0.181	1	5.69	1	3.91	1	5.59	1	8.44	1
EDBSD11	9240	1	2.88	1	350	1	0.506	1	0.224	1	5.92	1	5.19	1	7.15	1	14.5	1
EDBSD08	6320	1	2.47	1	465	1	0.318	1	0.166	1	4.21	1	3.55	1	5.23	1	14.2	1

Sediment Data for Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Sample	Manganese	D_Manganese	Nickel	D_Nickel	Selenium	D_Selenium	Silver	D_Silver	Thallium	D_Thallium	Vanadium	D_Vanadium	Zinc	D_Zinc	Mercury	D_Mercury
EDBSS01-Avg	350.5	1	10.15	1	0.5205	1	0.0846	1	0.3705	1	14.05	1	67.2	1	0.03155	1
EDBSS02	616	1	13.1	1	0.522	1	0.0821	1	0.281	1	12.3	1	63.3	1	0.0635	1
EDBSD03	505	1	8.02	1	0.528	1	0.0663	1	0.228	1	10.9	1	51.6	1	0.0614	1
EDBSS04	309	1	7.98	1	0.445	1	0.0581	1	0.247	1	13.1	1	30.7	1	0.0182	1
EDBSD05	265	1	4.82	1	0.347	1	0.05	0	0.257	1	13.2	1	22.7	1	0.004	1
EDBSD06-Avg	116.5	1	2.915	1	0.29	0	0.047	0	0.2185	1	8.795	1	11.35	1	0.00216	1
EDBSD07	159	1	4.08	1	0.29	0	0.047	0	0.168	1	10.7	1	18	1	0.00689	1
EDBSD09	236	1	5.8	1	0.68	1	0.057	0	0.159	1	12.3	1	21.4	1	0.00391	1
EDBSD10	247	1	7.02	1	0.523	1	0.055	0	0.136	1	12.5	1	24.4	1	0.0102	1
EDBSD11	336	1	6.73	1	0.65	1	0.051	0	0.106	1	14	1	33.7	1	0.0293	1
EDBSD08	258	1	4.23	1	0.489	1	0.05	0	0.087	0	11.9	1	25.5	1	0.0105	1

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

	General Background Statistics for Data Sets with Non-Detects
User Selected Options	
From File	K:\ENV\ENV10\25012501\Data\Calcs\TM\Background Sediment Metals Avg FD.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	90%
Different or Future K Values	1
Number of Bootstrap Operations	2000

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Aluminum

General Statistics			
Total Number of Observations	11	Number of Distinct Observations	10
Raw Statistics		**Log-Transformed Statistics**	
Minimum	4565	Minimum	8.426
Maximum	15700	Maximum	9.661
Second Largest	13000	Second Largest	9.473
First Quartile	6960	First Quartile	8.848
Median	10500	Median	9.259
Third Quartile	12300	Third Quartile	9.417
Mean	9821	Mean	9.138
SD	3215	SD	0.356
Coefficient of Variation	0.327		
Skewness	0.133		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.986	Shapiro Wilk Test Statistic	0.964
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	17136	95% UTL with 90% Coverage	20919
95% UPL (t)	**15908**	95% UPL (t)	18259
90% Percentile (z)	13942	90% Percentile (z)	14687
95% Percentile (z)	15110	95% Percentile (z)	16715
99% Percentile (z)	17301	99% Percentile (z)	21305
Gamma Distribution Test		**Data Distribution Test**	
k star	6.926	**Data appear Normal at 5% Significance Level**	
Theta Star	1418		
nu star	152.4		
A-D Test Statistic	0.195	**Nonparametric Statistics**	
5% A-D Critical Value	0.73	90% Percentile	15160
K-S Test Statistic	0.169	95% Percentile	15700
5% K-S Critical Value	0.255	99% Percentile	15700
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	15700
90% Percentile	14804	95% Percentile Bootstrap UTL with 90% Coverage	15700
95% Percentile	16655	95% BCA Bootstrap UTL with 90% Coverage	15430
99% Percentile	20510	95% UPL	15700
		95% Chebyshev UPL	24460
		Upper Threshold Limit Based upon IQR	20310

Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Arsenic			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
Raw Statistics		**Log-Transformed Statistics**	
Minimum	2.07	Minimum	0.728
Maximum	4.15	Maximum	1.423
Second Largest	3.99	Second Largest	1.384
First Quartile	2.47	First Quartile	0.904
Median	2.73	Median	1.004
Third Quartile	3.055	Third Quartile	1.117
Mean	2.874	Mean	1.034
SD	0.658	SD	0.215
Coefficient of Variation	0.229		
Skewness	1.095		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.874	Shapiro Wilk Test Statistic	0.924
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	4.37	95% UTL with 90% Coverage	4.588
95% UPL (t)	**4.119**	95% UPL (t)	4.226
90% Percentile (z)	3.717	90% Percentile (z)	3.705
95% Percentile (z)	3.956	95% Percentile (z)	4.006
99% Percentile (z)	4.404	99% Percentile (z)	4.639
Gamma Distribution Test		**Data Distribution Test**	
k star	16.81	**Data appear Normal at 5% Significance Level**	
Theta Star	0.171		
nu star	369.8		
A-D Test Statistic	0.491	**Nonparametric Statistics**	
5% A-D Critical Value	0.729	90% Percentile	4.118
K-S Test Statistic	0.196	95% Percentile	4.15
5% K-S Critical Value	0.255	99% Percentile	4.15
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	4.15
90% Percentile	3.801	95% Percentile Bootstrap UTL with 90% Coverage	4.15
95% Percentile	4.116	95% BCA Bootstrap UTL with 90% Coverage	4.134
99% Percentile	4.751	95% UPL	4.15
		95% Chebyshev UPL	5.868
		Upper Threshold Limit Based upon IQR	3.933
Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV			

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Barium			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
Raw Statistics		**Log-Transformed Statistics**	
Minimum	97.35	Minimum	4.578
Maximum	465	Maximum	6.142
Second Largest	454	Second Largest	6.118
First Quartile	123	First Quartile	4.812
Median	171	Median	5.142
Third Quartile	350	Third Quartile	5.858
Mean	224	Mean	5.266
SD	135	SD	0.548
Coefficient of Variation	0.603		
Skewness	1.119		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.804	Shapiro Wilk Test Statistic	0.898
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	531.1	95% UTL with 90% Coverage	674.2
95% UPL (t)	479.6	**95% UPL (t)**	**546.8**
90% Percentile (z)	397	90% Percentile (z)	391
95% Percentile (z)	446.1	95% Percentile (z)	477.2
99% Percentile (z)	538.1	99% Percentile (z)	693.4
Gamma Distribution Test		**Data Distribution Test**	
k star	2.673	**Data appear Gamma Distributed at 5% Significance Level**	
Theta Star	83.81		
nu star	58.81		
A-D Test Statistic	0.663	**Nonparametric Statistics**	
5% A-D Critical Value	0.733	90% Percentile	462.8
K-S Test Statistic	0.222	95% Percentile	465
5% K-S Critical Value	0.257	99% Percentile	465
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	465
90% Percentile	407.7	95% Percentile Bootstrap UTL with 90% Coverage	465
95% Percentile	486.2	95% BCA Bootstrap UTL with 90% Coverage	465
99% Percentile	657.6	95% UPL	465
		95% Chebyshev UPL	838.6
		Upper Threshold Limit Based upon IQR	690.5
Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV			

Beryllium

General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
Raw Statistics		**Log-Transformed Statistics**	
Minimum	0.29	Minimum	-1.238
Maximum	0.899	Maximum	-0.106
Second Largest	0.813	Second Largest	-0.207
First Quartile	0.4	First Quartile	-0.916
Median	0.527	Median	-0.641
Third Quartile	0.671	Third Quartile	-0.399
Mean	0.555	Mean	-0.646
SD	0.193	SD	0.359
Coefficient of Variation	0.347		
Skewness	0.417		

Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.96	Shapiro Wilk Test Statistic	0.967
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	0.993	95% UTL with 90% Coverage	1.186
95% UPL (t)	0.92	95% UPL (t)	1.034
90% Percentile (z)	0.802	90% Percentile (z)	0.831
95% Percentile (z)	0.872	95% Percentile (z)	0.946
99% Percentile (z)	1.003	99% Percentile (z)	1.208
Gamma Distribution Test		**Data Distribution Test**	
k star	6.583	**Data appear Normal at 5% Significance Level**	
Theta Star	0.0843		
nu star	144.8		
A-D Test Statistic	0.185	**Nonparametric Statistics**	
5% A-D Critical Value	0.73	90% Percentile	0.882
K-S Test Statistic	0.113	95% Percentile	0.899
5% K-S Critical Value	0.256	99% Percentile	0.899
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	0.899
90% Percentile	0.844	95% Percentile Bootstrap UTL with 90% Coverage	0.899
95% Percentile	0.952	95% BCA Bootstrap UTL with 90% Coverage	0.899
99% Percentile	1.177	95% UPL	0.899
		95% Chebyshev UPL	1.432
		Upper Threshold Limit Based upon IQR	1.078

Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Cadmium

General Statistics

Total Number of Observations	11	Number of Distinct Observations	11
Raw Statistics		**Log-Transformed Statistics**	
Minimum	0.118	Minimum	-2.137
Maximum	0.449	Maximum	-0.801
Second Largest	0.445	Second Largest	-0.81
First Quartile	0.153	First Quartile	-1.877
Median	0.181	Median	-1.709
Third Quartile	0.352	Third Quartile	-1.044
Mean	0.236	Mean	-1.546
SD	0.121	SD	0.463
Coefficient of Variation	0.511		
Skewness	1.117		

Background Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.804	Shapiro Wilk Test Statistic	0.892
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	0.512	95% UTL with 90% Coverage	0.611
95% UPL (t)	0.465	**95% UPL (t)**	**0.512**
90% Percentile (z)	0.391	90% Percentile (z)	0.386
95% Percentile (z)	0.435	95% Percentile (z)	0.456
99% Percentile (z)	0.518	99% Percentile (z)	0.626
Gamma Distribution Test		**Data Distribution Test**	
k star	3.668	**Data appear Gamma Distributed at 5% Significance Level**	
Theta Star	0.0645		
nu star	80.69		
A-D Test Statistic	0.714	**Nonparametric Statistics**	
5% A-D Critical Value	0.731	90% Percentile	0.448
K-S Test Statistic	0.22	95% Percentile	0.449
5% K-S Critical Value	0.256	99% Percentile	0.449
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	0.449
90% Percentile	0.402	95% Percentile Bootstrap UTL with 90% Coverage	0.449
95% Percentile	0.469	95% BCA Bootstrap UTL with 90% Coverage	0.449
99% Percentile	0.613	95% UPL	0.449
		95% Chebyshev UPL	0.787
		Upper Threshold Limit Based upon IQR	0.651

Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV

Chromium

General Statistics

Total Number of Observations	11	Number of Distinct Observations	11
Raw Statistics		**Log-Transformed Statistics**	
Minimum	3.29	Minimum	1.191
Maximum	11.2	Maximum	2.416
Second Largest	11.1	Second Largest	2.407
First Quartile	4.73	First Quartile	1.554
Median	5.9	Median	1.775
Third Quartile	8.06	Third Quartile	2.087
Mean	6.682	Mean	1.833
SD	2.601	SD	0.381
Coefficient of Variation	0.389		
Skewness	0.818		

Background Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.896	Shapiro Wilk Test Statistic	0.952
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	12.6	95% UTL with 90% Coverage	14.88
95% UPL (t)	**11.61**	95% UPL (t)	12.86
90% Percentile (z)	10.01	90% Percentile (z)	10.19
95% Percentile (z)	10.96	95% Percentile (z)	11.7
99% Percentile (z)	12.73	99% Percentile (z)	15.17
Gamma Distribution Test		**Data Distribution Test**	
k star	5.659	**Data appear Normal at 5% Significance Level**	
Theta Star	1.181		
nu star	124.5		
A-D Test Statistic	0.359	**Nonparametric Statistics**	
5% A-D Critical Value	0.73	90% Percentile	11.18
K-S Test Statistic	0.219	95% Percentile	11.2
5% K-S Critical Value	0.256	99% Percentile	11.2
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	11.2
90% Percentile	10.44	95% Percentile Bootstrap UTL with 90% Coverage	11.2
95% Percentile	11.87	95% BCA Bootstrap UTL with 90% Coverage	11.2
99% Percentile	14.88	95% UPL	11.2
		95% Chebyshev UPL	18.52
		Upper Threshold Limit Based upon IQR	13.06

Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Cobalt			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
Raw Statistics		**Log-Transformed Statistics**	
Minimum	2.135	Minimum	0.758
Maximum	8.33	Maximum	2.12
Second Largest	6.89	Second Largest	1.93
First Quartile	3.55	First Quartile	1.267
Median	3.91	Median	1.364
Third Quartile	6.72	Third Quartile	1.905
Mean	4.723	Mean	1.478
SD	1.902	SD	0.408
Coefficient of Variation	0.403		
Skewness	0.652		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.938	Shapiro Wilk Test Statistic	0.971
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	9.051	95% UTL with 90% Coverage	11.09
95% UPL (t)	8.325	95% UPL (t)	9.49
90% Percentile (z)	7.161	90% Percentile (z)	7.395
95% Percentile (z)	7.852	95% Percentile (z)	8.576
99% Percentile (z)	9.149	99% Percentile (z)	11.32
Gamma Distribution Test		**Data Distribution Test**	
k star	5.08	**Data appear Normal at 5% Significance Level**	
Theta Star	0.93		
nu star	111.8		
A-D Test Statistic	0.257	**Nonparametric Statistics**	
5% A-D Critical Value	0.731	90% Percentile	8.042
K-S Test Statistic	0.183	95% Percentile	8.33
5% K-S Critical Value	0.256	99% Percentile	8.33
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	8.33
90% Percentile	7.528	95% Percentile Bootstrap UTL with 90% Coverage	8.33
95% Percentile	8.613	95% BCA Bootstrap UTL with 90% Coverage	8.186
99% Percentile	10.9	95% UPL	8.33
		95% Chebyshev UPL	13.38
		Upper Threshold Limit Based upon IQR	11.48
Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV			

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Copper

General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
Raw Statistics		**Log-Transformed Statistics**	
Minimum	2.845	Minimum	1.046
Maximum	18.7	Maximum	2.929
Second Largest	13.6	Second Largest	2.61
First Quartile	4.94	First Quartile	1.597
Median	5.7	Median	1.74
Third Quartile	10.9	Third Quartile	2.389
Mean	7.881	Mean	1.92
SD	4.749	SD	0.551
Coefficient of Variation	0.603		
Skewness	1.401		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.859	Shapiro Wilk Test Statistic	0.971
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	18.69	95% UTL with 90% Coverage	23.91
95% UPL (t)	16.87	95% UPL (t)	19.37
90% Percentile (z)	13.97	90% Percentile (z)	13.83
95% Percentile (z)	15.69	95% Percentile (z)	16.89
99% Percentile (z)	18.93	99% Percentile (z)	24.6
Gamma Distribution Test		**Data Distribution Test**	
k star	2.698	**Data appear Normal at 5% Significance Level**	
Theta Star	2.921		
nu star	59.37		
A-D Test Statistic	0.352	**Nonparametric Statistics**	
5% A-D Critical Value	0.733	90% Percentile	17.68
K-S Test Statistic	0.203	95% Percentile	18.7
5% K-S Critical Value	0.257	99% Percentile	18.7
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	18.7
90% Percentile	14.31	95% Percentile Bootstrap UTL with 90% Coverage	18.7
95% Percentile	17.06	95% BCA Bootstrap UTL with 90% Coverage	18.19
99% Percentile	23.04	95% UPL	18.7
		95% Chebyshev UPL	29.5
		Upper Threshold Limit Based upon IQR	19.84

Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Lead			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
Raw Statistics		**Log-Transformed Statistics**	
Minimum	4.25	Minimum	1.447
Maximum	27.7	Maximum	3.321
Second Largest	21.1	Second Largest	3.049
First Quartile	7.76	First Quartile	2.049
Median	14.2	Median	2.653
Third Quartile	20.8	Third Quartile	3.035
Mean	13.52	Mean	2.453
SD	7.454	SD	0.596
Coefficient of Variation	0.551		
Skewness	0.574		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.932	Shapiro Wilk Test Statistic	0.953
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	30.48	95% UTL with 90% Coverage	45.09
95% UPL (t)	**27.63**	95% UPL (t)	35.91
90% Percentile (z)	23.07	90% Percentile (z)	24.94
95% Percentile (z)	25.78	95% Percentile (z)	30.97
99% Percentile (z)	30.86	99% Percentile (z)	46.49
Gamma Distribution Test		**Data Distribution Test**	
k star	2.576	**Data appear Normal at 5% Significance Level**	
Theta Star	5.248		
nu star	56.67		
A-D Test Statistic	0.302	**Nonparametric Statistics**	
5% A-D Critical Value	0.733	90% Percentile	26.38
K-S Test Statistic	0.189	95% Percentile	27.7
5% K-S Critical Value	0.257	99% Percentile	27.7
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	27.7
90% Percentile	24.8	95% Percentile Bootstrap UTL with 90% Coverage	27.7
95% Percentile	29.66	95% BCA Bootstrap UTL with 90% Coverage	27.04
99% Percentile	40.29	95% UPL	27.7
		95% Chebyshev UPL	47.46
		Upper Threshold Limit Based upon IQR	40.36
Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV			

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Manganese			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
Raw Statistics		**Log-Transformed Statistics**	
Minimum	116.5	Minimum	4.758
Maximum	616	Maximum	6.423
Second Largest	505	Second Largest	6.225
First Quartile	236	First Quartile	5.464
Median	265	Median	5.58
Third Quartile	350.5	Third Quartile	5.859
Mean	308.9	Mean	5.635
SD	144.4	SD	0.47
Coefficient of Variation	0.467		
Skewness	1.026		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.915	Shapiro Wilk Test Statistic	0.968
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	637.3	95% UTL with 90% Coverage	815.8
95% UPL (t)	**582.2**	95% UPL (t)	681.8
90% Percentile (z)	493.9	90% Percentile (z)	511.6
95% Percentile (z)	546.4	95% Percentile (z)	606.8
99% Percentile (z)	644.7	99% Percentile (z)	835.7
Gamma Distribution Test		**Data Distribution Test**	
k star	3.905	**Data appear Normal at 5% Significance Level**	
Theta Star	79.11		
nu star	85.91		
A-D Test Statistic	0.268	**Nonparametric Statistics**	
5% A-D Critical Value	0.731	90% Percentile	593.8
K-S Test Statistic	0.148	95% Percentile	616
5% K-S Critical Value	0.256	99% Percentile	616
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	616
90% Percentile	518.5	95% Percentile Bootstrap UTL with 90% Coverage	616
95% Percentile	602.6	95% BCA Bootstrap UTL with 90% Coverage	604.9
99% Percentile	782.6	95% UPL	616
		95% Chebyshev UPL	966.1
		Upper Threshold Limit Based upon IQR	522.3
Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV			

Nickel

General Statistics

Total Number of Observations	11	Number of Distinct Observations	11
Raw Statistics		**Log-Transformed Statistics**	
Minimum	2.915	Minimum	1.07
Maximum	13.1	Maximum	2.573
Second Largest	10.15	Second Largest	2.317
First Quartile	4.23	First Quartile	1.442
Median	6.73	Median	1.907
Third Quartile	8.02	Third Quartile	2.082
Mean	6.804	Mean	1.832
SD	2.964	SD	0.437
Coefficient of Variation	0.436		
Skewness	0.871		

Background Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.945	Shapiro Wilk Test Statistic	0.987
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	13.55	95% UTL with 90% Coverage	16.9
95% UPL (t)	12.42	95% UPL (t)	14.3
90% Percentile (z)	10.6	90% Percentile (z)	10.94
95% Percentile (z)	11.68	95% Percentile (z)	12.83
99% Percentile (z)	13.7	99% Percentile (z)	17.28
Gamma Distribution Test		**Data Distribution Test**	
k star	4.435	**Data appear Normal at 5% Significance Level**	
Theta Star	1.534		
nu star	97.57		
A-D Test Statistic	0.158	**Nonparametric Statistics**	
5% A-D Critical Value	0.731	90% Percentile	12.51
K-S Test Statistic	0.11	95% Percentile	13.1
5% K-S Critical Value	0.256	99% Percentile	13.1
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	13.1
90% Percentile	11.13	95% Percentile Bootstrap UTL with 90% Coverage	13.1
95% Percentile	12.84	95% BCA Bootstrap UTL with 90% Coverage	12.81
99% Percentile	16.46	95% UPL	13.1
		95% Chebyshev UPL	20.3
		Upper Threshold Limit Based upon IQR	13.71

Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV

Selenium

General Statistics

Number of Valid Data	11	Number of Detected Data	9
Number of Distinct Detected Data	9	Number of Non-Detect Data	2
		Percent Non-Detects	18.18%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.347	Minimum Detected	-1.058
Maximum Detected	0.68	Maximum Detected	-0.386
Mean of Detected	0.523	Mean of Detected	-0.666
SD of Detected	0.0994	SD of Detected	0.198
Minimum Non-Detect	0.29	Minimum Non-Detect	-1.238
Maximum Non-Detect	0.29	Maximum Non-Detect	-1.238

Warning: There are only 9 Detected Values in this data

Note: It should be noted that even though bootstrap may be performed on this data set

the resulting calculations may not be reliable enough tp draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

Background Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.926	Shapiro Wilk Test Statistic	0.915
5% Shapiro Wilk Critical Value	0.829	5% Shapiro Wilk Critical Value	0.829
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.454	Mean (Log Scale)	-0.896
SD	0.177	SD (Log Scale)	0.542
95% UTL 90% Coverage	0.856	95% UTL 90% Coverage	1.4
95% UPL (t)	0.789	95% UPL (t)	1.138
90% Percentile (z)	0.681	90% Percentile (z)	0.817
95% Percentile (z)	0.745	95% Percentile (z)	0.995
99% Percentile (z)	0.865	99% Percentile (z)	1.439
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.467	Mean in Original Scale	0.487
SD	0.147	SD in Original Scale	0.119
95% UTL with 90% Coverage	0.802	95% UTL with 90% Coverage	0.847
		95% BCA UTL with 90% Coverage	0.68
		95% Bootstrap (%) UTL with 90% Coverage	0.68
95% UPL (t)	**0.746**	95% UPL (t)	0.768
90% Percentile (z)	0.656	90% Percentile (z)	0.657
95% Percentile (z)	0.709	95% Percentile (z)	0.721
99% Percentile (z)	0.81	99% Percentile (z)	0.858
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	19.99	Data appear Normal at 5% Significance Level	
Theta Star	0.0262		
nu star	359.8		
A-D Test Statistic	0.458	**Nonparametric Statistics**	

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5% A-D Critical Value	0.721	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.232	Mean	0.491
5% K-S Critical Value	0.279	SD	0.109
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.0347
		95% KM UTL with 90% Coverage	0.738
Assuming Gamma Distribution		95% KM Chebyshev UPL	0.985
Gamma ROS Statistics with extrapolated Data		95% KM UPL (t)	0.696
Mean	0.497	90% Percentile (z)	0.63
Median	0.521	95% Percentile (z)	0.669
SD	0.106	99% Percentile (z)	0.743
k star	17.33		
Theta star	0.0287		
Nu star	381.3		
95% Percentile of Chisquare (2k)	49.39		
90% Percentile	0.655		
95% Percentile	0.708		
99% Percentile	0.816		
Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV			
For an Example: KM-UPL may be used when multiple detection limits are present			
Note: DL/2 is not a recommended method.			

Silver			
General Statistics			
Number of Valid Data	11	Number of Detected Data	4
Number of Distinct Detected Data	4	Number of Non-Detect Data	7
		Percent Non-Detects	63.64%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.0581	Minimum Detected	-2.846
Maximum Detected	0.0846	Maximum Detected	-2.47
Mean of Detected	0.0728	Mean of Detected	-2.632
SD of Detected	0.0127	SD of Detected	0.179
Minimum Non-Detect	0.047	Minimum Non-Detect	-3.058
Maximum Non-Detect	0.057	Maximum Non-Detect	-2.865
Data with Multiple Detection Limits		**Single Detection Limit Scenario**	
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect with Single DL	7
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected with Single DL	4
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	63.64%
Warning: There are only 4 Distinct Detected Values in this data			
Note: It should be noted that even though bootstrap may be performed on this data set			
the resulting calculations may not be reliable enough tp draw conclusions			
It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.			
Background Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.899	Shapiro Wilk Test Statistic	0.9
5% Shapiro Wilk Critical Value	0.748	5% Shapiro Wilk Critical Value	0.748
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.0427	Mean (Log Scale)	-3.294
SD	0.0249	SD (Log Scale)	0.536
95% UTL 90% Coverage	0.0993	95% UTL 90% Coverage	0.126
95% UPL (t)	0.0898	95% UPL (t)	0.102
90% Percentile (z)	0.0746	90% Percentile (z)	0.0738
95% Percentile (z)	0.0836	95% Percentile (z)	0.0897
99% Percentile (z)	0.101	99% Percentile (z)	0.129
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.0497	Mean in Original Scale	0.0512
SD	0.022	SD in Original Scale	0.0187
95% UTL with 90% Coverage	0.0998	95% UTL with 90% Coverage	0.105
		95% BCA UTL with 90% Coverage	0.0844
		95% Bootstrap (%) UTL with 90% Coverage	0.0846
95% UPL (t)	0.0914	95% UPL (t)	0.0919
90% Percentile (z)	0.0779	90% Percentile (z)	0.0748
95% Percentile (z)	0.0859	95% Percentile (z)	0.0845
99% Percentile (z)	0.101	99% Percentile (z)	0.106
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	10.79	Data appear Normal at 5% Significance Level	

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Theta Star	0.00675		
nu star	86.3		
A-D Test Statistic	0.375	**Nonparametric Statistics**	
5% A-D Critical Value	0.656	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.303	Mean	0.0634
5% K-S Critical Value	0.394	SD	0.00969
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.00337
		95% KM UTL with 90% Coverage	0.0855
Assuming Gamma Distribution		95% KM Chebyshev UPL	0.108
Gamma ROS Statistics with extrapolated Data		**95% KM UPL (t)**	**0.0818**
Mean	0.0729	90% Percentile (z)	0.0759
Median	0.0731	95% Percentile (z)	0.0794
SD	0.00716	99% Percentile (z)	0.086
k star	80.2		
Theta star	0.0009085		
Nu star	1764		
95% Percentile of Chisquare (2k)	191		
90% Percentile	0.0835		
95% Percentile	0.0867		
99% Percentile	0.0931		
Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV			
For an Example: KM-UPL may be used when multiple detection limits are present			
Note: DL/2 is not a recommended method.			

Thallium

General Statistics			
Number of Valid Data	11	Number of Detected Data	10
Number of Distinct Detected Data	10	Number of Non-Detect Data	1
		Percent Non-Detects	9.09%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.106	Minimum Detected	-2.244
Maximum Detected	0.371	Maximum Detected	-0.993
Mean of Detected	0.217	Mean of Detected	-1.588
SD of Detected	0.0781	SD of Detected	0.374
Minimum Non-Detect	0.087	Minimum Non-Detect	-2.442
Maximum Non-Detect	0.087	Maximum Non-Detect	-2.442
Background Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.968	Shapiro Wilk Test Statistic	0.977
5% Shapiro Wilk Critical Value	0.842	5% Shapiro Wilk Critical Value	0.842
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.201	Mean (Log Scale)	-1.729
SD	0.0907	SD (Log Scale)	0.586
95% UTL 90% Coverage	0.408	95% UTL 90% Coverage	0.673
95% UPL (t)	0.373	95% UPL (t)	0.538
90% Percentile (z)	0.318	90% Percentile (z)	0.376
95% Percentile (z)	0.351	95% Percentile (z)	0.465
99% Percentile (z)	0.412	99% Percentile (z)	0.694
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.202	Mean in Original Scale	0.205
SD	0.0867	SD in Original Scale	0.0846
95% UTL with 90% Coverage	0.399	95% UTL with 90% Coverage	0.523
		95% BCA UTL with 90% Coverage	0.371
		95% Bootstrap (%) UTL with 90% Coverage	0.371
95% UPL (t)	**0.366**	95% UPL (t)	0.44
90% Percentile (z)	0.313	90% Percentile (z)	0.334
95% Percentile (z)	0.344	95% Percentile (z)	0.394
99% Percentile (z)	0.403	99% Percentile (z)	0.535
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	5.949	Data appear Normal at 5% Significance Level	
Theta Star	0.0365		
nu star	119		
A-D Test Statistic	0.189	**Nonparametric Statistics**	
5% A-D Critical Value	0.726	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.153	Mean	0.207
5% K-S Critical Value	0.267	SD	0.0775
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.0246
		95% KM UTL with 90% Coverage	0.383

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Assuming Gamma Distribution		95% KM Chebyshev UPL	0.56
Gamma ROS Statistics with extrapolated Data		95% KM UPL (t)	0.354
Mean	0.203	90% Percentile (z)	0.306
Median	0.219	95% Percentile (z)	0.335
SD	0.0869	99% Percentile (z)	0.387
k star	3.899		
Theta star	0.0522		
Nu star	85.78		
95% Percentile of Chisquare (2k)	15.22		
90% Percentile	0.341		
95% Percentile	0.397		
99% Percentile	0.516		
Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV			
For an Example: KM-UPL may be used when multiple detection limits are present			
Note: DL/2 is not a recommended method.			

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Vanadium

General Statistics

Total Number of Observations	11	Number of Distinct Observations	10
Raw Statistics		**Log-Transformed Statistics**	
Minimum	8.795	Minimum	2.174
Maximum	14.05	Maximum	2.643
Second Largest	14	Second Largest	2.639
First Quartile	10.9	First Quartile	2.389
Median	12.3	Median	2.51
Third Quartile	13.2	Third Quartile	2.58
Mean	12.16	Mean	2.49
SD	1.555	SD	0.137
Coefficient of Variation	0.128		
Skewness	-0.915		

Background Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.93	Shapiro Wilk Test Statistic	0.897
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	15.7	95% UTL with 90% Coverage	16.46
95% UPL (t)	**15.1**	95% UPL (t)	15.62
90% Percentile (z)	14.15	90% Percentile (z)	14.37
95% Percentile (z)	14.72	95% Percentile (z)	15.1
99% Percentile (z)	15.78	99% Percentile (z)	16.58
Gamma Distribution Test		**Data Distribution Test**	
k star	44.99	**Data appear Normal at 5% Significance Level**	
Theta Star	0.27		
nu star	989.7		
A-D Test Statistic	0.405	**Nonparametric Statistics**	
5% A-D Critical Value	0.728	90% Percentile	14.04
K-S Test Statistic	0.189	95% Percentile	14.05
5% K-S Critical Value	0.255	99% Percentile	14.05
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	14.05
90% Percentile	14.53	95% Percentile Bootstrap UTL with 90% Coverage	14.05
95% Percentile	15.29	95% BCA Bootstrap UTL with 90% Coverage	14.05
99% Percentile	16.77	95% UPL	14.05
		95% Chebyshev UPL	19.24
		Upper Threshold Limit Based upon IQR	16.65

Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Zinc			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
Raw Statistics		**Log-Transformed Statistics**	
Minimum	11.35	Minimum	2.429
Maximum	67.2	Maximum	4.208
Second Largest	63.3	Second Largest	4.148
First Quartile	21.4	First Quartile	3.063
Median	25.5	Median	3.239
Third Quartile	51.6	Third Quartile	3.944
Mean	33.62	Mean	3.38
SD	18.71	SD	0.546
Coefficient of Variation	0.556		
Skewness	0.942		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.869	Shapiro Wilk Test Statistic	0.953
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	76.18	95% UTL with 90% Coverage	101.6
95% UPL (t)	**69.04**	95% UPL (t)	82.51
90% Percentile (z)	57.6	90% Percentile (z)	59.1
95% Percentile (z)	64.39	95% Percentile (z)	72.06
99% Percentile (z)	77.14	99% Percentile (z)	104.5
Gamma Distribution Test		**Data Distribution Test**	
k star	2.865	**Data appear Normal at 5% Significance Level**	
Theta Star	11.74		
nu star	63.02		
A-D Test Statistic	0.405	**Nonparametric Statistics**	
5% A-D Critical Value	0.733	90% Percentile	66.42
K-S Test Statistic	0.18	95% Percentile	67.2
5% K-S Critical Value	0.257	99% Percentile	67.2
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	67.2
90% Percentile	60.25	95% Percentile Bootstrap UTL with 90% Coverage	67.2
95% Percentile	71.51	95% BCA Bootstrap UTL with 90% Coverage	66.81
99% Percentile	95.96	95% UPL	67.2
		95% Chebyshev UPL	118.8
		Upper Threshold Limit Based upon IQR	96.9
Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV			

Calculation of Background Sediment Concentrations
Brine Service Company Superfund Site

Mercury			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
Raw Statistics		**Log-Transformed Statistics**	
Minimum	0.00216	Minimum	-6.138
Maximum	0.0635	Maximum	-2.757
Second Largest	0.0614	Second Largest	-2.79
First Quartile	0.004	First Quartile	-5.521
Median	0.0105	Median	-4.556
Third Quartile	0.0316	Third Quartile	-3.456
Mean	0.022	Mean	-4.351
SD	0.0223	SD	1.142
Coefficient of Variation	1.016		
Skewness	1.191		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.807	Shapiro Wilk Test Statistic	0.95
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	0.0727	95% UTL with 90% Coverage	0.173
95% UPL (t)	0.0642	**95% UPL (t)**	**0.112**
90% Percentile (z)	0.0506	90% Percentile (z)	0.0557
95% Percentile (z)	0.0587	95% Percentile (z)	0.0844
99% Percentile (z)	0.0739	99% Percentile (z)	0.184
Gamma Distribution Test		**Data Distribution Test**	
k star	0.842	**Data appear Gamma Distributed at 5% Significance Level**	
Theta Star	0.0261		
nu star	18.52		
A-D Test Statistic	0.346	**Nonparametric Statistics**	
5% A-D Critical Value	0.75	90% Percentile	0.0631
K-S Test Statistic	0.179	95% Percentile	0.0635
5% K-S Critical Value	0.262	99% Percentile	0.0635
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	0.0635
90% Percentile	0.0528	95% Percentile Bootstrap UTL with 90% Coverage	0.0635
95% Percentile	0.07	95% BCA Bootstrap UTL with 90% Coverage	0.0633
99% Percentile	0.11	95% UPL	0.0635
		95% Chebyshev UPL	0.124
		Upper Threshold Limit Based upon IQR	0.0729
Note: UPL (or upper percentile for gamma distributed data) represents a preferred estimate of BTV			

APPENDIX D-1
CHEMICAL-SPECIFIC DERMAL ABSORPTION FACTORS AND
GASTROINTESTINAL ABSORPTION FACTORS
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

Chemicals of Potential Concern	CAS #	ABS.gi (unitless)[1]	ABS.d[1] (unitless)
Aldrin	309-00-2	5.00E-01	1.00E-01
alpha-BHC	319-84-6	9.70E-01	4.00E-02
Total PCBs	1336-36-3	8.10E-01	1.40E-01
Arsenic	7440-38-2	9.50E-01	3.00E-02
Benz-a-anthracene	56-55-3	8.90E-01	1.30E-01
Benzene	71-43-2	9.70E-01	0.00E+00
Benzo-a-pyrene	50-32-8	8.90E-01	1.30E-01
Benzo-b-fluoranthene	205-99-2	8.90E-01	1.30E-01
beta-BHC	319-85-7	9.10E-01	4.00E-02
Bis (2-ethyl-hexyl) phthalate	117-81-7	1.90E-01	1.00E-01
Cobalt	7440-48-4	8.00E-01	1.00E-02
4,4'-DDD	72-54-8	7.00E-01	3.00E-02
4,4'-DDE	72-55-9	7.00E-01	3.00E-02
Dibenz-a,h-anthracene	53-70-3	8.90E-01	1.30E-01
Dibromochloromethane	124-48-1	6.00E-01	0.00E+00
Dieldrin	60-57-1	5.00E-01	1.00E-01
Dimethylphenol, 2,4-	105-67-9	5.00E-01	1.00E-01
Dinitro-2-methylphenol, 4,6-	534-52-1	1.00E+00	1.00E-01
Ethyl benzene	100-41-4	9.70E-01	0.00E+00
gamma-BHC	58-89-9	9.70E-01	4.00E-02
Heptachlor	76-44-8	7.20E-01	1.00E-01
Heptachlor epoxide	1024-57-3	7.20E-01	1.00E-01
Indeno-1,2,3-cd-pyrene	193-39-5	8.90E-01	1.30E-01
Lead (inorganic)	7439-92-1	1.50E-01	1.00E-02
Manganese	7439-96-5	6.00E-02	1.00E-02
Mercury	7439-97-6	7.00E-02	1.00E-02
Methylene chloride	75-09-2	9.50E-01	0.00E+00
Methylnaphthalene, 1-	90-12-0	8.90E-01	1.30E-01
Methylphenol, 3&4	106-44-5	5.00E-01	1.00E-01
Naphthalene	91-20-3	8.90E-01	1.30E-01
Pentachlorophenol	87-86-5	7.60E-01	2.50E-01
Selenium	7782-49-2	5.00E-01	1.00E-02
Trimethylbenzene, 1,2,4-	95-63-6	8.00E-01	0.00E+00
Trimethylbenzene, 1,3,5-	108-67-8	8.00E-01	0.00E+00
TPH (C_5-C_8 Aliphatics)*	110-54-3	8.00E-01	0.00E+00

Notes:

ABSd = Dermal absorption factor

ABSgi = Gastrointestional absorption factor

[1]Taken from the Texas Risk Reduction Program (TRRP), Physical Chemical Properties Table, last updated May 2012. Available online at:http://www.tceq.texas.gov/remediation/trrp/trrppcls.html

APPENDIX D-2
SUMMARY OF PHYSICAL/CHEMICAL PROPERTIES DATA
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

Chemicals of Potential Concern	CAS #	MW (g/mole)	H_unitless (unitless)	LogKoc (unitless)	LogKd (unitless)	Dair (cm^2/s)	Dwat (cm^2/s)	Solubility (mg/l)	Vapor_P (mm Hg)	logKow (unitless)
Aldrin	309-00-2	3.65E+02	7.07E-03	4.68E+00	0.00E+00	1.32E-02	4.86E-06	7.84E-02	1.67E-05	6.75E+00
alpha-BHC	319-84-6	2.91E+02	2.82E-04	3.12E+00	0.00E+00	1.42E-02	7.34E-06	2.00E+00	4.26E-05	4.26E+00
Total PCBs	1336-36-3	2.90E+02	1.75E-02	5.72E+00	0.00E+00	1.04E-01	1.00E-05	5.55E-02	7.60E-05	6.30E+00
Arsenic	7440-38-2	7.49E+01	0.00E+00	0.00E+00	1.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.79E-01
Benz-a-anthracene	56-55-3	2.28E+02	1.39E-04	5.55E+00	0.00E+00	5.10E-02	9.00E-06	1.00E-02	1.54E-07	5.52E+00
Benzene	71-43-2	7.81E+01	2.27E-01	1.82E+00	0.00E+00	8.80E-02	9.80E-06	1.77E+03	9.50E+01	1.99E+00
Benzo-a-pyrene	50-32-8	2.52E+02	4.70E-05	5.98E+00	0.00E+00	4.30E-02	9.00E-06	1.62E-03	4.89E-09	6.11E+00
Benzo-b-fluoranthene	205-99-2	2.52E+02	4.99E-04	6.08E+00	0.00E+00	2.26E-02	5.56E-06	1.50E-03	8.06E-08	6.11E+00
beta-BHC	319-85-7	2.91E+02	1.44E-05	3.14E+00	0.00E+00	1.42E-02	7.34E-06	5.42E-01	4.90E-07	4.26E+00
Bis (2-ethyl-hexyl) phthalate	117-81-7	3.91E+02	4.57E-04	5.83E+00	0.00E+00	3.51E-02	3.66E-06	3.00E-01	6.45E-06	8.39E+00
Cobalt	7440-48-4	5.89E+01	0.00E+00	0.00E+00	1.65E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4,4'-DDD	72-54-8	3.20E+02	1.66E-04	4.93E+00	0.00E+00	1.69E-02	4.76E-06	9.00E-02	8.66E-07	5.87E+00
4,4'-DDE	72-55-9	2.42E+02	8.73E-04	5.04E+00	0.00E+00	1.44E-02	5.87E-06	6.50E-02	5.66E-06	6.00E+00
D benz-a,h-anthracene	53-70-3	2.78E+02	4.66E-07	6.28E+00	0.00E+00	2.00E-02	5.18E-06	5.00E-04	2.10E-11	6.70E+00
D bromochloromethane	124-48-1	2.08E+02	3.25E-02	1.80E+00	0.00E+00	1.96E-02	1.05E-05	5.25E+03	1.50E+01	1.70E+00
Dieldrin	60-57-1	3.81E+02	1.11E-04	4.33E+00	0.00E+00	1.25E-02	4.74E-06	1.95E-01	9.96E-07	5.45E+00
Dimethylphenol, 2,4-	105-67-9	1.22E+02	8.31E-05	2.07E+00	0.00E+00	5.84E-02	8.69E-06	6.20E+03	1.26E-01	2.61E+00
Dinitro-2-methylphenol, 4,6-	534-52-1	1.98E+02	1.07E-07	-1.50E+00	0.00E+00	5.31E-02	7.27E-06	3.00E+03	2.87E-05	2.07E+00
Ethyl benzene	100-41-4	1.06E+02	3.28E-01	2.31E+00	0.00E+00	7.50E-02	7.80E-06	1.69E+02	9.60E+00	3.03E+00
gamma-BHC	58-89-9	2.91E+02	1.41E-04	3.04E+00	0.00E+00	1.42E-02	7.34E-06	5.75E+00	3.72E-05	4.26E+00
Heptachlor	76-44-8	3.73E+02	2.44E-02	4.07E+00	0.00E+00	1.12E-02	5.69E-06	1.80E-01	3.26E-04	6.21E+00
Heptachlor epoxide	1024-57-3	3.89E+02	3.45E-04	3.86E+00	0.00E+00	1.32E-02	4.23E-06	2.75E-01	4.34E-06	4.91E+00
Indeno-1,2,3-cd-pyrene	193-39-5	2.76E+02	2.85E-06	6.54E+00	0.00E+00	1.90E-02	5.66E-06	3.75E-03	1.40E-10	6.70E+00
Lead (inorganic)	7439-92-1	2.07E+02	0.00E+00	0.00E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.29E-01
Manganese	7439-96-5	5.49E+01	0.00E+00	0.00E+00	1.70E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mercury	7439-97-6	2.01E+02	4.74E-01	0.00E+00	-1.40E+00	3.07E-02	6.30E-06	3.00E-02	1.30E-03	-4.71E-01
Methylene chloride	75-09-2	8.49E+01	9.10E-02	1.07E+00	0.00E+00	1.01E-01	1.17E-05	1.54E+04	4.55E+02	1.34E+00
Methylnaphthalene, 1-	90-12-0	1.42E+02	1.64E-02	3.36E+00	0.00E+00	6.31E-02	7.13E-06	2.80E+01	6.62E-02	3.72E+00
Methylphenol, 3&4	106-44-5	1.08E+02	3.99E-05	1.91E+00	0.00E+00	7.40E-02	1.00E-05	2.30E+04	1.30E-01	2.06E+00
Naphthalene	91-20-3	1.28E+02	2.00E-02	3.19E+00	0.00E+00	5.90E-02	7.50E-06	3.14E+01	8.89E-02	3.17E+00
Pentachlorophenol	87-86-5	2.66E+02	1.16E-05	2.61E+00	0.00E+00	5.60E-02	6.10E-06	1.40E+01	1.70E-05	4.74E+00
Selenium	7782-49-2	7.90E+01	0.00E+00	0.00E+00	3.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.39E-01
Trimethylbenzene, 1,2,4-	95-63-6	1.20E+02	1.84E-01	2.97E+00	0.00E+00	6.22E-02	7.28E-06	5.68E+01	1.59E+00	3.65E+00
Trimethylbenzene, 1,3,5-	108-67-8	1.20E+02	2.72E-01	3.01E+00	0.00E+00	6.21E-02	7.23E-06	5.15E+01	2.13E+00	3.70E+00
TPH (C_5-C_8 Aliphatics)	110-54-3	8.62E+01	4.66E+01	2.68E+00	0.00E+00	2.00E-01	7.77E-06	1.30E+01	1.52E+02	3.29E+00

Notes:

[1]Taken from the Texas Risk Reduction Program (TRRP), Physical Chemical Properties Table, last updated May 2012. Available online at:http://www.tceq.texas.gov/remediation/trrp/trrppcls.html

APPENDIX E-1
SOIL-TO-AMBIENT AIR VOLATILIZATION FACTORS - SOUTH PIT AND NORTH PIT EXPOSURE AREAS
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

$$VF_s(m^3/kg) = \frac{Q/C_{vol} \cdot (3.14 \cdot D_A \cdot T)^{\frac{1}{2}} \cdot 10^{-4} m^2/cm^2}{2 \cdot \rho_b \cdot D_A}$$

$$DA(cm^2/s) = \frac{\theta_a^{10/3} \cdot D_i \cdot H' + \theta_w^{10/3} \cdot D_w}{n^2 \cdot (\rho_b \cdot K_d + \theta_w + \theta_a \cdot H')}$$

Parameter Symbol	Parameter Definition	Units	Value	Reference
VF	Volatilization factor, soil to ambient air	m3/kg	Chemical-specific	Calculated
Q/Cvol	Inverse mean conc. at center of a 0.5-acre-square source	g/m2-s per kg/m3	40.76	TCEQ, 1999
T	Exposure interval	s	950000000	TCEQ, 1999; USEPA, 2002
ρb	Dry soil bulk density	g/cm3	1.67	TCEQ, 1999
DA	Apparent diffusivity	cm2/s	Chemical-specific	Appendix D-2
θa	Air-filled soil porosity (Lair/Lsoil)	cm3-air/cm3-soil	0.21	TCEQ, 1999
Di	Chemical diffusivity in air	cm2/s	Chemical-specific	Appendix D-2
H'	Henry's law constant	unitless	Chemical-specific	Appendix D-2
θw	Water-filled soil porosity (Lwater/Lsoil)	cm3-H2O/cm3-soil	0.16	TCEQ, 1999
Dw	Chemical diffusivity in water	cm2/s	Chemical-specific	Appendix D-2
n	Total soil porosity	cm3-pore space/cm3-soil	0.37	TCEQ, 1999
Kd	Soil organic carbon partition coefficient; for organics, kd = Koc *foc	cm3-water/g-soil	Chemical-specific	Appendix D-2
Koc	Soil organic carbon-water partition coefficient	cm3-water/g-carbon	Chemical-specific	Appendix D-2
foc	Fraction organic carbon in soil	g-carbon/g-soil	0.008	TCEQ, 1999

		South Pit Exposure Area		North Pit Exposure Area	
		DA	VF	DA	VF
CAS #	Chemicals of Potential Concern	cm^2/s	m^3/kg	cm^2/s	m^3/kg
7440-38-2	Arsenic	---	---	---	---
7439-92-1	Lead	---	---	---	---
7440-62-2	Vanadium	---	---	---	---
7439-97-6	Mercury	7.08E-07	7.92E+04	7.08E-07	7.92E+04
319-84-6	alpha-BHC	2.02E-08	4.69E+05	2.02E-08	4.69E+05
1024-57-3	Heptachlor epoxide	2.52E-09	1.33E+06	2.52E-09	1.33E+06
TPCB	Total PCBs	4.22E-09	1.03E+06	4.22E-09	1.03E+06
108-67-8	1,3,5-Trimethy benzene	1.97E-05	1.50E+04	1.97E-05	1.50E+04
71-43-2	Benzene	2.88E-04	3.93E+03	2.88E-04	3.93E+03
100-41-4	Ethylbenzene	1.34E-04	5.77E+03	1.34E-04	5.77E+03
90-12-0	1-Methylnapthalene	5.55E-07	8.95E+04	5.55E-07	8.95E+04
56-55-3	Benz(a)anthracene	1.01E-10	6.64E+06	1.01E-10	6.64E+06
50-32-8	Benzo(a)pyrene	3.09E-11	1.20E+07	3.09E-11	1.20E+07
205-99-2	Benzo(b)fluoranthene	2.53E-11	1.32E+07	2.53E-11	1.32E+07
117-81-7	Bis(2-ethylhexyl)phthalate	4.48E-11	9.96E+06	4.48E-11	9.96E+06
53-70-3	Dibenz(a,h)anthracene	8.19E-12	2.33E+07	8.19E-12	2.33E+07
193-39-5	Indeno(1,2,3-cd)pyrene	4.93E-12	3.00E+07	4.93E-12	3.00E+07
91-20-3	Naphthalene	9.33E-07	6.90E+04	9.33E-07	6.90E+04

Notes:

[1]Calculated using equation provided in the USEPA's Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, dated December 2002 (USEPA, 2002a).

APPENDIX E-2
PARTICULATE EMISSIONS FACTOR - SOUTH AND NORTH PIT EXPOSURE AREAS
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

$$PEF\ (m^3/kg) = Q/C_{wind} \times \frac{3{,}600\ s/h}{0.036 \cdot (1-V) \cdot \left(\frac{U_m}{U_t}\right)^3 \cdot F(x)}$$

Parameter Symbol	Definition	Units	Values	Reference
PEF	Particulate emissions factor	m3/kg	4.77E+08	Calculated
Q/Cwind	Inverse of mean concentration in air at center of affected soil area (30-acre default)	g/m2-s per kg/m3	40.76	TCEQ, 1999
V	Fraction of vegetative cover	unitless	0.5	TCEQ, 1999
Um	Mean annual windspeed	m/s	4.8	TCEQ, 1999
Ut	Equivalent threshold value of windspeed at 7m	m/s	11.32	TCEQ, 1999
F(x)	Function dependent on Um/Ut	unitless	0.224	TCEQ, 1999

Notes:

[1]Calculated using equation provided in the USEPA's Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, dated December 2002 (USEPA, 2002a).

APPENDIX F-1
GROUNDWATER-TO-AMBIENT AIR VOLATILIZATION FACTOR- SOUTH PIT EXPOSURE AREA (UTU)
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

$$VF_{wamb}\left[\frac{mg/m^3 - air}{mg/L - H_2O}\right] = \frac{H'}{1+\left[\frac{U_{air}\,¢_{air}\,L_{gw}}{W_g\,D_{ws}^{eff}}\right]} \bullet \left[10^3\,\frac{L}{m^3}\right]$$

$$D_{ws}^{eff}\left[\frac{cm^2}{s}\right] = \left(h_{cap} + h_v\right)\left[\frac{h_{cap}}{D_{cap}^{eff}} + \frac{h_v}{D_s^{eff}}\right]^{-1}$$

$$D_{cap}^{eff}\left[\frac{cm^2}{s}\right] = D^{air}\,\frac{-3.33}{-2}\,\frac{acap}{T} + \left[\frac{D^w}{H'}\right]\left[\frac{-3.33}{-2}\,\frac{wcap}{T}\right]$$

$$D_s^{eff}\left[\frac{cm^2}{s}\right] = D^{air}\,\frac{-3.33}{-2}\,\frac{as}{T} + \left[\frac{D^w}{H'}\right]\left[\frac{-3.33}{-2}\,\frac{ws}{T}\right]$$

Parameter Symbol	Parameter Definition	Units	Value	Reference
VFwamb	Volatilization factor, groundwater to ambient air	L/m3	Chemical-specific	Calculated
H'	Henry's law constant	unitless	Chemical-specific	Appendix D-2
Uair	Windspeed above ground surface in ambient mixing zone	cm/s	240	TCEQ, 1999
dair	Ambient air mixing zone height	cm	200	TCEQ, 1999
Lgw	Depth to groundwater, Lgw = hcap + hv	cm	300	Site-specific
hcap	Thickness of the capillary fringe	cm	5	TCEQ, 1999
hv	Thickness of the vadose zone	cm	295	Site-specific
Wg	Width of gw source in the direction of the closest off-site property line (30-acre default)	cm	34800	TCEQ, 1999
D^{eff}_{ws}	Effective diffusivity above water table	cm2/s	Chemical-specific	Calculated
D^{eff}_{cap}	Effective diffusivity in the capillary fringe	cm2/s	Chemical-specific	Calculated
D^{eff}_{s}	Effective diffusivity in the vadose zone soils	cm2/s	Chemical-specific	Calculated
θacap	Volumetric air content of capillary fringe soils	cm3-air/cm3-soil	0.037	TCEQ, 1999
θwcap	Volumetric water content of capillary fringe soils	cm3-H2O/cm3-soil	0.333	TCEQ, 1999
θas	Volumetric air content in vadose zone soils	cm3-air/cm3-soil	0.21	TCEQ, 1999
θws	Volumetric water content in vadose zone soils	cm3-H2O/cm3-soil	0.16	TCEQ, 1999
θT	Total soil porosity	cm3-pore-space/cm3-soil	0.37	TCEQ, 1999
Dw	Chemical diffusivity in water	cm2/s	Chemical-specific	Appendix D-2

CAS No.	Chemical of Potential Concern	Dair (cm2/s)	Dwat (cm2/s)	H' (unitless)	D^{eff}_{s} (cm^2/s)	D^{eff}_{cap} (cm^2/s)	D^{eff}_{ws} (cm^2/s)	VF_{wamb}[1] (mg/m^3-air)/(mg/L-H_2O)
7440-38-2	Arsenic	---	---	---	---	---	---	---
319-84-6	alpha-BHC	1.42E-02	7.34E-06	2.82E-04	9.99E-04	4.88E-03	1.01E-03	6.91E-07
60-57-1	Dieldrin	1.25E-02	4.74E-06	1.11E-04	1.20E-03	8.02E-03	1.22E-03	3.27E-07
71-43-2	Benzene	8.80E-02	9.80E-06	2.27E-01	3.56E-03	1.91E-05	8.69E-04	4.77E-04
106-44-5	3&4-Methylphenol	7.40E-02	1.00E-05	3.99E-05	7.09E-03	4.70E-02	7.19E-03	6.93E-07

Note

[1]Calculated using equation provided in the TCEQ's Texas Risk Reduction Program (TRRP) Rule, 30 Texas Administrative Code (TAC) 350. Effective August 17, 2000.

APPENDIX F-2
GROUNDWATER-TO-AMBIENT AIR VOLATILIZATION FACTOR- OFF-SITE EXPOSURE AREA (UTU)
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

$$VF_{wamb}\left[\frac{mg/m^3 - air}{mg/L - H_2O}\right] = \frac{H'}{1+\left[\frac{U_{air}\,¢\,_{air}\,L_{gw}}{W_g D_{ws}^{eff}}\right]} \bullet \left[10^3 \frac{L}{m^3}\right]$$

$$D_{ws}^{eff}\left[\frac{cm^2}{s}\right] = \left(h_{cap} + h_v\right)\left[\frac{h_{cap}}{D_{cap}^{eff}} + \frac{h_v}{D_s^{eff}}\right]^{-1}$$

$$D_{cap}^{eff}\left[\frac{cm^2}{s}\right] = D^{air}\,{}^{-3\,33}_{\frac{acap}{-2}}{}_{T} + \left[\frac{D^w}{H'}\right]\left[{}^{-3\,33}_{\frac{wcap}{-2}}{}_{T}\right]$$

$$D_s^{eff}\left[\frac{cm^2}{s}\right] = D^{air}\,{}^{-3\,33}_{\frac{as}{-2}}{}_{T} + \left[\frac{D^w}{H'}\right]\left[{}^{-3\,33}_{\frac{ws}{-2}}{}_{T}\right]$$

Parameter Symbol	Parameter Definition	Units	Value	Reference
VFwamb	Volatilization factor, groundwater to ambient air	L/m3	Chemical-specific	Calculated
H'	Henry's law constant	unitless	Chemical-specific	Appendix D-2
Uair	Windspeed above ground surface in ambient mixing zone	cm/s	240	TCEQ, 1999
dair	Ambient air mixing zone height	cm	200	TCEQ, 1999
Lgw	Depth to groundwater, Lgw = hcap + hv	cm	300	Site-specific
hcap	Thickness of the capillary fringe	cm	5	TCEQ, 1999
hv	Thickness of the vadose zone	cm	295	Site-specific
Wg	Width of gw source in the direction of the closest off-site property line (30-acre default)	cm	34800	TCEQ, 1999
D^{eff}_{ws}	Effective diffusivity above water table	cm2/s	Chemical-specific	Calculated
D^{eff}_{cap}	Effective diffusivity in the capillary fringe	cm2/s	Chemical-specific	Calculated
D^{eff}_{s}	Effective diffusivity in the vadose zone soils	cm2/s	Chemical-specific	Calculated
θacap	Volumetric air content of capillary fringe soils	cm3-air/cm3-soil	0.037	TCEQ, 1999
θwcap	Volumetric water content of capillary fringe soils	cm3-H2O/cm3-soil	0.333	TCEQ, 1999
θas	Volumetric air content in vadose zone soils	cm3-air/cm3-soil	0.21	TCEQ, 1999
θws	Volumetric water content in vadose zone soils	cm3-H2O/cm3-soil	0.16	TCEQ, 1999
θT	Total soil porosity	cm3-pore-space/cm3-soil	0.37	TCEQ, 1999
Dw	Chemical diffusivity in water	cm2/s	Chemical-specific	Appendix D-2

CAS No.	Chemical of Potential Concern	Dair (cm2/s)	Dwat (cm2/s)	H' (unitless)	D^{eff}_{s} (cm^2/s)	D^{eff}_{cap} (cm^2/s)	D^{eff}_{ws} (cm^2/s)	VF_{wamb} [1] (mg/m^3-air)/(mg/L-H_2O)
71-43-2	Benzene	8.80E-02	9.80E-06	2.27E-01	3.56E-03	1.91E-05	8.69E-04	4.77E-04

Note
[1]Calculated using equation provided in the TCEQ's Texas Risk Reduction Program (TRRP) Rule, 30 Texas Administrative Code (TAC) 350. Effective August 17, 2000.

APPENDIX G-1
GROUNDWATER VOLATILIZATION FACTORS CONSTRUCTION WORKER IN A TRENCH MODEL
SOUTH PIT EXPOSURE AREA UTU - (GROUNDWATER LESS THAT 15 FEET DEEP)
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

$$C_{trench}(mg/m3) = C_{gw} \cdot VF_{trench}$$

$$VF_{trench} = \frac{K_i \cdot A \cdot F \cdot 10^{-3} \cdot 10^{4} \cdot 3600}{ACH \cdot V}$$

$$K_i = \frac{1}{\frac{1}{k_{iL}} + \frac{R \cdot T}{H_i k_{iG}}}$$

$$k_{iL} = \left(\frac{MW_{O2}}{MW_i}\right)^{0.5} \cdot \frac{T}{298} \cdot k_L, O_2$$

$$k_{iG} = \left(\frac{MW_{H2O}}{MW_i}\right)^{0.335} \cdot \left(\frac{T}{298}\right)^{1.005} \cdot k_G, H_2O$$

Parameter Symbol	Parameter Definition	Units	Value	Reference
VFtrench	Volatilization factor in a trench	L/m3	Chemical -specific	Calculated
Ki	Overall mass transfer coefficient of contaminant	cm/s	Chemical-specific	Calculated
A	Area of trench	m2	2.23E+00	VDEQ, 2012
L	Length of trench	m	2.44E+00	VDEQ, 2012
W	Width of trench	m	9.14E-01	VDEQ, 2012
D	Depth of trench	m	3.05E+00	Site-specific
F	Fraction of floor through which the contaminant can enter	unitless	1	VDEQ, 2012
ACH	Air changes per hour	h-1	360	VDEQ, 2012
V	Volume of trench	m3	6.80E+00	Site-specific
kiL	Liquid-phase mass transfer coefficient	cm/s	Chemical-specific	Calculated
R	Ideal gas constant	atm-m3/mole-K	0.000082	VDEQ, 2012
T	Average system absolute temperature	K	298	Site-specific
Hi	Henry's Law constant	atm-m3/mole	Chemical-specific	--
kiG	Gas-phase mass transfer coefficient	cm/s	Chemical-specific	Calculated
MWO2	Molecular weight of oxygen	g/mol	32	VDEQ, 2012
MWi	Molecular weight of contaminant	g/mol	Chemical-specific	--
kL,O2	Liquid-phase mass transfer coefficient of oxygen at 25oC	cm/s	0 002	VDEQ, 2012
MWH2O	Molecular weight of water	g/mol	18	VDEQ, 2012
kG,H2O	Gas-phase mass transfer coefficient of water vapor at 25oC	cm/s	0 833	VDEQ, 2012

Chemicals of Potential Concern	Molecular Weight MWi g/mol	Henry's Law Constant H_i atm-m^3/mol	Gas-Phase Mass Transfer Coefficient k_{iG} cm/s	Liquid-Phase Mass Transfer Coefficient k_{iL} cm/s	Overall Mass Transfer Coefficient K_i cm/s	Concentration of Contaminant in Groundwater Cgw ug/L	Volatilization Factor VF_{trench} L/m^3	On-site Concentration of Contaminant in Trench Ctrench ug/m^3	On-site Concentration of Contaminant in Trench Ctrench[1] mg/m^3
Arsenic	7.49E+01	---	----	----	---	2.40E+03	---	----	----
alpha-BHC	2.91E+02	1 06E-05	3.28E-01	6.63E-04	1.17E-04	7.50E+00	3.84E-03	2.88E-02	2.88E-05
Dieldrin	3.81E+02	1 51E-05	3.00E-01	5.80E-04	1.40E-04	4.90E+00	4.60E-03	2.26E-02	2.26E-05
Benzene	7.81E+01	5 55E-03	5.09E-01	1.28E-03	1 27E-03	5.80E+03	4.15E-02	2.41E+02	2.41E-01
3&4-Methylphenol	1.08E+02	7 92E-07	4.57E-01	1.09E-03	1.46E-05	5.70E+04	4.79E-04	2.73E+01	2.73E-02

Notes:

[1]Calculated from equation provided in VDEQ's Voluntary Remediation Program Risk Assessment Guidance. Available online at: http://www.deq.virginia.gov/Programs/LandProtectionRevitaliza ion/RemediationPrograms/VoluntaryRemedia ionProgram/VRPRiskAssessmentGuidance/Guidance.aspx

APPENDIX G-2
INHALATION EXPOSURE POINT CONCENTRATIONS
CONSTRUCTION WORKER IN A TRENCH - OFF-SITE EXPOSURE AREA UTU - (GROUNDWATER LESS THAT 15 FEET DEEP)
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

$$C_{trench}(mg/m3) = C_{gw} \cdot VF_{trench}$$

$$K_i = \frac{1}{\frac{1}{k_{iL}} + \frac{R \cdot T}{H_i k_{iG}}}$$

$$VF_{trench} = \frac{K_i \cdot A \cdot F \cdot 10^{-3} \cdot 10^{4} \cdot 3600}{ACH \cdot V}$$

$$k_{iL} = \left(\frac{MW_{O2}}{MW_i}\right)^{0.5} \cdot \frac{T}{298} \cdot k_L, O_2$$

$$k_{iG} = \left(\frac{MW_{H2O}}{MW_i}\right)^{0.335} \cdot \left(\frac{T}{298}\right)^{1.005} \cdot k_G, H_2O$$

Parameter Symbol	Parameter Definition	Units	Value	Reference
VFtrench	Volatilization factor in a trench	L/m3	Chemical -specific	Calculated
Ki	Overall mass transfer coefficient of contaminant	cm/s	Chemical-specific	Calculated
A	Area of trench	m2	2.23E+00	VDEQ, 2012
L	Length of trench	m	2.44E+00	VDEQ, 2012
W	Width of trench	m	9.14E-01	VDEQ, 2012
D	Depth of trench	m	3.05E+00	Site-specific
F	Fraction of floor through which the contaminant can enter	unitless	1	VDEQ, 2012
ACH	Air changes per hour	h-1	360	VDEQ, 2012
V	Volume of trench	m3	6.80E+00	Site-specific
kiL	Liquid-phase mass transfer coefficient	cm/s	Chemical-specific	Calculated
R	Ideal gas constant	atm-m3/mole-K	0.000082	VDEQ, 2012
T	Average system absolute temperature	K	298	Site-specific
Hi	Henry's Law constant	atm-m3/mole	Chemical-specific	--
kiG	Gas-phase mass transfer coefficient	cm/s	Chemical-specific	Calculated
MWO2	Molecular weight of oxygen	g/mol	32	VDEQ, 2012
MWi	Molecular weight of contaminant	g/mol	Chemical-specific	--
kL,O2	Liquid-phase mass transfer coefficient of oxygen at 25oC	cm/s	0.002	VDEQ, 2012
MWH2O	Molecular weight of water	g/mol	18	VDEQ, 2012
kG,H2O	Gas-phase mass transfer coefficient of water vapor at 25oC	cm/s	0.833	VDEQ 2012

Chemical of Potential Concern	Molecular Weight MWi g/mol	Henry's Law Constant H_i atm-m^3/mol	Gas-Phase Mass Transfer Coefficient k_{iG} cm/s	Liquid-Phase Mass Transfer Coefficient k_{iL} cm/s	Overall Mass Transfer Coefficient K_i cm/s	Concentration of Contaminant in Groundwater Cgw ug/L	Volatilization Factor VF_{trench} L/m^3	Off-site Concentration of Contaminant in Trench Ctrench ug/m^3	Off-site Concentration of Contaminant in Trench Ctrench[1] mg/m^3
Benzene	7.81E+01	5.55E-03	5.09E-01	1.28E-03	1.27E-03	3.50E+03	4.15E-02	1.45E+02	1.45E-01

Notes:

[1]Calculated from equation provided in VDEQ's Voluntary Remediation Program Risk Assessment Guidance. Available online at:
http://www.deq.virginia.gov/Programs/LandProtectionRevitalization/Remedia ionPrograms/VoluntaryRemediationProgram/VRPRiskAssessmentGuidance/Guidance.aspx

APPENDIX H-1
DERMAL ABSORBED DOSE - CONTACT WITH GROUND WATER (UTU)
ON-SITE CONSTRUCTION WORKER SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

$$If\ t_{event} \le t^*, then:\ DA_{event} = 2C_w K_p FA\sqrt{\frac{6\tau_{event} t_{event}}{\pi}}$$

$$If\ t_{event} > t^*, then:\ DA_{event} = C_w K_p FA\left[\frac{t_{event}}{1+B} + 2\tau_{event}\left(\frac{1+3B+3B^2}{(1+B)^2}\right)\right]$$

$$For\ inorganics:\quad DA_{event} = C_w K_p t_{event}$$

$$B = K_p\frac{\sqrt{MW}}{2.6}$$

$$If\ B \le 0.6, then\ t^* = 2.4\tau_{event}$$

$$If\ B > 0.6, then\ t^* = 6\tau_{event}(b - \sqrt{b^2 - c^2})$$

$$\tau_{event} = 0.105 \times 10^{(0.0056 MW)}$$

$$b = \frac{2(1+B)^2}{\pi} - c$$

$$c = \frac{1+3B+3B^2}{3(1+B)}$$

Parameter Symbol	Parameter Definition	Units	Value	Reference
DA_{event}	Absorbed dose per event	mg/cm2-event	Chemical-specific	Calculated
FA	Fraction absorbed water	unitless	Chemical-specific	USEPA, 2004a
Kp	Dermal permeability coeffient of compound in water	cm/hr	Chemical-specific	USEPA, 2004a
Cw	Chemical concentration in water	mg/cm^3	Chemical-specific	Table 3.12 (Appendix A)
τ_{event}	Lag time per event (hr/event)	hr/event	Chemical-specific	Calculated
MW	Molecular weight	g/mole	Chemical-specific	TCEQ, 2012b
t_{event}	Event duration	hr/event	8	Professional Judgement
t*	Time to reach steady-state	hr/event	Chemical-specific	Calculated
b	Correlation coefficient	unitless	Chemical-specific	Calculated
c	Correlation coefficient	unitless	Chemical-specific	Calculated
B	Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis	unitless	Chemical-specific	Calculated

CAS #	Chemical of Potential Concern	Type	Kp cm/hr	Kp Ref	τ_{event} hr/event[d]	B unitless[d]	b unitless[d]	c unitless[d]	t* hr[d]	FA unitless[e]	Cw mg/cm^3	RME On-Site Construction Worker DA_{event} mg/cm^2-event[f]	CT On-Site Construction Worker DA_{event} mg/cm^2-event[f]
7440-38-2	Arsenic	M	1.00E-03	a	Inorg	Inorg	Inorg	Inorg	Inorg	---	2.40E-03	1.92E-05	1.92E-05
319-84-6	alpha-BHC	O	2.41E-02	c	4.47E+00	1.58E-01	4.08E-01	4.46E-01	1.07E+01	1.00E+00	7.50E-06	2.99E-06	2.99E-06
60-57-1	Dieldrin	O	1.20E-02	b	1.43E+01	9.01E-02	3.61E-01	3.96E-01	3.42E+01	8.00E-01	4.90E-06	1.39E-06	1.39E-06
71-43-2	Benzene	O	1.50E-02	b	2.87E-01	5.10E-02	3.35E-01	3.68E-01	6.90E-01	1.00E+00	5.80E-03	7.15E-04	7.15E-04
106-44-5	3&4-Methylphenol	O	7.70E-03	b	4.23E-01	3.08E-02	3.22E-01	3.54E-01	1.02E+00	1.00E+00	5.70E-02	3.79E-03	3.79E-03

Notes:

a - Kp for inorganic compounds provided on USEPA RAGS, Part E , Exhibit 3-1. (USEPA, 2004a).

b - Kp (predicted values for organic compounds) were taken from USEPA RAGS, Part E, Exhibit B-2 (USEPA, 2004a)

c -If a Kp value was not available in USEPA RAGS, Part E, Exhibit B-2 for an organic compound, Kp was calculated using Eguation 3.8 in USEPA RAGS E(USEPA, 2004a).

d - Values were calculated using equations provided in USEPA RAGS 2004, Part E, Appendix A (USEPA, 2004a).

e - Taken from USEPA RAGS, Part E, Exhibit B-3 (look up table) or estimated using Exhibit A-5 (USEPA, 2004a)

f - Calculated based on equations provided in USEPA's RAGS, Part E, Section 3.0. (USEPA, 2004a).

APPENDIX H-2
DERMAL ABSORBED DOSE - CONTACT WITH GROUND WATER (UTU)
OFF-SITE CONSTRUCTION WORKER SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

$$If\ t_{event} \le t^*, then:\ DA_{event} = 2C_w K_p FA\sqrt{\frac{6\tau_{event} t_{event}}{\pi}}$$

$$If\ t_{event} > t^*, then:\ DA_{event} = C_w K_p FA\left[\frac{t_{event}}{1+B} + 2\tau_{event}\left(\frac{1+3B+3B^2}{(1+B)^2}\right)\right]$$

$$For\ inorganics:\ DA_{event} = C_w K_p t_{event}$$

$$B = K_p\frac{\sqrt{MW}}{2.6}$$

$$If\ B \le 0.6, then\ t^* = 2.4\tau_{event}$$

$$If\ B > 0.6, then\ t^* = 6\tau_{event}\,(b - \sqrt{b^2 - c^2})$$

$$\tau_{event} = 0.105 \times 10^{(0.0056MW)}$$

$$b = \frac{2\,(1+B)^2}{\pi} - c$$

$$c = \frac{1+3B+3B^2}{3(1+B)}$$

Parameter Symbol	Parameter Definition	Units	Value	Reference
DA_{event}	Absorbed dose per event	mg/cm2-event	Chemical-specific	Calculated
FA	Fraction absorbed water	unitless	Chemical-specific	USEPA, 2004a
Kp	Dermal permeability coeffient of compound in water	cm/hr	Chemical-specific	USEPA, 2004a
Cw	Chemical concentration in water	mg/cm^3	Chemical-specific	Table 3.15 (Appendix A)
τ_{event}	Lag time per event (hr/event)	hr/event	Chemical-specific	Calculated
MW	Molecular weight	g/mole	Chemical-specific	TCEQ, 2012b
t_{event}	Event duration	hr/event	8	Professional Judgement
t*	Time to reach steady-state	hr/event	Chemical-specific	Calculated
b	Correlation coefficient	unitless	Chemical-specific	Calculated
c	Correlation coefficient	unitless	Chemical-specific	Calculated
B	Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis	unitless	Chemical-specific	Calculated

CAS #	Chemical of Potential Concern	Type	Kp		τ_{event}	B	b	c	t*	FA	Cw	**RME Off-Site Construction Worker**	**CT Off-Site Construction Worker**
			cm/hr	Ref	hr/event[b]	unitless[b]	unitless[b]	unitless[b]	hr[b]	unitless[c]	mg/cm^3	DA_{event} mg/cm2-event[d]	DA_{event} mg/cm2-event[d]
71-43-2	Benzene	O	1.50E-02	a	2.87E-01	5.10E-02	3.35E-01	3.68E-01	6.90E-01	1.00E+00	3.50E-03	4.31E-04	4.31E-04

Notes:
a - Kp (predicted values for organic compounds) were taken from USEPA RAGS, Part E, Exhibit B-2 (USEPA, 2004a)
b - Values were calculated using equations provided in USEPA RAGS 2004, Part E, Appendix A (USEPA, 2004a).
c - Taken from USEPA RAGS, Part E, Exhibit B-3 (look up table) or estimated using Exhibit A-5 (USEPA, 2004a)
d - Calculated based on USEPA, RAGS, Part E, Section 3.0. (USEPA, 2004a).

APPENDIX H-3
DERMAL ABSORBED DOSE CALCULATION - CONTACT WITH SURFACE WATER
BASELINE HUMAN HEALTH RISK ASSESSMENT
EAST DITCH SURFACE WATER EXPOSURE SCENARIO
BRINE SERVICE COMPANY SUPERFUND SITE

$$If\ t_{event} \le t^*, then:\ DA_{event} = 2C_w K_p FA\sqrt{\frac{6\tau_{event} t_{event}}{\pi}}$$

$$If\ t_{event} > t^*, then:\ DA_{event} = C_w K_p FA\left[\frac{t_{event}}{1+B} + 2\tau_{event}\left(\frac{1+3B+3B^2}{(1+B)^2}\right)\right]$$

$$For\ inorganics:\ DA_{event} = C_w K_p t_{event}$$

$$B = K_p\frac{\sqrt{MW}}{2.6}$$

$$If\ B \le 0.6, then\ t^* = 2.4\tau_{event}$$

$$If\ B > 0.6, then\ t^* = 6\tau_{event}\ (b - \sqrt{b^2 - c^2})$$

$$\tau_{event} = 0.105 \times 10^{(0.0056MW)}$$

$$b = \frac{2\,(1+B)^2}{\pi} - c$$

$$c = \frac{1+3B+3B^2}{3(1+B)}$$

Parameter Symbol	Parameter Definition	Units	Value	Reference
DA_{event}	Absorbed dose per event	mg/cm2-event	Chemical-specific	Calculated
FA	Fraction absorbed water	unitless	Chemical-specific	USEPA, 2004a
Kp	Dermal permeability coeffient of compound in water	cm/hr	Chemical-specific	USEPA, 2004a
Cw	Chemical concentration in water	mg/cm^3	Chemical-specific	Table 3.18 (Appendix A)
τ_{event}	Lag time per event (hr/event)	hr/event	Chemical-specific	Calculated
MW	Molecular weight	g/mole	Chemical-specific	TCEQ, 2012b
t_{event}	Event duration	hr/event	8	Professional Judgement
t*	Time to reach steady-state	hr/event	Chemical-specific	Calculated
b	Correlation coefficient	unitless	Chemical-specific	Calculated
c	Correlation coefficient	unitless	Chemical-specific	Calculated
B	Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis	unitless	Chemical-specific	Calculated

CAS #	Chemical of Poten ial Concern	Type	Kp		τ_{event}	B	b	c	t*	FA	Cw	RME On-site Maintenance Worker	CT On-site Maintenance Worker	RME On-site Trespasser	CT On-site Trespasser
												Da_{event}	Da_{event}	Da_{event}	Da_{event}
			cm/hr	Ref	hr/event[c]	unitless[c]	unitless[c]	unitless[c]	hr[c]	unitless[d]	mg/cm^3	mg/cm2-event[e]	mg/cm2-event[e]	mg/cm2-event[e]	mg/cm2-event[e]
7440-38-2	Arsenic	M	1.00E-03	a	Inorg	Inorg	Inorg	Inorg	Inorg	---	1.56E-05	3.12E-08	3.12E-08	6.24E-08	3.12E-08
309-00-2	Aldrin	O	1.40E-03	b	1.16E+01	1.03E-02	3.10E-01	3.40E-01	2.79E+01	1.00E+00	2.90E-08	5.41E-10	5.41E-10	7.65E-10	5.41E-10

Notes:

a - Kp for inorganic compounds provided on USEPA RAGS, Part E , Exhibit 3-1. (USEPA, 2004).

b - Kp (predicted values for organic compounds) taken from USEPA RAGS, Part E, Exhibit B-2 (USEPA, 2004)

c - Values were calculated using equations provided in USEPA RAGS 2004, Part E, Appendix A (USEPA, 2004).

d - Taken from USEPA RAGS, Part E, Exhibit B-3 (USEPA, 2004)

e - Calculated based on USEPA, RAGS, Part E, Section 3.0. (USEPA 2004).

APPENDIX I

SOIL GAS SCREENING CRITERIA AND INDOOOR AIR EXPOSURE POINT CONCENTRATIONS
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

The Phase II Technical Memorandum (URS, 2011) for the Brine Service Company Superfund Site (Site) recommended *"...that soil gas samples be collected in the vicinity of Wingfoot Tire, Adult Video, and Robert's for the evaluation of the vapor intrusion (VI) pathway."* This recommendation included initially collecting passive soil gas samples at locations as described in the Phase II Sampling and Analysis Plan of the Phase II Technical Memorandum (URS, 2011), followed by the collection of active soil gas samples at the three locations with the highest passive soil gas mass and one location with the lowest passive soil gas mass. The results of the passive soil gas sampling were reviewed with the United States Environmental Protection Agency (USEPA) and Texas Commission on Environmental Quality (TCEQ) during a net-meeting on February 9, 2012 and, based on this review, the following five passive soil gas locations were recommended for active soil gas sampling:

- **SG-04:** background location;
- **SG-13:** location adjacent to the Adult Video Store (South Pit Exposure Area);
- **SG-22:** location within the parking lot of the Adult Video Store (South Pit Exposure Area);
- **SG-33:** location on Roberts Equipment property (South Pit Exposure Area); and
- **SG-49:** location on Wingfoot Tire property (North Pit Exposure Area).

The following subsections describe the soil gas screening criteria used to compare the Site soil gas data and the calculation of indoor air exposure point concentrations (EPCs) for detected soil gas COPCs (i.e., detected COPCs that were screened for further evaluation in the BHHRA). The RI Report summarizes the passive and active soil gas data that were collected at the Site (URS, 2014).

Soil Gas Screening Criteria

Commercial/industrial soil gas screening criteria were developed for constituents using the following equation:

$$\text{Soil Gas Screening Criteria } (ug/m^3) = \frac{\text{Acceptable Air Inhalation Concentration } (ug/m^3)}{\text{Vapor Attenuation factor } (\alpha)}$$

Acceptable commercial/industrial air inhalation concentrations were obtained from:

- Table 2c in the USEPA's OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance) (USEPA, 2002b);
- USEPA's Industrial Air RSLs (USEPA, 2013a); and
- MassDEP's Interim Final Vapor Intrusion Guidance, Table I-1 (MassDEP, 2011).

The vapor attenuation factor represents the ratio between indoor air concentration and soil gas concentration. The default vapor attenuation factor for commercial buildings (α =0.001) was obtained from Table 2 in the California Environmental Protection Agency (CalEPA's) "Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air" (CalEPA, 2011). Appendix I-1 summarizes the acceptable commercial/industrial air inhalation concentrations and the soil gas screening criteria.

Estimation of Indoor Air Concentrations

Indoor air EPCs for detected COPCs were estimated using the USEPA's Vapor Intrusion (VI) SCREEN Model for Soil Gas (USEPA, 2004b) [which is based on the Johnson and Ettinger (J&E) Model] and default or site-specific data for the following model input parameters:

- Soil gas concentration (*maximum detected soil gas concentration for each COPC)*;
- Depth to bottom of enclosed space (*assumed buildings are built slab on grade*);
- Depth to soil gas sample collection (*approximately 5 feet below ground surface*);
- Estimated average soil temperatures for Site (*approximately 22 ^{0}C for that region; USEPA, 2004b*);
- Soil type (*silty clay loam*) and default values for *bulk density, total, air and water porosities* (based on the soil type) were obtained from USEPA (2004b); and
- Chemical and physical properties data [see Appendix I-2].

The estimated indoor air EPCs are summarized in Appendix I-3 and the USEPA VI SCREEN Model input parameters and output for the estimated indoor air concentration ($C_{building}$) for the detected COPCs are provided in Appendix Tables I-4-1 through I-4-21.

References

California Environmental Protection Agency (CalEPA). 2011. Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). Department of Toxic Substances Control. October. Available online at: http://www.dtsc.ca.gov/AssessingRisk/upload/Final_VIG_Oct_2011.pdf

Massachusetts Department of Environmental Protection (MassDEP). 2002. Characterizing Risks Posed by Petroleum Contaminated Sites: Implementation of the MADEP VPH/EPH Approach. Final Policy. October 31. Available online at: http://www.mass.gov/dep/cleanup/laws/02-411.pdf

Massachusetts Department of Environmental Protection (MassDEP). 2011. Interim Vapor Intrusion Guidance. WSC#-11-435. December. Available online at: http://www.mass.gov/dep/cleanup/laws/vifin.pdf

U.S. Environmental Protection Agency (USEPA). 2002b. OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion

Guidance). November. Available online at: http://www.epa.gov/osw/hazard/correctiveaction/eis/vapor.htm

U.S. Environmental Protection Agency (USEPA). 2004b. 3 Phase System Model and Soil Gas Model. February. Available online at http://www.epa.gov/oswer/riskassessment/airmodel/johnson_ettinger.htm

U.S. Environmental Protection Agency (USEPA). 2013a. Regions 3, 6, and 9. Regional Screening Levels for Chemical Contaminants at Superfund Sites.

URS Corporation (URS) (2011). Technical Memorandum Phase II RI for the Brine Service Company Superfund Site. November 2011.

URS Corporation (URS). 2014. Remedial Investigation Report for the Brine Service Company Superfund Site. May 2014.

APPENDIX I-1
SOIL GAS SCREENING CRITIERIA
SOUTH AND NORTH PIT EXPOSURE AREAS
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

Analyte	CAS No.	Commercial/Industrial Air Inhalation Concentrations (ug/m^3)	Commerical/Industrial Air Inhalation Concentration Reference	Soil Gas Screening Criteria (attenuation factor =0.001) (ug/m^3)
TPH (C_5-C_8 Aliphatics)	C5C8Aliphatic	3.30E+02	MassDEP, 2011	3.30E+05
TPH (C_9-C_{10} Aromatics)	C9C10Aromatic	4.40E+01	MassDEP, 2011	4.40E+04
TPH (C_9-C_{12} Aliphatics)	C9C12Aliphatic	2.20E+02	MassDEP, 2011	2.20E+05
1,1,2-Trichloroethane	79-00-5	7.70E-01	USEPA, 2013a	7.70E+02
1,2,4-Trimethylbenzene	95-63-6	3.10E+01	USEPA, 2013a	3.10E+04
1,3,5-Trimethylbenzene	108-67-8	6.00E+00	USEPA, 2002b	6.00E+03
1,4-Dichlorobenzene	106-46-7	1.10E+00	USEPA, 2013a	1.10E+03
2-Butanone	78-93-3	2.20E+04	USEPA, 2013a	2.20E+07
2-Hexanone	591-78-6	1.30E+02	USEPA, 2013a	1.30E+05
Acetone	67-64-1	1.40E+05	USEPA, 2013a	1.40E+08
Benzene	71-43-2	1.60E+00	USEPA, 2013a	1.60E+03
Carbon disulfide	75-15-0	3.10E+03	USEPA, 2013a	3.10E+06
Carbon tetrachloride	56-23-5	2.00E+00	USEPA, 2013a	2.00E+03
cis-1,3-Dichloropropene	10061-01-5	3.10E+00	USEPA, 2013a	3.10E+03
Cyclohexane	110-82-7	2.60E+04	USEPA, 2013a	2.60E+07
Ethy benzene	100-41-4	4.90E+00	USEPA, 2013a	4.90E+03
Isopropylbenzene	98-82-8	1.80E+03	USEPA, 2013a	1.80E+06
Methylene chloride	75-09-2	1.20E+03	USEPA, 2013a	1.20E+06
Naphthalene	91-20-3	3.60E-01	USEPA, 2013a	3.60E+02
n-Butylbenzene	104-51-8	1.40E+02	USEPA, 2002b	1.40E+05
n-Propylbenzene	103-65-1	4.40E+03	USEPA, 2013a	4.40E+06
sec-Butylbenzene	135-98-8	1.40E+02	USEPA, 2002b	1.40E+05
Styrene	100-42-5	4.40E+03	USEPA, 2013a	4.40E+06
tert-Butylbenzene	98-06-6	1.40E+02	USEPA, 2002b	1.40E+05
Toluene	108-88-3	2.20E+04	USEPA, 2013a	2.20E+07
Xylenes, Total	1330-20-7	4.40E+02	USEPA, 2013a	4.40E+05

Notes:

Massachusetts Department of Environmental Protection (MassDEP). 2011. Interim Vapor Intrusion Guidance. WSC#-11-435. December. Available online at: http://www.mass.gov/dep/cleanup/laws/vifin.pdf

U.S. Environmental Protection Agency (USEPA). 2002b. OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance). November. Available online at: http://www.epa.gov/osw/hazard/correctiveaction/eis/vapor.htm

U.S. Environmental Protection Agency (USEPA). 2013a. USEPA Regions 3, 6, and 9. Regional Screening Levels for Chemical Contaminants at Superfund Sites.

APPENDIX I-2
VAPOR INTRUSION PATHWAY - PHYSICAL AND CHEMICAL PROPERTIES DATA
SOUTH AND NORTH PIT EXPOSURE AREAS
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

Detected Soil Gas COPCs	Molecular Weight (MW) (g/mol)	Organic Carbon Partition Coefficient (Koc) (cm^3/g)	Diffusivity in Air (D_a) (cm^2/s)	Diffusivity in water (D_w) (cm^2/s)	Pure Component Water Solubility (S) (mg/L)	Henry's law constant (H') (unitless)	Henry's Law Constant at Reference Temperature (H) (atm-m^3/mol)	Henry's Law Constant at Reference Temperature (T_R) (^oC)	Normal boiling point (T_B) (^oK)	Critical temperature (T_C) (^oK)	Enthalpy of vaporization at vaporization at the normal boiling point DHv,b (cal/mol)	Reference
Benzene	7.81E+01	5.89E+01	8.80E-02	9.80E-06	1.79E+03	2.27E-01	5.54E-03	2 50E+01	3.53E+02	5.62E+02	7.34E+03	From USEPA's VI model (USEPA, 2004b)
Ethylbenzene	1.06E+02	3.63E+02	7.50E-02	7.80E-06	1.69E+02	3.22E-01	7.86E-03	2 50E+01	4.09E+02	6.17E+02	8.50E+03	From USEPA's VI model (USEPA, 2004b)
TPH (C_5-C_8 Aliphatics)	9.30E+01	2.27E+03	8.00E-02	1.00E-05	1.10E+01	6.80E+01	1.66E+00	2.50E+01	3.42E+02	5.08E+02	6.90E+03	MassDEP (2002), where available; otherwise values for hexane from USEPA (2004b) were used as surrogates

Notes:
COPC = Chemical of Potential Concern
USEPA = United States Environmental Protection Agency
VI = Vapor Intrusion

Massachusetts Department of Environmental Protec ion (MassDEP). 2002. Characterizing Risks Posed by Petroleum Contaminated Sites: Implementation of the MADEP VPH/EPH Approach. Final Policy. October 31. Available online at: http://www.mass.gov/dep/cleanup/laws/02-411.pdf

U.S. Environmental Protection Agency (USEPA). 2004b. 3 Phase System Model and Soil Gas Model. February. Available online at http://www.epa gov/oswer/riskassessment/airmodel/johnson_ettinger.htm

APPENDIX I-3
ESTIMATED INDOOR AIR EXPOSURE POINT CONCENTRATIONS
SOUTH AND NORTH PIT EXPOSURE AREAS
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

Exposure Point	Chemical of Potential Concern	Soil Gas Concentration	Units	Predicted Indoor Air Concentration	Units
Adult Video Store	Benzene	360000	ug/m3	29.52	ug/m3
Building	Ethylbenzene	42000	ug/m3	3.42	ug/m3
SG-22	TPH (C5-C8 Aliphatics)	7200000	ug/m3	588.04	ug/m3
Adult Video Store	TPH (C5-C8 Aliphatics)	580000	ug/m3	47.37	ug/m3
Building					
SG-13					
Robert's Equipment	Benzene	540000	ug/m3	44.29	ug/m3
Building	Ethylbenzene	32000	ug/m3	2.61	ug/m3
SG-33	TPH (C5-C8 Aliphatics)	9700000	ug/m3	792.21	ug/m3

APPENDIX I-4-1
SG-22 - Benzene
DATA INPUT SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

SG-SCREEN
Version 3.1; 02/04

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
71432	3.60E+05			Benzene

MORE ↓

ENTER Dep h below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	22	SICL		

MORE ↓

Lookup Soil Parameters

ENTER Vadose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SICL	1.37	0.482	0.198	

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	25	25	250

APPENDIX-I-4-2
SG-22 - Benzene
PHYSICAL/CHEMICAL SUMMARY SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $DH_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Molecular weight, MW (g/mol)
8.80E-02	9.80E-06	5.54E-03	25	7,342	353.24	562.16	78.11

APPENDIX I-4-3
SG-22 - Benzene
EXPOSURE POINT CONCENTRATION
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, q_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. (ug/m^3)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137	0.284	0.276	1.74E-09	0.838	1.46E-09	4,000	3.60E+05	1.69E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, h (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $DH_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} ($atm-m^3/mol$)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, m_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	4.00E-04	15	7,998	4.83E-03	1.99E-01	1.79E-04	5.73E-03	137

Convection path length, L_p (cm)	Source vapor conc., C_{source} (ug/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, a (unitless)	**Infinite source bldg. conc., $C_{building}$ (ug/m^3)**
15	3.60E+05	0.10	1.43E+00	5.73E-03	4.00E+02	5.24E+02	8.20E-05	**2.95E+01**

APPENDIX I-4-4
SG-22 - Ethylbenzene
DATA INPUT SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

SG-SCREEN
Version 3.1; 02/04

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
100414	4.20E+04			Ethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	22	SICL		

MORE ↓

Lookup Soil Parameters

ENTER Vadose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SICL	1.37	0.482	0.198	

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	25	25	250

APPENDIX-I-4-5
SG-22 - Ethylbenzene
PHYSICAL/CHEMICAL SUMMARY SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $DH_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Molecular weight, MW (g/mol)
7.50E-02	7.80E-06	7.86E-03	25	8,501	409.34	617.20	106.17

APPENDIX I-4-6
SG-22 - Ethylbenzene
EXPOSURE POINT CONCENTRATION
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, q_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. (ug/m^3)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137	0.284	0.276	1.74E-09	0.838	1.46E-09	4,000	4.20E+04	1.69E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, h (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $DH_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, m_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_V (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	4.00E-04	15	10,017	6.62E-03	2.73E-01	1.79E-04	4.88E-03	137

Convection path length, L_p (cm)	Source vapor conc., C_{source} (ug/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, a (unitless)	**Infinite source bldg. conc., $C_{building}$ (ug/m^3)**
15	4.20E+04	0.10	1.43E+00	4.88E-03	4.00E+02	1.55E+03	8.14E-05	**3.42E+00**

APPENDIX I-4-7
SG-22 - TPH (C5-C8 Aliphatics)
DATA INPUT SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

SG-SCREEN
Version 3.1; 02/04

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
C5-C8	7.20E+06			C5-C8 Aliphatics

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	22	SICL		

MORE ↓

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SICL	1.37	0.482	0.198	

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	25	25	250

APPENDIX-I-4-8
SG-22 - TPH (C5-C8 Aliphatics)
PHYSICAL/CHEMICAL SUMMARY SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $DH_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Molecular weight, MW (g/mol)
8.00E-02	1.00E-05	1.66E+00	25	6,895	341.70	508.00	93.00

APPENDIX I-4-9
SG-22 -TPH (C5-C8 Aliphatics)
EXPOSURE POINT CONCENTRATION
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, q_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. (ug/m^3)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137	0.284	0.276	1.74E-09	0.838	1.46E-09	4,000	7.20E+06	1.69E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, h (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $DH_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} ($atm-m^3/mol$)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, m_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_V (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	4.00E-04	15	7,576	1.46E+00	6.03E+01	1.79E-04	5.21E-03	137

Convection path length, L_p (cm)	Source vapor conc., C_{source} (ug/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, a (unitless)	**Infinite source bldg. conc., $C_{building}$ (ug/m^3)**
15	7.20E+06	0.10	1.43E+00	5.21E-03	4.00E+02	9.81E+02	8.17E-05	**5.88E+02**

APPENDIX I-4-10
SG-13 - TPH (C5-C8 Alipha ics)
DATA INPUT SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

SG-SCREEN
Version 3.1; 02/04

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
C5-C8	5 80E+05			C5-C8 Aliphatics

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	22	SICL		

MORE ↓

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, $\rho_b{}^A$ (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, $\theta_w{}^V$ (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SICL	1.37	0.482	0.198	

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	25	25	250

APPENDIX-I-4-11
SG-13 - TPH (C5-C8 Aliphatics)
PHYSICAL/CHEMICAL SUMMARY SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $DH_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Molecular weight, MW (g/mol)
8.00E-02	1.00E-05	1.66E+00	25	6,895	341.70	508.00	93.00

APPENDIX I-4-12
SG-13 -TPH (C5-C8 Aliphatics)
EXPOSURE POINT CONCENTRATION
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, q_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. (ug/m^3)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137	0.284	0.276	1.74E-09	0.838	1.46E-09	4,000	5.80E+05	1.69E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, h (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $DH_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} ($atm\text{-}m^3/mol$)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, m_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	4.00E-04	15	7,576	1.46E+00	6.03E+01	1.79E-04	5.21E-03	137

Convection path length, L_p (cm)	Source vapor conc., C_{source} (ug/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, a (unitless)	**Infinite source bldg. conc., $C_{building}$ (ug/m^3)**
15	5.80E+05	0.10	1.43E+00	5.21E-03	4.00E+02	9.81E+02	8.17E-05	**4.74E+01**

APPENDIX I-4-13
SG-33 - Benzene
DATA INPUT SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

SG-SCREEN
Version 3.1; 02/04

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
71432	5.40E+05			Benzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	22	SICL		

MORE ↓

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SICL	1.37	0.482	0.198	

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	25	25	250

APPENDIX-I-4-14
SG-33 - Benzene
PHYSICAL/CHEMICAL SUMMARY SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $DH_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Molecular weight, MW (g/mol)
8.80E-02	9.80E-06	5.54E-03	25	7,342	353.24	562.16	78.11

APPENDIX I-4-15
SG-33 - Benzene
EXPOSURE POINT CONCENTRATION
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, q_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. (ug/m^3)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137	0.284	0.276	1.74E-09	0.838	1.46E-09	4,000	5.40E+05	1.69E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, h (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $DH_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} ($atm-m^3/mol$)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, m_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_V (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	4.00E-04	15	7,998	4.83E-03	1.99E-01	1.79E-04	5.73E-03	137

Convection path length, L_p (cm)	Source vapor conc., C_{source} (ug/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^I)$ (unitless)	Infinite source indoor attenuation coefficient, a (unitless)	**Infinite source bldg. conc., $C_{building}$ (ug/m^3)**
15	5.40E+05	0.10	1.43E+00	5.73E-03	4.00E+02	5.24E+02	8.20E-05	**4.43E+01**

APPENDIX I-4-16
SG-33- Ethy benzene
DATA INPUT SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

SG-SCREEN
Version 3.1; 02/04

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
100414	3.20E+04			Ethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	22	SICL		

MORE ↓

Lookup Soil Parameters

ENTER Vadose zone SCS soil type	ENTER Vadose zone soil dry bu k density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SICL	1.37	0.482	0.198	

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)

APPENDIX-I-4-17
SG-33 - Ethylbenzene
PHYSICAL/CHEMICAL SUMMARY SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $DH_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Molecular weight, MW (g/mol)
7.50E-02	7.80E-06	7.86E-03	25	8,501	409.34	617.20	106.17

APPENDIX I-4-18
SG-33- Ethylbenzene
EXPOSURE POINT CONCENTRATION
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, q_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. (ug/m^3)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137	0.284	0.276	1.74E-09	0.838	1.46E-09	4,000	3.20E+04	1.69E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, h (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $DH_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} ($atm-m^3/mol$)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, m_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_V (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	4.00E-04	15	10,017	6.62E-03	2.73E-01	1.79E-04	4.88E-03	137

Convection path length, L_p (cm)	Source vapor conc., C_{source} (ug/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, a (unitless)	**Infinite source bldg. conc., $C_{building}$ (ug/m^3)**
15	3.20E+04	0.10	1.43E+00	4.88E-03	4.00E+02	1.55E+03	8.14E-05	**2.61E+00**

APPENDIX I-4-19
SG-33 - TPH (C5-C8 Aliphatics)
DATA INPUT SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

SG-SCREEN
Version 3.1; 02/04

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
C5-C8	9.70E+06			C5-C8 Aliphatics

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	22	SICL		

MORE ↓

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SICL	1.37	0.482	0.198	

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	25	25	250

APPENDIX-I-4-20
SG-33 - TPH (C5-C8 Aliphatics)
PHYSICAL/CHEMICAL SUMMARY SHEET
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $DH_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Molecular weight, MW (g/mol)
8.00E-02	1.00E-05	1.66E+00	25	6,895	341.70	508.00	93.00

APPENDIX I-4-21
SG-33 -TPH (C5-C8 Aliphatics)
EXPOSURE POINT CONCENTRATION
Baseline Human Health Risk Assessment
Brine Service Company Superfund Site

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137	0.284	0.276	1.74E-09	0.838	1.46E-09	4,000	9.70E+06	1.69E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_V (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	4.00E-04	15	7,576	1.46E+00	6.03E+01	1.79E-04	5.21E-03	137

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe^f) (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	**Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)**
15	9.70E+06	0.10	1.43E+00	5.21E-03	4.00E+02	9.81E+02	8.17E-05	**7.92E+02**

APPENDIX J-1
LEACHING FROM SOIL TO GROUNDWATER: LEAD AND MERCURY
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

$$^{GW}Soil = \frac{(Groundwater\ PCL^{*}) \cdot LDF}{K_{sw}} \cdot \frac{L_2}{L_1}$$

$$K_{sw}\left[\frac{(mg/L - H_2O)}{(mg/kg - soil)}\right] = \frac{\rho_b}{\theta_{ws} + K_d \rho_b + H'\theta_{as}}$$

Parameter Definition	Reference	Parameter Symbol	Value	Units
Soil bulk density	Default	ρ_b	1.67	g-soil/cm^3-water
Volumetric water content of vadose zone soils	Default	θ_{ws}	0.16	cm^3water/cm^3soil
Volumetric air content of vadose zone soils	Default	θ_{as}	0.21	cm^3air/cm^3soil
Fraction of organic carbon in soil	Default	f_{oc}	0.0020	g-carbon/g-soil
Thickness of affected soil	Default	L_1	305	cm
Depth from top of affected soil to groundwater table	Default	L_2	305	cm
Dilution factor	30-acre default	LDF	10	unitless

Constituent of Potential Concern	CAS Number	H'[2] (Dimensionless)	Com/Ind $^{GW}GW_{Class\ 3}$ Tier 1 PCL[3] (mg/L)	Type	Log K_{oc} (cm^3 water / g carbon)	K_{oc} (cm^3 water / g carbon)	K_d[4,5] (cm3 water /g soil)	K_{sw}	Site-Specific Com/Ind $^{GW}Soil_{Class\ 3}$ PCL (mg/kg)
Lead	7439-92-1	0.0E+00	1.5E+00	a	Not applicable	Not applicable	2.3E+02	4.3E-03	3511
Mercury	7439-97-6	4.7E-01	2.0E-01	m	Not applicable	Not applicable	2.0E+02	5.0E-03	400

Notes:

1) Soil-to groundwater PCL Equations and default parameters were taken from TCEQ Tier 2 PCL Equations, dated March 24, 2000.
2) Physical/Chemical factors (H', log koc) were taken from the Texas Risk Reduction Program (TRRP) Chemical/Physical Property Table, updated June 2012 (TCEQ, 2012b).
3) The commercial/industrial $^{GW}GW_{Class\ 3}$ Tier 1 PCLs were obtained from TRRP, Table 3, updated June 2012.
4) The K_d for mercury was taken the TRRP Rule, Figure 30 TAC 350.73(e)(1)(C); and assuming an average site-specific soil pH of 8.74.
5) The K_d for lead was taken from Figure 30 TAC 350.73(e)(1)(A); loamy soil pH 5 - 9 (pH data are provided in Appendix J-3).

APPENDIX J-2
LEACHING FROM SOIL TO GROUNDWATER: SELENIUM
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

$$^{GW}Soil = \frac{(Groundwater\ PCL^{*}) \cdot LDF}{K_{sw}} \cdot \frac{L_2}{L_1}$$

$$K_{sw}\left[\frac{(mg/L - H_2O)}{(mg/kg - soil)}\right] = \frac{\rho_b}{\theta_{ws} + K_d \rho_b + H'\theta_{as}}$$

Parameter Definition	Reference	Parameter Symbol	Value	Units
Soil bulk density	Default	ρ_b	1.67	g-soil/cm^3-water
Volumetric water content of vadose zone soils	Default	θ_{ws}	0.16	cm^{3}water/cm^{3}soil
Volumetric air content of vadose zone soils	Default	θ_{as}	0.21	cm^{3}air/cm^{3}soil
Fraction of organic carbon in soil	Default	f_{oc}	0.0020	g-carbon/g-soil
Thickness of affected soil	Site-specific[5]	L_1	152	cm
Depth from top of affected soil to groundwater table	Site-specific[6]	L_2	305	cm
Dilution factor	30-acre default	LDF	10	unitless

Constituent of Potential Concern	CAS Number	H'[2] (Dimensionless)	Com/Ind $^{GW}GW_{Class\ 3}$ Tier 1 PCL[3] (mg/L)	Type	Log K_{oc} (cm^3 water / g carbon)	K_{oc} (cm^3 water / g carbon)	K_d[4] (cm3 water /g soil)	K_{sw}	Site-Specific Com/Ind $^{GW}Soil_{Class\ 3}$ PCL (mg/kg)
Selenium	7782-49-2	0.0E+00	5.0E+00	m	Not applicable	Not applicable	2.2E+00	4.4E-01	230

Notes:

1) Soil-to groundwater PCL Equations and default parameters were taken from TCEQ Tier 2 PCL Equations, dated March 24, 2000.
2) Physical/Chemical factors (H', log koc) were taken from the Texas Risk Reduction Program (TRRP) Chemical/Physical Property Table, updated June 2012 (TCEQ, 2012b)
3) The commercial/industrial $^{GW}GW_{Class\ 3}$ Tier 1 PCLs were obtained from TRRP, Table 3, updated June 2012.
4) The K_d for selenium was taken the TRRP Rule, Figure 30 TAC 350.73(e)(1)(C); and assuming an average site-specific soil pH of 8.74.
5) Depth to bottom of affected soil (based on data for selenium only): 5 feet (152 cm).
6) Average depth to UTU: 10 feet (305 cm).

APPENDIX J-3
SOIL pH DATA
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

		Analyte CAS No. Units	pH PH pH units
Location	Depth Interval	Sample Date	
EDBSS01	0-0.5 ft	10/5/2010	8.03
EDBSS01	0-0.5 ft	10/5/2010	8.24
EDBSS02	0-0.5 ft	10/5/2010	8.06
EDBSS04	0-0.5 ft	10/5/2010	8.45
EDNSS01	0-0.5 ft	11/17/2010	8.57
ENSB01	1-2 ft	11/8/2010	7.08
ENSB01	2-3 ft	11/8/2010	8.24
ENSB01	6-7 ft	11/8/2010	8.72
ENSB02	1-2 ft	11/8/2010	8.33
ENSB02	2-3 ft	11/8/2010	9.28
ENSB02	2-3 ft	11/8/2010	8.68
ENSB02	6-7 ft	11/8/2010	9.38
ENSB03	1-2 ft	11/8/2010	8.74
ENSB03	2-3 ft	11/8/2010	8.93
ENSB03	5-6 ft	11/8/2010	8.13
ENSB04	1-2 ft	12/9/2010	8.84
ENSB04	3-4 ft	12/9/2010	8.92
ENSB04	9-10 ft	12/9/2010	9.55
ENSB05	1-2 ft	11/8/2010	9.21
ENSB05	2-3 ft	11/8/2010	9.43
ENSB05	7-8 ft	11/8/2010	9.61
ENSB05	7-8 ft	11/8/2010	9.72
ENSB06	1-2 ft	11/9/2010	8.99
ENSB06	4-5 ft	11/9/2010	8.46
ENSB06	9-10 ft	11/9/2010	9.01
ENSB07	1-2 ft	12/8/2010	8.19
ENSB07	3-4 ft	12/8/2010	8.01
ENSB07	9-10 ft	12/8/2010	9.14
ENSB08	1-2 ft	11/9/2010	9.09
ENSB08	2-3 ft	11/9/2010	9
ENSB08	9-10 ft	11/9/2010	9.42
ENSB09	1-2 ft	11/9/2010	8.75
ENSB09	1-2 ft	11/9/2010	8.73
ENSB09	2-3 ft	11/9/2010	9.14
ENSB09	9-10 ft	11/9/2010	9.01
ENSS01	0-0.5 ft	10/11/2010	7.68
ENSS02	0-0.5 ft	10/11/2010	8.73
ENSS03	0-0.5 ft	10/11/2010	8.45
ENSS03	0-0.5 ft	10/11/2010	8.37
ENSS04	0-0.5 ft	10/11/2010	8.45
ENSS05	0-0.5 ft	10/11/2010	8.49
ENSS06	0-0.5 ft	10/11/2010	8.47
ENSS07	0-0.5 ft	10/11/2010	8.16
ENSS08	0-0.5 ft	10/11/2010	7.86
ESSB02	1-2 ft	11/5/2010	8.74
ESSB02	2-3 ft	11/5/2010	8.59
ESSB02	6-7 ft	11/5/2010	7.89
ESSB03	1-2 ft	12/9/2010	8.05
ESSB03	1-2 ft	12/9/2010	7.46
ESSB03	2-3 ft	12/9/2010	8
ESSB03	7-8 ft	12/9/2010	8.58
ESSB04	1-2 ft	11/5/2010	8.48
ESSB04	2-3 ft	11/5/2010	8.06
ESSB04	7-8 ft	11/5/2010	9.72
ESSB07	1-2 ft	12/8/2010	8.05
ESSB07	2-3 ft	12/8/2010	9.05
ESSB07	9-10 ft	12/8/2010	9.15
ESSS01	0-0.5 ft	10/12/2010	8.55
ESSS02	0-0.5 ft	10/12/2010	8.34
ESSS03	0-0.5 ft	10/12/2010	8.17
ESSS04	0-0.5 ft	10/12/2010	8.32
ESSS05	0-0.5 ft	10/12/2010	8.02
ESSS05	0-0.5 ft	10/12/2010	8.08
ESSS06	0-0.5 ft	10/12/2010	7.8
ESSS07	0-0.5 ft	10/12/2010	7.53
ESSS08	0-0.5 ft	10/12/2010	8.07
NPSB01	1-2 ft	11/11/2010	8.88
NPSB01	2-3 ft	11/11/2010	8.99
NPSB01	10-11 ft	11/11/2010	9.3
NPSB02	1-2 ft	11/11/2010	8.76
NPSB02	4-5 ft	11/11/2010	9.01
NPSB02	5-6 ft	11/11/2010	9.1

APPENDIX J-3
SOIL pH DATA
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

		Analyte CAS No. Units	pH PH pH units
Location	Depth Interval	Sample Date	
NPSB03	1-2 ft	11/11/2010	8.5
NPSB03	4-5 ft	11/11/2010	8.78
NPSB03	11-12 ft	11/11/2010	9.07
NPSB04	1-2 ft	11/10/2010	8.5
NPSB04	1-2 ft	11/10/2010	8.02
NPSB04	2-3 ft	11/10/2010	8.44
NPSB04	9-10 ft	11/10/2010	9.33
NPSB05	1-2 ft	11/11/2010	8.51
NPSB05	4-5 ft	11/11/2010	8.69
NPSB05	9-10 ft	11/11/2010	9.05
NPSB06	1-2 ft	11/10/2010	9.04
NPSB06	2-3 ft	11/10/2010	8.04
NPSB06	2-3 ft	11/10/2010	9.01
NPSB06	7-8 ft	11/10/2010	9.23
NPSB07	1-2 ft	11/9/2010	9.11
NPSB07	4-5 ft	11/9/2010	8.51
NPSB07	5-6 ft	11/9/2010	9.16
NPSB08	1-2 ft	11/10/2010	9.23
NPSB08	2-3 ft	11/10/2010	8.32
NPSB08	9-10 ft	11/10/2010	9.56
NPSB09	1-2 ft	11/10/2010	9.15
NPSB09	2-3 ft	11/10/2010	8.89
NPSB09	10-11 ft	11/10/2010	9.11
NPSB12	7.5-8.5 ft	1/25/2012	9.92
NPSL10	10-11 ft	1/12/2012	8.84
NPSS01	0-0.5 ft	10/12/2010	7.68
NPSS02	0-0.5 ft	10/13/2010	8.49
NPSS03	0-0.5 ft	10/12/2010	7.69
NPSS04	0-0.5 ft	10/13/2010	8.37
NPSS05	0-0.5 ft	10/13/2010	7.91
NPSS06	0-0.5 ft	10/13/2010	7.65
NPSS07	0-0.5 ft	10/13/2010	7.05
NPSS08	0-0.5 ft	10/13/2010	8.33
NPSS08	0-0.5 ft	10/13/2010	8.34
SPSB01	1-2 ft	12/2/2010	8.58
SPSB01	2-3 ft	12/2/2010	10.7
SPSB02	1-2 ft	12/2/2010	8.26
SPSB02	2-3 ft	12/2/2010	7.85
SPSB02	2-3 ft	12/2/2010	8.01
SPSB02	5-6 ft	12/2/2010	8.98
SPSB02	10-11 ft	12/2/2010	9.34
SPSB03	1-2 ft	12/1/2010	8.14
SPSB03	2-3 ft	12/1/2010	7.78
SPSB03	13-14 ft	12/1/2010	9.32
SPSB04	1-2 ft	12/2/2010	8.23
SPSB04	3-4 ft	12/2/2010	9.58
SPSB04	15-16 ft	12/2/2010	9.43
SPSB05	1-2 ft	12/3/2010	8.48
SPSB05	2-3 ft	12/3/2010	8.69
SPSB05	13-14 ft	12/3/2010	9.98
SPSB05	13-14 ft	12/3/2010	10.6
SPSB06	1-2 ft	12/3/2010	10.4
SPSB06	2-3 ft	12/3/2010	8.06
SPSB06	13-14 ft	12/3/2010	10.4
SPSB07	1-2 ft	12/1/2010	8.81
SPSB07	3-4 ft	12/1/2010	8.57
SPSB07	12-13 ft	12/1/2010	11
SPSB08	1-2 ft	12/1/2010	7.66
SPSB08	3-4 ft	12/1/2010	7.67
SPSB08	7-8 ft	12/1/2010	9.14
SPSB09	1-2 ft	11/30/2010	9.25
SPSB09	1-2 ft	11/30/2010	9.16
SPSB09	2-3 ft	11/30/2010	9.26
SPSB09	13-14 ft	11/30/2010	9.64
SPSB10	1-2 ft	11/30/2010	8.59
SPSB10	3-4 ft	11/30/2010	8.8
SPSB10	5-6 ft	11/30/2010	9.15
SPSB10	13-14 ft	11/30/2010	8.98
SPSB11	1-2 ft	11/30/2010	9.64
SPSB11	3-4 ft	11/30/2010	9.19
SPSB11	11-12 ft	11/30/2010	9.02
SPSL01	7-13.5 ft	12/2/2010	8.15

APPENDIX J-3
SOIL pH DATA
BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

		Analyte CAS No. Units	pH PH pH units
Location	Depth Interval	Sample Date	
SPSL06	16-19.5 ft	12/3/2010	10.2
SPSS01	0-0.5 ft	10/14/2010	8.17
SPSS02	0-0.5 ft	10/13/2010	8.71
SPSS03	0-0.5 ft	10/14/2010	8.39
SPSS03	0-0.5 ft	10/14/2010	8.24
SPSS04	0-0.5 ft	10/14/2010	8.35
SPSS05	0-0.5 ft	10/14/2010	8.33
SPSS06	0-0.5 ft	10/13/2010	7.9
SPSS07	0-0.5 ft	10/13/2010	9.06
SPSS08	0-0.5 ft	10/14/2010	8.4
WSB01	1-2 ft	11/1/2010	9.06
WSB01	4-5 ft	11/1/2010	9.38
WSB01	4-5 ft	11/1/2010	9.38
WSB01	15-16 ft	11/1/2010	9.31
WSB02	0-1 ft	11/3/2010	9.15
WSB02	1-2 ft	11/3/2010	9.1
WSB02	3-4 ft	12/2/2010	8.46
WSB03	1-2 ft	12/6/2010	9.22
WSB03	2-3 ft	12/6/2010	9.09
WSB03	9-10 ft	12/6/2010	8.58
WSB04	1-2 ft	11/2/2010	9.04
WSB04	4-5 ft	11/2/2010	8.62
WSB04	14-15 ft	11/2/2010	9.02
WSB04	14-15 ft	11/2/2010	9.34
WSB05	1-2 ft	11/3/2010	9.04
WSB05	4-5 ft	11/3/2010	9.18
WSB05	11-12 ft	11/3/2010	9.08
WSB06	1-2 ft	12/6/2010	9.09
WSB06	2-3 ft	12/6/2010	8.34
WSB06	10-11 ft	12/6/2010	8.3
WSB07	1-2 ft	11/2/2010	9.3
WSB07	4-5 ft	11/2/2010	8.78
WSB07	10-11 ft	11/2/2010	9.68
WSB08	1-2 ft	11/2/2010	9.13
WSB08	1-2 ft	11/2/2010	9.3
WSB08	2-3 ft	11/2/2010	9.09
WSB08	9-10 ft	11/2/2010	9.32
WSB09	1-2 ft	12/7/2010	8.6
WSB09	3-4 ft	12/7/2010	8.8
WSB09	11-12 ft	12/7/2010	9.19
WSS01	0-0.5 ft	10/8/2010	8.64
WSS02	0-0.5 ft	10/7/2010	8.39
WSS03	0-0.5 ft	10/8/2010	8.53
WSS04	0-0.5 ft	10/7/2010	8.49
WSS05	0-0.5 ft	10/7/2010	8.35
WSS06	0-0.5 ft	10/8/2010	8.62
WSS07	0-0.5 ft	10/7/2010	8
WSS08	0-0.5 ft	10/8/2010	7.68

Maximum pH	11
Minimum pH	7.05
Average pH	8.74

Soil Analytical Data Summary
Background Samples
Brine Service Company Superfund Site

	Sample Location		BGSS01	BGSS02	BGSS03	BGSS04	BGSS05	BGSS06	BGSS06	BGSS07	BGSS08	BGSS09	BGSS10	BGSS11	BGSS12	BGSS13
	Sample Depth		1-2 ft	1-2 ft	0-0.5 ft	1-2 ft	1-2 ft	0-0.5 ft	0-0.5 ft	1-2 ft	1-2 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	0-0.5 ft
	Sample Date		3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012
Analyte	CAS No.	Units														
METALS																
Aluminum	7429-90-5	mg/kg	10300	7230	2180	6080	1640	1890	1820	1800	8790	1400	1430	3180	11400	1150
Antimony	7440-36-0	mg/kg	<0.2	<0.22	<0.19	<0.21	<0.19	<0.2	<0.18	<0.2	<0.21	<0.21	<0.2	<0.2	<0.2	<0.2
Arsenic	7440-38-2	mg/kg	2.28	1.66	1.27	1.21	1.18	1.19	1.12	1.53	1.56	0.833	0.983	1.35	1.79	0.747
Barium	7440-39-3	mg/kg	26.6	51.5	25.9	35.7	10.3	35.4	41.1	19	18.2	23.4	19.4	51.7	49	23.2
Beryllium	7440-41-7	mg/kg	0.552	0.366 J	0.136 J	0.313 J	0.134 J	0.132 J	0.141 J	0.13 J	0.426 J	0.112 J	0.0911 J	0.168 J	0.553	0.0839 J
Cadmium	7440-43-9	mg/kg	0.0643 J	0.0818 J	1.02	0.0735 J	<0.047	1.25	1.44	0.948	0.085 J	1.06	0.552	1.42	<0.05	0.749
Chromium	7440-47-3	mg/kg	5.45	4.15	2.06	3.51	1.64	2.57	2.54	1.94	4.89	2.04	1.62	3.14	6.04	1.63
Cobalt	7440-48-4	mg/kg	2.42	1.08	0.967	1.51	1.11	1.55	1.49	0.998	0.963	1.13	0.788	1.21	3.19	0.774
Copper	7440-50-8	mg/kg	2.83	2	3.43	2.1	1.13	4.58	4.97	3.11	1.68	4	2.25	5.92	3.35	2.72
Lead	7439-92-1	mg/kg	6.05	4.4	13.7	3.63	2.83	16.3	18.3	8.81	4.57	16.9	6.3	16.5	5.22	9.63
Manganese	7439-96-5	mg/kg	38.1	32.7	48.8	43.3	66.2	113	116	59.6	22	72.9	44.8	65.6	45.8	55.8
Nickel	7440-02-0	mg/kg	3.98	2.7	1.38	2.57	1.06	1.42	1.51	1.23	2.69	0.996	0.968	2.11	4.31	1.07
Selenium	7782-49-2	mg/kg	0.89	0.772	0.31 J	0.581	0.323 J	0.721	0.516	0.415 J	0.563	0.412 J	0.376 J	0.549	0.887	0.371 J
Silver	7440-22-4	mg/kg	<0.079	<0.087	<0.075	<0.082	<0.075	<0.081	0.0792 J	<0.079	<0.086	<0.084	<0.08	0.0828 J	<0.08	<0.08
Thallium	7440-28-0	mg/kg	0.0951 J	<0.076	<0.066	0.119 J	<0.066	<0.071	0.0923 J	<0.069	0.0777 J	<0.073	<0.07	<0.071	0.107 J	<0.07
Vanadium	7440-62-2	mg/kg	11.2	9.01	4.79	6.13	4.59	5.23	5.02	5.14	8.56	4.06	4.1	6.62	10.8	3.84
Zinc	7440-66-6	mg/kg	16.4	14.8	77.4	13.9	4.65	89.2	97.8	54.4	13.9	71.3	37.6	102	17	52
Mercury	7439-97-6	mg/kg	0.00841	0.01	0.0445	0.00827	0.00671	0.0334	0.0289	0.0251	0.0242	0.0444	0.0135	0.0193	0.00658	0.0269
Cyanide	57-12-5	mg/kg	<0.68	<0.71	<0.64	<0.66	<0.63	<0.64	<0.62	<0.63	<0.7	<0.66	1.56 J	<0.66	<0.68	<0.65
PESTICIDES AND PCBS																
4,4´-DDD	72-54-8	mg/kg	<0.00056	<0.00059	<0.00053	<0.00055	0.0019 J	<0.00054	<0.00051	<0.00052	<0.00058	<0.00055	<0.00054	<0.00055	<0.00057	<0.00054
4,4´-DDE	72-55-9	mg/kg	<0.00056	<0.00059	<0.00053	<0.00055	0.001 J	<0.00054	<0.00051	<0.00052	<0.00058	<0.00055	0.009	<0.00055	<0.00057	<0.00054
4,4´-DDT	50-29-3	mg/kg	<0.00056	<0.00059	<0.00053	<0.00055	0.0042	<0.00054	<0.00051	<0.00052	<0.00058	<0.00055	<0.00054	<0.00055	<0.00057	<0.00054
Aldrin	309-00-2	mg/kg	<0.00034	<0.00035	<0.00032	<0.00033	<0.00031	<0.00032	<0.00031	<0.00031	<0.00035	<0.00033	<0.00032	<0.00033	<0.00034	<0.00032
alpha-BHC	319-84-6	mg/kg	<0.00034	<0.00035	<0.00032	<0.00033	<0.00031	<0.00032	<0.00031	<0.00031	<0.00035	<0.00033	<0.00032	<0.00033	<0.00034	<0.00032
alpha-Chlordane	5103-71-9	mg/kg	<0.00022	<0.00023	<0.00021	<0.00022	<0.00021	<0.00021	<0.00021	<0.00021	<0.00023	<0.00022	<0.00021	<0.00022	<0.00023	<0.00022
beta-BHC	319-85-7	mg/kg	<0.00034	<0.00035	<0.00032	<0.00033	<0.00031	<0.00032	<0.00031	<0.00031	<0.00035	<0.00033	<0.00032	<0.00033	<0.00034	<0.00032
delta-BHC	319-86-8	mg/kg	<0.00022	<0.00023	<0.00021	<0.00022	<0.00021	<0.00021	<0.00021	<0.00021	<0.00023	<0.00022	<0.00021	<0.00022	<0.00023	<0.00022
Dieldrin	60-57-1	mg/kg	<0.00056	<0.00059	<0.00053	<0.00055	<0.00052	<0.00054	<0.00051	<0.00052	<0.00058	<0.00055	<0.00054	<0.00055	<0.00057	<0.00054
Endosulfan I	959-98-8	mg/kg	<0.00034	<0.00035	<0.00032	<0.00033	<0.00031	<0.00032	<0.00031	<0.00031	<0.00035	<0.00033	<0.00032	<0.00033	<0.00034	<0.00032
Endosulfan II	33213-65-9	mg/kg	<0.00067	<0.0007	<0.00064	<0.00066	<0.00063	<0.00064	<0.00062	<0.00063	<0.0007	<0.00066	<0.00064	<0.00066	<0.00068	<0.00065
Endosulfan sulfate	1031-07-8	mg/kg	<0.00067	<0.0007	<0.00064	<0.00066	<0.00063	<0.00064	<0.00062	<0.00063	<0.0007	<0.00066	<0.00064	<0.00066	<0.00068	<0.00065
Endrin	72-20-8	mg/kg	<0.00067	<0.0007	<0.00064	<0.00066	<0.00063	<0.00064	<0.00062	<0.00063	<0.0007	<0.00066	<0.00064	<0.00066	<0.00068	<0.00065
Endrin aldehyde	7421-93-4	mg/kg	<0.00067	<0.0007	<0.00064	<0.00066	<0.00063	<0.00064	<0.00062	<0.00063	<0.0007	<0.00066	<0.00064	<0.00066	<0.00068	<0.00065
gamma-BHC	58-89-9	mg/kg	<0.00022	<0.00023	<0.00021	<0.00022	<0.00021	<0.00021	<0.00021	<0.00021	<0.00023	<0.00022	<0.00021	<0.00022	<0.00023	<0.00022
gamma-Chlordane	5103-74-2	mg/kg	<0.00022	<0.00023	<0.00021	<0.00022	<0.00021	<0.00021	<0.00021	<0.00021	<0.00023	<0.00022	<0.00021	<0.00022	<0.00023	<0.00022
Heptachlor	76-44-8	mg/kg	<0.00034	<0.00035	<0.00032	<0.00033	<0.00031	<0.00032	<0.00031	<0.00031	<0.00035	<0.00033	0.0017 J	<0.00033	<0.00034	<0.00032
Heptachlor epoxide	1024-57-3	mg/kg	<0.00034	<0.00035	<0.00032	<0.00033	0.0013 J	<0.00032	<0.00031	<0.00031	<0.00035	<0.00033	<0.00032	<0.00033	<0.00034	<0.00032
Methoxychlor	72-43-5	mg/kg	<0.0038	<0.004	<0.0036	<0.0038	<0.0036	<0.0036	<0.0035	<0.0036	<0.004	<0.0037	<0.0036	<0.0037	<0.0039	<0.0037
Toxaphene	8001-35-2	mg/kg	<0.0054	<0.0056	<0.0051	<0.0053	<0.005	<0.0051	<0.0049	<0.005	<0.0056	<0.0052	<0.0051	<0.0052	<0.0055	<0.0052
Aroclor 1016	12674-11-2	mg/kg	<0.0027	<0.0028	<0.0025	<0.0027	<0.0025	<0.0026	<0.0025	<0.0025	<0.0028	<0.0026	<0.0026	<0.0026	<0.0027	<0.0026
Aroclor 1221	11104-28-2	mg/kg	<0.0027	<0.0028	<0.0025	<0.0027	<0.0025	<0.0026	<0.0025	<0.0025	<0.0028	<0.0026	<0.0026	<0.0026	<0.0027	<0.0026
Aroclor 1232	11141-16-5	mg/kg	<0.0027	<0.0028	<0.0025	<0.0027	<0.0025	<0.0026	<0.0025	<0.0025	<0.0028	<0.0026	<0.0026	<0.0026	<0.0027	<0.0026
Aroclor 1242	53469-21-9	mg/kg	<0.0027	<0.0028	<0.0025	<0.0027	<0.0025	<0.0026	<0.0025	<0.0025	<0.0028	<0.0026	<0.0026	<0.0026	<0.0027	<0.0026
Aroclor 1248	12672-29-6	mg/kg	<0.0027	<0.0028	<0.0025	<0.0027	<0.0025	<0.0026	<0.0025	<0.0025	<0.0028	<0.0026	<0.0026	<0.0026	<0.0027	<0.0026
Aroclor 1254	11097-69-1	mg/kg	<0.0027	<0.0028	<0.0025	<0.0027	0.047	<0.0026	<0.0025	<0.0025	<0.0028	<0.0026	<0.0026	<0.0026	<0.0027	<0.0026
Aroclor 1260	11096-82-5	mg/kg	<0.002	<0.0021	<0.0019	<0.002	<0.0019	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019	<0.002	<0.002	<0.0019
SEMIVOLATILE ORGANIC COMPOUNDS																
1,1´-Biphenyl	92-52-4	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
1-Methylnaphthalene	90-12-0	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
2,4,5-Trichlorophenol	95-95-4	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
2,4,6-Trichlorophenol	88-06-2	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
2,4-Dimethylphenol	105-67-9	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
2,4-Dinitrophenol	51-28-5	mg/kg	<0.0037	<0.0039	<0.0035	<0.0036	<0.0035	<0.0035	<0.0034	<0.0035	<0.0038	<0.0036	<0.0035	<0.0036	<0.0037	<0.0036
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
2,6-Dinitrotoluene	606-20-2	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
2-Chloronaphthalene	91-58-7	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
2-Chlorophenol	95-57-8	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
2-Methylnaphthalene	91-57-6	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	0.0018 J	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
2-Methylphenol	95-48-7	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
2-Nitroaniline	88-74-4	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
2-Nitrophenol	88-75-5	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
3&4-Methylphenol	106-44-5	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect

Soil Analytical Data Summary
Background Samples
Brine Service Company Superfund Site

	Sample Location		BGSS01	BGSS02	BGSS03	BGSS04	BGSS05	BGSS06	BGSS06	BGSS07	BGSS08	BGSS09	BGSS10	BGSS11	BGSS12	BGSS13
	Sample Depth		1-2 ft	1-2 ft	0-0.5 ft	1-2 ft	1-2 ft	0-0.5 ft	0-0.5 ft	1-2 ft	1-2 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	0-0.5 ft
	Sample Date		3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012
Analyte	CAS No.	Units														
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
3-Nitroaniline	99-09-2	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
4-Chloroaniline	106-47-8	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
4-Nitroaniline	100-01-6	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
4-Nitrophenol	100-02-7	mg/kg	<0.0037	<0.0039	<0.0035	<0.0036	<0.0035	<0.0035	<0.0034	<0.0035	<0.0038	<0.0036	<0.0035	<0.0036	<0.0037	<0.0036
Acenaphthene	83-32-9	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Acenaphthylene	208-96-8	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Acetophenone	98-86-2	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Anthracene	120-12-7	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Benz(a)anthracene	56-55-3	mg/kg	<0.0018	<0.0019	0.0033 J	<0.0018	<0.0017	0.0061 J	0.0086	0.002 J	<0.0019	0.0075	0.002 J	0.0076	<0.0018	0.0036 J
Benzaldehyde	100-52-7	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Benzo(a)pyrene	50-32-8	mg/kg	<0.0018	<0.0019	0.004 J	<0.0018	<0.0017	0.0088	0.012	0.0021 J	<0.0019	0.0092	0.0027 J	0.01	<0.0018	0.0063 J
Benzo(b)fluoranthene	205-99-2	mg/kg	<0.0018	<0.0019	0.0054 J	<0.0018	<0.0017	0.0096	0.013	0.0037 J	<0.0019	0.011	0.0038 J	0.014	<0.0018	0.0085
Benzo(g,h,i)perylene	191-24-2	mg/kg	<0.0019	<0.002	0.0036 J	<0.0019	<0.0018	0.0086	0.012	0.0027 J	<0.002	0.0074	0.0035 J	0.011	<0.0019	0.0057 J
Benzo(k)fluoranthene	207-08-9	mg/kg	<0.0018	<0.0019	0.0024 J	<0.0018	<0.0017	0.0044 J	0.0055 J	<0.0017	<0.0019	0.0041 J	0.0022 J	0.0044 J	<0.0018	0.0031 J
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	<0.0018	<0.0019	0.0041 J	0.0079	<0.0017	0.0048 J	0.0073	<0.0017	<0.0019	0.0047 J	<0.0017	0.0097	<0.0018	0.0049 J
Butyl benzyl phthalate	85-68-7	mg/kg	<0.0032	<0.0033	0.0043 J	<0.0031	<0.0029	<0.003	<0.0029	<0.0029	<0.0033	<0.0031	<0.003	<0.0031	<0.0032	<0.003
Caprolactam	105-60-2	mg/kg	<0.0023	<0.0023	<0.0021	<0.0022	<0.0021	<0.0021	<0.0021	<0.0021	<0.0023	<0.0022	<0.0021	<0.0022	<0.0023	<0.0022
Carbazole	86-74-8	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Chrysene	218-01-9	mg/kg	<0.0018	<0.0019	0.0043 J	<0.0018	<0.0017	0.0084	0.011	0.002 J	<0.0019	0.011	0.003 J	0.012	<0.0018	0.0063 J
Dibenz(a,h)anthracene	53-70-3	mg/kg	<0.0023	<0.0023	<0.0021	<0.0022	<0.0021	0.003 J	0.0039 J	<0.0021	<0.0023	<0.0022	<0.0021	0.0031 J	<0.0023	<0.0022
Dibenzofuran	132-64-9	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Diethyl phthalate	84-66-2	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Dimethyl phthalate	131-11-3	mg/kg	<0.0023	<0.0023	<0.0021	<0.0022	<0.0021	<0.0021	<0.0021	<0.0021	<0.0023	<0.0022	<0.0021	<0.0022	<0.0023	<0.0022
Di-n-butyl phthalate	84-74-2	mg/kg	<0.0023	<0.0023	<0.0021	<0.0022	<0.0021	0.021	0.024	<0.0021	<0.0023	<0.0022	0.0033 J	0.011	<0.0023	<0.0022
Di-n-octyl phthalate	117-84-0	mg/kg	<0.0023	<0.0023	<0.0021	<0.0022	<0.0021	<0.0021	<0.0021	<0.0021	<0.0023	<0.0022	<0.0021	<0.0022	<0.0023	<0.0022
Fluoranthene	206-44-0	mg/kg	<0.0018	<0.0019	0.0055 J	<0.0018	<0.0017	0.0097	0.015	0.0032 J	<0.0019	0.012	0.0047 J	0.013	<0.0018	0.008
Fluorene	86-73-7	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Hexachlorobenzene	118-74-1	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Hexachlorobutadiene	87-68-3	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Hexachloroethane	67-72-1	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	<0.0018	<0.0019	0.003 J	<0.0018	<0.0017	0.0072	0.0086	0.0022 J	<0.0019	0.0065 J	0.0027 J	0.0095	<0.0018	0.0052 J
Isophorone	78-59-1	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Naphthalene	91-20-3	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
Nitrobenzene	98-95-3	mg/kg	<0.0018	<0.0019	<0.0017	<0.0018	<0.0017	<0.0017	<0.0016	<0.0017	<0.0019	<0.0017	<0.0017	<0.0017	<0.0018	<0.0017
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0023	<0.0023	<0.0021	<0.0022	<0.0021	<0.0021	<0.0021	<0.0021	<0.0023	<0.0022	<0.0021	<0.0022	<0.0023	<0.0022
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0023	<0.0023	<0.0021	<0.0022	<0.0021	<0.0021	<0.0021	<0.0021	<0.0023	<0.0022	<0.0021	<0.0022	<0.0023	<0.0022
Pentachlorophenol	87-86-5	mg/kg	<0.002	<0.0021	<0.0019	<0.002	<0.0019	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019	<0.002	<0.002	<0.0019
Phenanthrene	85-01-8	mg/kg	<0.0028	<0.0029	<0.0027	<0.0028	<0.0026	0.004 J	0.0054 J	<0.0026	<0.0029	0.0049 J	<0.0027	0.0051 J	<0.0028	0.0034 J
Phenol	108-95-2	mg/kg	<0.0023	<0.0023	<0.0021	<0.0022	<0.0021	<0.0021	<0.0021	<0.0021	<0.0023	<0.0022	<0.0021	<0.0022	<0.0023	<0.0022
Pyrene	129-00-0	mg/kg	<0.0018	<0.0019	0.0048 J	<0.0018	<0.0017	0.0098	0.014	0.0026 J	<0.0019	0.011	0.0037 J	0.014	<0.0018	0.0073

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			ESSB01	ESSB01	ESSB01	ESSB02	ESSB02	ESSB03	ESSB03	ESSB03	ESSB04	ESSB04	ESSB05	ESSB05	ESSB05	ESSB06	ESSB06	ESSB06	ESSB07	ESSB07	ESSB08
Depth Interval			1-2 ft	2-3 ft	6-7 ft	1-2 ft	2-3 ft	1-2 ft	1-2 ft	2-3 ft	1-2 ft	2-3 ft	1-2 ft	4-5 ft	15-16 ft	1-2 ft	2-3 ft	2-3 ft	1-2 ft	2-3 ft	1-2 ft
Sample Date			11/4/2010	11/4/2010	11/4/2010	11/5/2010	11/5/2010	12/9/2010	12/9/2010	12/9/2010	11/5/2010	11/5/2010	11/4/2010	11/4/2010	11/4/2010	11/3/2010	11/3/2010	11/3/2010	12/8/2010	12/8/2010	11/4/2010
Analyte	CAS No.	Units																			
METALS																					
Aluminum	7429-90-5	mg/kg	13000	11000	12300	12800	11600	17700	13900	17900	9990	10000	14000	11500	12000	7360	9040	9770	11400	10300	10600
Antimony	7440-36-0	mg/kg	<0.28	<0.29	<0.28	<0.27	<0.27	<1.3	<1.3	<1.3	0.377 J	0.464 J	<0.27	<0 28	<0.31	<0.27	<0.26	<0 26	<0.27	<0.27	<0 3
Arsenic	7440-38-2	mg/kg	3	2.82	3.53	5.19	2.45	10.2	10.4	9.82	14.4	9.95	4.91	3.52	4.66	6.43	3.08	3.47	4.08	4.7	6.2
Barium	7440-39-3	mg/kg	112	96.2	229	216	102	1240	1140	237	225	623	2070	373	294	249	524	637	582	623	210
Beryllium	7440-41-7	mg/kg	0.556	0.562 J	0.604	0.6	0.548	0.579 J	0.524 J	0.835 J	0.553	0.53 J	0.483 J	0.552 J	0.938	0.397 J	0.481 J	0.65	0.592	0.533 J	0.709
Cadmium	7440-43-9	mg/kg	0.177 J	0.202 J	0.144 J	0.23 J	0.164 J	13.1	13	15.1	10.7	8.29	0.449 J	0.22 J	0.174 J	8.19	0.268 J	0.384 J	0.737	0.258 J	0.193 J
Chromium	7440-47-3	mg/kg	6.9	6.39	6.89	8.23	17.3	216	234	18.8	6.85	49.2	92.1	24.3	6.92	5.99	13	13.4	7.29	14.7	8.76
Cobalt	7440-48-4	mg/kg	3.97	4.1	4.81	8.33	3.15	8.61	7.68	4.71	5.32	5.9	5.7	3.51	4.15	2.94	3.02	3.63	4.74	3.77	5.15
Copper	7440-50-8	mg/kg	7.03	7.5	5.37	8.39	4.87	123	114	62.7	234	95.2	54.2	11.6	6.36	37.6	21.5	13.6	8.36	10.2	7.11
Lead#	7439-92-1	mg/kg	11	10.3	8.48	25.7	8.59	232	254	134	151	145	81.8	20.2	10	101	28	32.7	17.2	25.4	11.7
Manganese	7439-96-5	mg/kg	289	267	244	374	168	324	297	263	377	263	164	176	119	216	169	128	317	265	311
Nickel	7440-02-0	mg/kg	7.23	6.91	6.5	9.32	5.12	12.9	13	10	9.93	10.2	7.28	6.5	8.03	5.16	5.76	6.76	6.46	6.2	8.22
Selenium	7782-49-2	mg/kg	0.765	0.729	0.79	0.82	0.839	1.9 J	2.11 J	2.67	1.74	2.83	0.991	1.04	1.1	3.77	1.88	1.61	0.956	0.985	1.51
Silver	7440-22-4	mg/kg	<0.044	0.0504 J	<0.045	<0.043	<0.043	1.47 J	1.13 J	1.98 J	0.647	0.706	0.217 J	0.0704 J	<0.05	0.692 J	<0.21	0.0495 J	0.0793 J	0.0559 J	<0.048 JL
Thallium	7440-28-0	mg/kg	0.166 J	0.217 J	0.178 J	0.174 J	0.164 J	<0.37	<0.37	<0.37	0.22 J	0.207 J	0.176 J	0.144 J	0.263 J	0.137 J	0.143 J	0.153 J	0.133 U	0.143 U	0.237 J
Vanadium	7440-62-2	mg/kg	10.4	9.29	17	22.1	18.6	27.7	25.4	25	15.7	17.7	13.6	15.8	13.8	11.8	15.9	13.2	14.9	16.4	19.6
Zinc	7440-66-6	mg/kg	23.3	31.1 JH	20.2	26.6	23.1	1960	1760	1840	2120	1460	115	30.1	26	551	71.5	71.7	73.2	37.6	30.4
Mercury#	7439-97-6	mg/kg	0.0149	0.0147	0.000351 J	0.0159	0.00913	2.95	3.77	1.55	4.6	4.2	2.22	0.116	0.021	23	0.121 J	0.214 J	2.81	1.75	0.0365
Cyanide	57-12-5	mg/kg	<0.7	<0.71	<0.73	<0.71	<0.72	<0.71	<0.59	<0.66	<0.64	<0.71	<0.66	<0.73	<0.8	2.34	2.96	5.24	<0.65	<0.64	<0.74
PESTICIDES and PCBs																					
4,4´-DDD	72-54-8	mg/kg	<0.00059	0.0059	0.007	<0.003	0.048 J	0.075	0.067	<0.00059	<0.0027	0.33 J	0.024 J	0.001 J	<0.00067	<0.0058	<0.0029	0.017 J	<0.0057	0.027 J	<0.00062
4,4´-DDE	72-55-9	mg/kg	<0.00059	<0.0006	0.0031 J	<0.003	0.094	<0.0059	<0.0058	<0.00059	<0.0027	0.092	<0.0028	<0.00061	<0.00067	<0.0058	<0.0029	<0.00058	<0.0057	<0.0056	<0.00062
4,4´-DDT	50-29-3	mg/kg	<0.00059	0.0053	0.0076	<0.003	<0.006	0.056	0.045	<0.00059	0.019	<0.006	0.027	<0.00061	<0.00067	<0.0058	<0.0029	<0.00058	<0.0057	0.036 J	<0.00062
Aldrin	309-00-2	mg/kg	<0.00036	<0.00036	<0.00037	<0.0018	<0.0036	<0.0035	<0.0035	<0.00035	<0.0016	<0.0036	<0.0017	<0.00037	<0.0004	<0.0035	<0.0018	<0.00035	<0.0034	<0.0034	<0.00037
alpha-BHC	319-84-6	mg/kg	<0.00036	<0.00036	<0.00037	<0.0018	0.033	<0.0035	<0.0035	<0.00035	<0.0016	<0.0036	<0.0017	<0.00037	<0.0004	<0.0035	<0.0018	<0.00035	<0.0034	<0.0034	<0.00037
alpha-Chlordane	5103-71-9	mg/kg	<0.00024	<0.00024	<0.00025	<0.0012	<0.0024	<0.0024	<0.0023	<0.00024	<0.0011	<0.0024	<0.0011	<0.00025	<0.00027	<0.0023	<0.0012	0.0037	<0.0023	<0.0022	<0.00025
beta-BHC	319-85-7	mg/kg	<0.00036	<0.00036	<0.00037	<0.0018	0.058 J	0.024 J	0.018 J	<0.00035	<0.0016	0.31 J	<0.0017	<0.00037	<0.0004	<0.0035	<0.0018	0.0057 JL	<0.0034	0.016 J	0.0016 UJ
delta-BHC	319-86-8	mg/kg	<0.00024	<0.00024	<0.00025	<0.0012	<0.0024	<0.0024	<0.0023	<0.00024	<0.0011	<0.0024	<0.0011	<0.00025	<0.00027	<0.0023	<0.0012	<0.00023	<0.0023	<0.0022	<0.00025
Dieldrin	60-57-1	mg/kg	<0.00059	0.0027 J	0.0032 J	<0.003	<0.006	<0.0059	<0.0058	<0.00059	<0.0027	0.053 J	<0.0028	<0.00061	<0.00067	<0.0058	<0.0029 J	0.01 J	<0.0057	<0.0056	<0.00062
Endosulfan I	959-98-8	mg/kg	<0.00036	<0.00036	<0.00037	<0.0018	<0.0036	<0.0035	<0.0035	<0.00035	<0.0016	<0.0036	<0.0017	<0.00037	<0.0004	<0.0035	<0.0018	<0.00035	<0.0034	<0.0034	<0.00037
Endosulfan II	33213-65-9	mg/kg	<0.00071	<0.00072	<0.00074	<0.0036	<0.0073	<0.0071	0.02 J	<0.00071	<0.0033	<0.0072	<0.0034	<0.00074	<0.00081	<0.0069	<0.0035	<0.00069	<0.0068	<0.0067	<0.00074
Endosulfan sulfate	1031-07-8	mg/kg	<0.00071	<0.00072	<0.00074	<0.0036	0.026 U	0.031 J	0.032 J	<0.00071	<0.0033	0.048 U	<0.0034	<0.00074	<0.00081	<0.0069	<0.0035	<0.00069	<0.0068	<0.0067	<0.00074
Endrin	72-20-8	mg/kg	<0.00071	<0.00072	<0.00074	<0.0036	0.048 J	<0.0071	<0.0069	<0.00071	<0.0033	0.15 J	<0.0034	<0.00074	<0.00081	<0.0069	<0.0035 J	0.011 JH	<0.0068	<0.0067	<0.00074
Endrin aldehyde	7421-93-4	mg/kg	<0.00071	<0.00072	<0.00074	<0.0036	0.028 J	0.028 J	<0.0069	<0.00071	<0.0033	<0.0072	<0.0034	<0.00074	<0.00081	<0.0069	<0.0035	0.0094 J	<0.0068	<0.0067	<0.00074
gamma-BHC	58-89-9	mg/kg	<0.00024	<0.00024	<0.00025	<0.0012	<0.0024	<0.0024	<0.0023	<0.00024	<0.0011	<0.0024 J	<0.0011	<0.00025	<0.00027	<0.0023	<0.0012	<0.00023	<0.0023	<0.0022	<0.00025
gamma-Chlordane	5103-74-2	mg/kg	<0.00024	0.0038 J	0.0045 J	0.011 U	0.025 U	0.037 J	0.026 J	<0.00024	<0.0011	0.17 J	0.02	<0.00025	<0.00027	<0.0023	<0.0012	<0.00023	<0.0023	0.014 J	<0.00025
Heptachlor	76-44-8	mg/kg	<0.00036	<0.00036	<0.00037	<0.0018	<0.0036	<0.0035	<0.0035	<0.00035	<0.0016	<0.0036	<0.0017	<0.00037	<0.0004	<0.0035	<0.0018	<0.00035	<0.0034	<0.0034	<0.00037
Heptachlor epoxide	1024-57-3	mg/kg	<0.00036	<0.00036	<0.00037	<0.0018	0.098 U	0.028 U	0.021 U	<0.00035	<0.0016	0.06 U	<0.0017	<0.00037	<0.0004	<0.0035	<0.0018	<0.00035	<0.0034	0.015 U	<0.00037
Methoxychlor	72-43-5	mg/kg	<0.004	<0.0041	<0.0042	<0.02	<0.041	<0.04	<0.039	<0.004	<0.018	<0.041	<0.019	<0.0042	<0.0046	<0.039	<0.02	<0.0039	<0.039	<0.038	<0.0042
Toxaphene	8001-35-2	mg/kg	<0.0045	<0.0046	<0.0047	<0.023	<0.046	<0.045	<0.044	<0.0045	<0.021	<0.046	<0.021	<0.0047	<0.0051	<0.044	<0.022	<0.0044	<0.043	<0.043	<0.0047
Aroclor 1016	12674-11-2	mg/kg	<0.0028	<0.0029	<0.0029	<0.0029	<0.058	<0.014	<0.014	<0.0028	<0.0026	<0.14	<0.014	<0.003	<0.0032	<0.0028	<0.0028	<0.028	<0.0027	<0.0027	<0.003
Aroclor 1221	11104-28-2	mg/kg	<0.0028	<0.0029	<0.0029	<0.0029	<0.058	<0.014	<0.014	<0.0028	<0.0026	<0.14	<0.014	<0.003	<0.0032	<0.0028	<0.0028	<0.028	<0.0027	<0.0027	<0.003
Aroclor 1232	11141-16-5	mg/kg	<0.0028	<0.0029	<0.0029	<0.0029	<0.058	<0.014	<0.014	<0.0028	<0.0026	<0.14	<0.014	<0.003	<0.0032	<0.0028	<0.0028	<0.028	<0.0027	<0.0027	<0.003
Aroclor 1242	53469-21-9	mg/kg	<0.0028	<0.0029	<0.0029	<0.0029	<0.058	<0.014	<0.014	<0.0028	<0.0026	<0.14	<0.014	<0.003	<0.0032	<0.0028	<0.0028	<0.028	<0.0027	<0.0027	<0.003
Aroclor 1248	12672-29-6	mg/kg	<0.0028	<0.0029	<0.0029	<0.0029	<0.058	<0.014	<0.014	<0.0028	<0.0026	<0.14	<0.014	<0.003	<0.0032	<0.0028	<0.0028	<0.028	<0.0027	<0.0027	<0.003
Aroclor 1254	11097-69-1	mg/kg	<0.0028	0.069	0.082	<0.0029	<0.058	<0.014	<0.014	<0.0028	<0.0026	<0.14	0.36 J	<0.003	<0.0032	<0.0028	<0.0028 J	<0.028	<0.0027	<0.0027	0.034 J
Aroclor 1260	11096-82-5	mg/kg	<0.0021	<0.0022	<0.0022	<0.0022	<0.044	0.14	0.13	<0.0021	0.14	<0.11	<0.01	<0.0022	<0.0024	<0.0021	<0.0021	<0.021	<0.002	0.08	<0.0022
Total PCBs	TPCB	mg/kg	<0.00945	0.07735	0.09035	<0.0098	<0.196	0.182	0.172	<0.00945	0.1478	<0.475	0.4	<0.0101	<0.0108	<0.00945	<0.00945	<0.0945	<0.0091	0.0881	0.0426
VOLATILE ORGANIC COMPOUNDS																					
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.00053	<0.00052	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1 1-Dichloroethane	75-34-3	mg/kg	<0.00053	<0.00052	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1,1-Dichloroethene	75-35-4	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.00064	<0.00062 JL	<0.00057	<0.00057	<0.00056	<0.00063	<0.00065	<0.0006	<0.0007	<0.00062	<0.00056	<0.0006	<0.00065	<0.00064	<0.00054	<0.00052	<0.00062	<0.00058	<0.00052
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	0.00087 J	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1 2-Dibromoethane	106-93-4	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1 2-Dichloroethane	107-06-2	mg/kg	<0.00053	<0.00052	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1 2-Dichloropropane	78-87-5	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
2-Butanone	78-93-3	mg/kg	<0.0015	<0.0014 JL	<0.0013	<0.0013	<0.0013	<0.0015	<0.0015	<0.0014	<0.0016	<0.0014	<0.0013	<0.0014	<0.0015	<0.0015	<0.0013	<0.0012	<0.0014	<0.0013	<0.0012
2-Hexanone	591-78-6	mg/kg	<0.0011	<0.001 JL	<0.00095	<0.00095	<0.00093	<0.001	<0.0011	<0.001	<0.0012	<0.001	<0.00093	<0.001	<0.0011	<0.0011	<0.00091	<0.00087	<0.001	<0.00096	<0.00087
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.0011	<0.001	<0.00095	<0.00095	<0.00093	<0.001	<0.0011	<0.001	<0.0012	<0.001	<0.00093	<0.001	<0.0011	<0.0011	<0.00091	<0.00087	<0.001	<0.00096	<0.00087
Acetone	67-64-1	mg/kg	<0.0021	<0.0021	<0.0019	<0.0019	0.017 U	<0.0021	<0.0022	<0.002	<0.0023	<0.0021	<0.0019	<0.002	<0.0022	<0.0021	<0.0018	<0.0017	<0.0021	<0.0019	<0.0017
Benzene#	71-43-2	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	0.0017 U	0.0023 U	0.00095 U	<0.00059	0.0021 J	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Bromodichloromethane	75-27-4	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Bromoform	75-25-2	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Bromomethane	74-83-9	mg/kg	<0.0011	<0.001	<0.00095	<0.00095	<0.00093	<0.001	<0.0011	<0.001	<0.0012	<0.001	<0.00093	<0.001	<0.0011	<0.0011	<0.00091	<0.00087	<0.001	<0.00096	<0.00087
Carbon disulfide	75-15-0	mg/kg	<0.0011	<0.001 JL	<0.00095	<0.00095	<0.00093	<0.001	<0.0011	0.0051 J	<0.0012	<0.001	<0.00093	<0.001	<0.0011	<0.0011	<0.00091	<0.00087	<0.001	<0.00096	<0.00087
Carbon tetrachloride	56-23-5	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			ESSB01	ESSB01	ESSB01	ESSB02	ESSB02	ESSB03	ESSB03	ESSB03	ESSB04	ESSB04	ESSB05	ESSB05	ESSB05	ESSB06	ESSB06	ESSB06	ESSB07	ESSB07	ESSB08
Depth Interval			1-2 ft	2-3 ft	6-7 ft	1-2 ft	2-3 ft	1-2 ft	1-2 ft	2-3 ft	1-2 ft	2-3 ft	1-2 ft	4-5 ft	15-16 ft	1-2 ft	2-3 ft	2-3 ft	1-2 ft	2-3 ft	1-2 ft
Sample Date			11/4/2010	11/4/2010	11/4/2010	11/5/2010	11/5/2010	12/9/2010	12/9/2010	12/9/2010	11/5/2010	11/5/2010	11/4/2010	11/4/2010	11/4/2010	11/3/2010	11/3/2010	11/3/2010	12/8/2010	12/8/2010	11/4/2010
Analyte	CAS No.	Units																			
Chlorobenzene	108-90-7	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Chloroethane	75-00-3	mg/kg	<0.0011	<0.001	<0.00095	<0.00095	<0.00093	<0.001	<0.0011	<0.001	<0.0012	<0.001	<0.00093	<0.001	<0.0011	<0.0011	<0.00091	<0.00087	<0.001	<0.00096	<0.00087
Chloroform	67-66-3	mg/kg	<0.00053	<0.00052	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Chloromethane	74-87-3	mg/kg	<0.0011	<0.001	<0.00095	<0.00095	<0.00093	<0.001	<0.0011	<0.001	<0.0012	<0.001	<0.00093	<0.001	<0.0011	<0.0011	<0.00091	<0.00087	<0.001	<0.00096	<0.00087
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.00053	<0.00052	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Cyclohexane	110-82-7	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	0.0036 J	<0.00044
Dibromochloromethane	124-48-1	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Dichlorodifluoromethane	75-71-8	mg/kg	<0.00053	<0.00052	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Ethylbenzene	100-41-4	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	0.0022 J	0.0031 J	0.0025 J	<0.00059	0.0021 J	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	0.0015 J	<0.00044
Isopropylbenzene	98-82-8	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Methyl acetate	79-20-9	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.00053	<0.00052	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Methylcyclohexane	108-87-2	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	0.0009 J	<0.00059	0.0062	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	0.0035 J	<0.00044
Methylene chloride	75-09-2	mg/kg	<0.0011	<0.001 JL	<0.00095	<0.00095	<0.00093	<0.001	<0.0011	<0.001	0.0013 J	<0.001	0.0012 J	<0.001	<0.0011	<0.0011	<0.00091	<0.00087	<0.001	<0.00096	0.0009 J
Naphthalene	91-20-3	mg/kg	<0.00053	0.0027 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	0.0025 J	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	0.0023 J
n-Butylbenzene	104-51-8	mg/kg	<0.00053	<0.00052	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
n-Propylbenzene	103-65-1	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	0.00062 J	0.00092 J	0.00064 J	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	0.00071 J	0.00054 J	<0.00044
sec-Butylbenzene	135-98-8	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Styrene	100-42-5	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	0.0041 J	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
tert-Butylbenzene	98-06-6	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Tetrachloroethene	127-18-4	mg/kg	<0.00064	<0.00062 JL	<0.00057	<0.00057	<0.00056	<0.00063	<0.00065	<0.0006	<0.0007	<0.00062	<0.00056	<0.0006	<0.00065	<0.00064	<0.00054	<0.00052	<0.00062	<0.00058	<0.00052
Toluene	108-88-3	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	0.0042 U	0.0051 U	0.0034 U	<0.00059	0.0023 J	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	0.0024 J	0.0018 J	<0.00044
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.00053	<0.00052	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Trichloroethene	79-01-6	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Trichlorofluoromethane	75-69-4	mg/kg	<0.00053	<0.00052 JL	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Vinyl chloride	75-01-4	mg/kg	<0.00053	<0.00052	<0.00047	<0.00047	<0.00046	<0.00052	<0.00054	<0.0005	<0.00059	<0.00052	<0.00047	<0.0005	<0.00055	<0.00053	<0.00045	<0.00044	<0.00051	<0.00048	<0.00044
Xylenes, Total	1330-20-7	mg/kg	<0.0016	<0.0016 JL	<0.0014	<0.0014	<0.0014	0.0053 J	0.007 J	0.0054 J	<0.0018	0.0055 J	<0.0014	<0.0015	<0.0016	<0.0016	<0.0014	<0.0013	0.004 J	0.0032 J	<0.0013
SEMIVOLATILE ORGANIC COMPOUNDS																					
1,1´-Biphenyl	92-52-4	mg/kg	<0.0034	<0.0035	<0.0036	<0.0035	<0.018	0.75	0.42	0.0097	<0.0032	0.16	0.034 J	<0.0036	<0.0039	<0.017	<0.0034	<0.0033	0.0036 J	0.047 J	<0.0036
1-Methylnaphthalene#	90-12-0	mg/kg	<0.0027	<0.0028	<0.0028	<0.0028	0.015 J	1.1 J	0.61 J	0.019	0.003 J	0.39	0.08	<0.0028	<0.0031	<0.013	0.0055 J	0.006 J	0.0059 J	0.092 JL	<0.0028
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0033	<0.0033	<0.0034	<0.0034	<0.017	<0.066	<0.065	<0.0033 JL	<0.003	<0.025	<0.016	<0.0034	<0.0038	<0.016	<0.0033	<0.0032	<0.0032	<0.031	<0.0035
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	<0.078	<0.076	<0.0039 JL	<0.0036	<0.03	<0.019	<0.0041	<0.0044	<0.019	<0.0039	<0.0038	<0.0037	<0.037	<0.0041
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0026	<0.0026	<0.0027	<0.0026	<0.013	<0.052	<0.051	<0.0026 JL	<0.0024	<0.02	<0.012	<0.0027	<0.003	<0.013	<0.0026	<0.0025	<0.0025	<0.025 JL	<0.0027
2 4-Dimethylphenol	105-67-9	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	<0.078	<0.076	<0.0039 JL	0.0072	<0.03	<0.019	<0.0041	<0.0044	<0.019	<0.0039	<0.0038	<0.0037	<0.037 JL	<0.0041 JL
2 4-Dinitrophenol	51-28-5	mg/kg	<0.0039 JL	<0.0039 JL	<0.0041 JL	<0.004 JL	<0.02 JL	<0.078	<0.076	<0.0039 JL	<0.0036 JL	<0.03 JL	<0.019 JL	<0.0041 JL	<0.0044 JL	<0.019	<0.0039	<0.0038 JL	<0.0037	<0.037	<0.0041
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	<0.078	<0.076	<0.0039	<0.0036	<0.03	<0.019	<0.0041	<0.0044	<0.019	<0.0039	<0.0038	<0.0037	<0.037	<0.0041
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.0038	<0.0038	<0.0039	<0.0039	<0.019	<0.076	<0.074	<0.0038	<0.0035	<0.029	<0.018	<0.0039	<0.0043	<0.019	<0.0038	<0.0037	<0.0036	<0.036	<0.0039
2-Chloronaphthalene	91-58-7	mg/kg	<0.0049	<0.0049	<0.005	<0.0049	<0.025	<0.097	<0.095	<0.0048	<0.0045	<0.037	<0.023	<0.005	<0.0055	<0.024	<0.0048	<0.0047	<0.0046	<0.046	<0.0051
2-Chlorophenol	95-57-8	mg/kg	<0.0038	<0.0038	<0.0039	<0.0039	<0.019	<0.076	<0.074	<0.0038 JL	<0.0035	<0.029	<0.018	<0.0039	<0.0043	<0.019	<0.0038	<0.0037	<0.0036	<0.036 JL	<0.0039
2-Methylnaphthalene	91-57-6	mg/kg	<0.0032	<0.0032	<0.0033	0.0042 J	0.021 J	4.8 J	2.7 J	0.059	0.0076	1.6	0.28	0.0061 J	<0.0036	<0.016	0.0096	0.016	0.013	0.3 JL	<0.0033
2-Methylphenol	95-48-7	mg/kg	<0.0034	<0.0035	<0.0036	<0.0035	0.02 J	0.14 J	0.072 J	0.005 JL	0.01	0.27	0.02 J	<0.0036	<0.0039	<0.017	<0.0034	<0.0033	0.0042 J	<0.033 JL	<0.0036
2-Nitroaniline	88-74-4	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	<0.078	<0.076	<0.0039	<0.0036	<0.03	<0.019	<0.0041	<0.0044	<0.019	<0.0039	<0.0038	<0.0037	<0.037	<0.0041
2-Nitrophenol	88-75-5	mg/kg	<0.0054	<0.0055	<0.0056	<0.0055	<0.028	<0.11	<0.11	<0.0054 JL	<0.005	<0.041	0.17	<0.0057	<0.0062	<0.027	<0.0054	<0.0053	<0.0052	<0.052 JL	<0.0057
3&4-Methylphenol	106-44-5	mg/kg	<0.0033	<0.0033	<0.0034	<0.0034	0.097	0.24	0.13 J	<0.0033 JL	0.016	0.53	0.035 J	<0.0034	<0.0038	<0.016	<0.0033	<0.0032	0.0091	0.045 JL	<0.0035
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0037	<0.0037	<0.0038	<0.0037	<0.019	<0.073	<0.071	<0.0037	<0.0034	<0.028	<0.018	<0.0038	<0.0042	<0.018	<0.0036	<0.0036 JL	<0.0035	<0.035	<0.0038
3-Nitroaniline	99-09-2	mg/kg	<0.0031	<0.0031	<0.0032	<0.0031	<0.016	<0.061 JL	<0.06 JL	<0.0031 JL	<0.0028	<0.023	<0.015	<0.0032	<0.0035	<0.015	<0.0031	<0.003	<0.0029	<0.029 JL	<0.0032
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	<0.078	<0.076	<0.0039 JL	<0.0036	<0.03	<0.019	<0.0041	<0.0044	<0.019	<0.0039	<0.0038 JL	<0.0037	<0.037	<0.0041
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	<0.078	<0.076	<0.0039	<0.0036	<0.03	<0.019	<0.0041	<0.0044	<0.019	<0.0039	<0.0038	<0.0037	<0.037	<0.0041
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	<0.078	<0.076	<0.0039 JL	<0.0036	<0.03	<0.019	<0.0041	<0.0044	<0.019	<0.0039	<0.0038	<0.0037	<0.037 JL	<0.0041
4-Chloroaniline	106-47-8	mg/kg	<0.0026	<0.0026	<0.0027	<0.0026	<0.013	<0.052	<0.051	<0.0026	<0.0024	<0.02	<0.012	<0.0027	<0.003	<0.013	<0.0026	<0.0025 JL	<0.0025	<0.025 JL	<0.0027
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0026	<0.0026	<0.0027	<0.0026	<0.013	<0.052	<0.051	<0.0026	<0.0024	<0.02	<0.012	<0.0027	<0.003	<0.013	<0.0026	<0.0025	<0.0025	<0.025	<0.0027
4-Nitroaniline	100-01-6	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	<0.078	<0.076	<0.0039	<0.0036	<0.03	<0.019	<0.0041	<0.0044	<0.019	<0.0039	<0.0038	<0.0037	<0.037	<0.0041
4-Nitrophenol	100-02-7	mg/kg	<0.0045	<0.0045	<0.0047	<0.0046	<0.023	<0.09	<0.088	<0.0045 JL	<0.0041	<0.034	<0.021	<0.0047	<0.0051	<0.022	<0.0045	<0.0044	<0.0043	<0.043	<0.0047
Acenaphthene	83-32-9	mg/kg	<0.0026	<0.0026	<0.0027	<0.0026	0.085	<0.052	<0.051	<0.0026	0.0086	0.34	<0.012	<0.0027	<0.003	0.014 J	<0.0026	<0.0025	<0.0025	0.026 J	<0.0027
Acenaphthylene	208-96-8	mg/kg	<0.0026	<0.0026	<0.0027	<0.0026	0.084	0.063 J	<0.051	<0.0026	0.0074	0.12	0.039	<0.0027	<0.003	0.044	<0.0026	<0.0025	0.0029 J	0.027 J	<0.0027 JL
Acetophenone	98-86-2	mg/kg	<0.0028	<0.0029	<0.0029	0.018	0.6	6.8 J	3.8 J	0.083	0.01	3.8	0.35	0.011 U	0.0033 U	0.029 J	0.044	0.04	0.025 U	0.4 JL	<0.003
Anthracene	120-12-7	mg/kg	<0.0026	<0.0026	<0.0027	0.0035 J	0.2	0.15 J	0.11 J	0.0076 J	0.021	0.17	0.039	0.0029 J	<0.003	0.086	<0.0026	0.0037 J	0.0044 J	0.11	<0.0027
Benz(a)anthracene	56-55-3	mg/kg	<0.0033	<0.0033	<0.0034	<0.0034	0.19	0.53	0.25	0.014	0.086	0.28	0.05	<0.0034	<0.0038	0.2	0.019	0.013	0.013	0.35	<0.0035
Benzaldehyde	100-52-7	mg/kg	<0.0054 JL	<0.0055 JL	<0.0056 JL	0.012 JL	0.31 JL	<0.11 JL	<0.11 JL	<0.0054 JL	<0.005 JL	<0.041 JL	0.23 JL	0.0099 JL	<0.0062 JL	<0.027 JL	<0.0054 JL	<0.0053 JL	<0.0052	<0.052 JL	<0.0057 JL
Benzo(a)pyrene	50-32-8	mg/kg	<0.0027	<0.0028	<0.0028	<0.0028	0.4	0.8	0.48	0.022	0.11	0.46	0.071	<0.0028	<0.0031	0.29	<0.0027	0.058	0.016	0.36	<0.0028
Benzo(b)fluoranthene	205-99-2	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	0.52	0.23	0.018	0.15	0.17	0.047	<0.0041	<0.0044	0.32	0.02 J	<0.0038 J	0.015	0.32	<0.0041
Benzo(g h i)perylene	191-24-2	mg/kg	<0.0034	<0.0035	<0.0036	<0.0035	0.53	1.6 J	0.79 J	0.029	0.076	1.7	0.4	0.0073 J	<0.0039	0.25	0.054 J	0.096 J	0.026	0.52	<0.0036
Benzo(k)fluoranthene	207-08-9	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	0.18	0.16	0.01	0.067	0.28	<0.019	<0.0041	<0.0044	0.33	0.017	0.017	0.018	0.26	<0.0041
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.0028	<0.0029	<0.0029	<0.0029	<0.015	<0.057	<0.055	<0.0028	<0.0026	<0.022	<0.014	<0.003	<0.0032	<0.014	<0.0028	<0.0028	<0.0027	<0.027 JL	<0.003
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0033	<0.0033	<0.0034	<0.0034	<0.017	<0.066	<0.065	<0.0033	<0.003	<0.025	<0.016	<0.0034	<0.0038	<0.016	<0.0033	<0.0032	<0.0032	<0.031 JL	<0.0035
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0032	<0.0032	<0.0033	<0.0033	<0.016	<0.064	<0.062	<0.0032	<0.0029	<0.024	<0.015	<0.0033	<0.0036	<0.016	<0.0032	<0.0031	<0.0031	<0.03 JL	<0.0032
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	<0.0078	<0.0079	<0.0081	0.024 U	<0.04	<0.16	<0.15	<0.0078	0.013 U	<0.059	<0.037	<0.0081	<0.0089	<0.038	<0.0078	<0.0076	<0.0075	<0.074	0.014 U
Butyl benzyl phthalate	85-68-7	mg/kg	<0.003	<0.003	<0.0031	<0.003	<0.015	<0.059	<0.058	<0.0029	<0.0027	<0.022	<0.014	<0.0031	<0.0034	<0.014	<0.0029	<0.0029	<0.0028	<0.028	<0.0031
Caprolactam	105-60-2	mg/kg	<0.0028	<0.0029	<0.0029	<0.0029	<0.015	<0.057	<0.055	<0.0028	<0.0026	<0.022	<0.014	<0.003	<0.0032	<0.014	<0.0028	<0.0028	<0.0027	<0.027 JL	<0.003
Carbazole	86-74-8	mg/kg	<0.0026	<0.0026	<0.0027	<0.0026	<0.013	<0.052 JL	<0.051 JL	0.0058 JL	0.014	<0.02	<0.012	<0.0027	<0.003	0.06	<0.0026	<0.0025	0.003 J	0.052 JL	<0.0027
Chrysene	218-01-9	mg/kg	<0.0034	<0.0035	<0.0036	<0.0035	0.091	0.77	0.39	0.022	0.096	0.36	0.068	<0.0036	<0.0039	0.4	0.019	0.012	0.016	0.37	<0.0036
Dibenz(a h)anthracene	53-70-3	mg/kg	<0.0026	<0.0026	<0.0027	<0.0026	<0.013	0.45	0.2	0.0069 J	0.018	0.38	0.047	<0.0027	<0.003	<0.013	<0.0026	<0.0025	0.0032 J	0.11	<0.0027
Dibenzofuran	132-64-9	mg/kg	<0.0026	<0.0026	<0.0027	<0.0026	<0.013	0.19	0.099 J	0.0035 J	0.0027 J	0.093	0.017 J	<0.0027	<0.003	<0.013	<0.0026	<0.0025	<0.0025	<0.025	<0.0027
Diethyl phthalate	84-66-2	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	<0.078	<0.076	<0.0039	<0.0036	<0.03	<0.019	<0.0041	<0.0044	<0.019	<0.0039	<0.0038	<0.0037	<0.037	<0.0041
Dimethyl phthalate	131-11-3	mg/kg	<0.0028	<0.0029	<0.0029	<0.0029	<0.015	<0.057	<0.055	<0.0028	<0.0026	<0.022	<0.014	<0.003	<0.0032	<0.014	<0.0028	<0.0028	<0.0027	<0.027	<0.003
Di-n-butyl phthalate	84-74-2	mg/kg	<0.003	<0.003	<0.0031	<0.003	0.087 U	<0.059	<0.058	<0.0029	<0.0027	<0.022	<0.014	<0.0031	<0.0034	<0.014	<0.0029	<0.0029	<0.0028	<0.028	<0.0031
Di-n-octyl phthalate	117-84-0	mg/kg	<0.0034	<0.0035	<0.0036	<0.0035	<0.018	<0.068	<0.067	<0.0034	0.0093	0.12	<0.016	<0.0036	<0.0039	<0.017	<0.0034	<0.0033	<0.0033	<0.033	<0.0036
Fluoranthene	206-44-0	mg/kg	<0.0026	<0.0026	<0.0027	0.0034 J	<0.013	0.38	0.23	0.018	0.2	0.22	0.018 J	<0.0027	<0.003	0.56	0.027	0.012	0.028	0.67	<0.0027
Fluorene	86-73-7	mg/kg	<0.0026	<0.0026	<0.0027	<0.0026	0.24	0.096 J	0.053 J	0.0027 J	0.0047 J	0.11	0.012 J	<0.0027	<0.003	<0.013	<0.0026	<0.0025	<0.0025	0.032 J	<0.0027

Bolded - detection above the SDL
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U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			ESSB01	ESSB01	ESSB01	ESSB02	ESSB02	ESSB03	ESSB03	ESSB03	ESSB04	ESSB04	ESSB05	ESSB05	ESSB05	ESSB06	ESSB06	ESSB06	ESSB07	ESSB07	ESSB08
Depth Interval			1-2 ft	2-3 ft	6-7 ft	1-2 ft	2-3 ft	1-2 ft	1-2 ft	2-3 ft	1-2 ft	2-3 ft	1-2 ft	4-5 ft	15-16 ft	1-2 ft	2-3 ft	2-3 ft	1-2 ft	2-3 ft	1-2 ft
Sample Date			11/4/2010	11/4/2010	11/4/2010	11/5/2010	11/5/2010	12/9/2010	12/9/2010	12/9/2010	11/5/2010	11/5/2010	11/4/2010	11/4/2010	11/4/2010	11/3/2010	11/3/2010	11/3/2010	12/8/2010	12/8/2010	11/4/2010
Analyte	CAS No.	Units																			
Hexachlorobenzene	118-74-1	mg/kg	<0.0031	<0.0031	<0.0032	<0.0031	<0.016	<0.061	<0.06	<0.0031	<0.0028	<0.023	<0.015	<0.0032	<0.0035	<0.015	<0.0031	<0.003	<0.0029	<0.029	<0.0032
Hexachlorobutadiene	87-68-3	mg/kg	<0.0052	<0.0053	<0.0054	<0.0053	<0.027	<0.1	<0.1	<0.0052	<0.0048	<0.04	<0.025	<0.0054	<0.0059	<0.025	<0.0052	<0.0051	<0.005	<0.049 JL	<0.0054
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0043	<0.0043	<0.0044	<0.0043	<0.022	<0.085	<0.083	<0.0042	<0.0039	<0.032	<0.02	<0.0044	<0.0048	<0.021	<0.0042	<0.0042 R	<0.0041	<0.04	<0.0044 JL
Hexachloroethane	67-72-1	mg/kg	<0.0046	<0.0047	<0.0048	<0.0047	<0.024	<0.092	<0.09	<0.0046	<0.0042	<0.035	<0.022	<0.0048	<0.0053	<0.023	<0.0046	<0.0045	<0.0044	<0.044 JL	<0.0048
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	<0.0041	<0.0042	<0.0043	<0.0042	<0.021	0.48	0.27	0.011	0.081	0.37	0.067	<0.0043	<0.0047	0.19	<0.0041	<0.004	0.015	0.26	<0.0043
Isophorone	78-59-1	mg/kg	<0.0036	<0.0036	<0.0037	<0.0036	<0.018	<0.071	<0.069	<0.0035	<0.0033	<0.027	<0.017	<0.0037	<0.004	<0.017	<0.0035	<0.0035	<0.0034	<0.034 JL	<0.0037
Naphthalene	91-20-3	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	2.2 J	1.2 J	0.027	<0.0036	0.64	0.11	<0.0041	<0.0044	<0.019	0.0068 J	0.011	0.007 U	0.15 JL	<0.0041
Nitrobenzene	98-95-3	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	<0.078	<0.076	<0.0039	<0.0036	<0.03	<0.019	<0.0041	<0.0044	<0.019	<0.0039	<0.0038	<0.0037	<0.037 JL	<0.0041
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0047	<0.0048	<0.0049	<0.0048	<0.024	<0.094	<0.092	<0.0047	<0.0044	<0.036	<0.023	<0.0049	<0.0054	<0.023	<0.0047	<0.0046	<0.0045	<0.045 JL	<0.0049
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0026	<0.0026	<0.0027	<0.0026	<0.013	<0.052	<0.051	<0.0026	<0.0024	<0.02	<0.012	<0.0027	<0.003	<0.013	<0.0026	<0.0025	<0.0025	<0.025	<0.0027
Pentachlorophenol	87-86-5	mg/kg	<0.0033 JL	<0.0033 JL	<0.0034 JL	<0.0034 JL	<0.017 JL	<0.066	<0.065	<0.0033 JL	<0.003 JL	<0.025 JL	<0.016 JL	<0.0034 JL	<0.0038 JL	<0.016	<0.0033	<0.0032	<0.0032	<0.031	<0.0035 JL
Phenanthrene	85-01-8	mg/kg	<0.0036	<0.0036	<0.0037	0.0038 J	0.49	0.93	0.49	0.022	0.1	0.93	0.11	<0.0037	<0.004	0.13	0.021	0.011	0.013	0.46	<0.0037
Phenol	108-95-2	mg/kg	<0.0039	<0.0039	<0.0041	<0.004	<0.02	0.11 J	<0.076	0.0061 JL	0.01	0.2	0.021 J	<0.0041	<0.0044	<0.019	<0.0039	<0.0038	0.023	0.05 JL	<0.0041
Pyrene	129-00-0	mg/kg	<0.0026	<0.0026	<0.0027	0.0033 J	0.15	0.59	0.32	0.018	0.21	0.29	0.062	<0.0027	<0.003	0.48	0.028	0.017	0.022	0.53	<0.0027

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--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			ESSB08	ESSB08	ESSB10	ESSB10	ESSB10	ESSB11	ESSB11	ESSB11	ESSB12	ESSB12	ESSB13	ESSB13	ESSB13	ESSB14	ESSB14	ESSB14	ESSB14	ESSB14	ESSB15
Depth Interval			4-5 ft	15-16 ft	0-0.5 ft	1-2 ft	5-6 ft	0-0.5 ft	1-2 ft	5-6 ft	1-2 ft	4-5 ft	1-2 ft	4-5 ft	9-10 ft	1-2 ft	4-5 ft	4-5 ft	9-10 ft	12-13 ft	1-2 ft
Sample Date			11/4/2010	11/4/2010	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/7/2012
Analyte	CAS No.	Units																			
METALS																					
Aluminum	7429-90-5	mg/kg	10200	8050	7280	6720	7720	4090	9070	2790	9390	8240	6550	11600	10100	4020	8780	8130	9740	2550	7510
Antimony	7440-36-0	mg/kg	<0.31	<0.32	<0.2	<0.22	<0.21	<0.19	<0.2	<0.23	<0.22	<0.25	<0.2	<0 24	<0.24	0.23 J	<0.21	<0 21	<0.23	<0.22	0.223 J
Arsenic	7440-38-2	mg/kg	6.57	1.74	2.85	2.75	3.5	1.87	3.45	1.36	2.83	2.12	3.64	2.57	3.55	5.81	2.45	1.83	4.83	1.31	4.24
Barium	7440-39-3	mg/kg	210	98.4	203	1310	289	206	1140	1000	161	197	228	98.3	160	1220	143 J	75.5 J	234	57.4	282
Beryllium	7440-41-7	mg/kg	0.587 J	0.516 J	0.522	0.453 J	0.561	0.303 J	0.624	0.213 J	0.679	0.685	0.407 J	0.735	0.711	0.255 J	0.619	0.582	0.828	0.192 J	0.481 J
Cadmium	7440-43-9	mg/kg	0.223 J	0.123 J	0.192 J	0.311 J	0.264 J	0.117 J	0.456 J	0.0998 J	0.166 J	0.144 J	0.207 J	0.19 J	0.148 J	0.508 J	0.144 J	0.137 J	0.182 J	0.0574 J	0.303 J
Chromium	7440-47-3	mg/kg	6.56	3.95	5.01	5.83	5.55	3.47	7.35	7.76	6.01	5.57	3.79	7.07	7.34	15.8	6.37	5.48	7.12	2.21	7.27
Cobalt	7440-48-4	mg/kg	4.73	2.59	3.98	3.26	8.38	2.28	4.61	1.72	4.63	2.33	2.35	4.49	4.07	2.25	4.11	3.69	7.9	1.56	3.58
Copper	7440-50-8	mg/kg	5.86	4.27	6.01	13.7	7.23	4.19	12.1	3.37	5.92	6.5	3.87	7.21	5.57	16.1	6.36	5.54	5.64	1.71	9.77
Lead#	7439-92-1	mg/kg	11.1	8.45	10.4	84.8	13	7.93	43.5	8.14	8.73	8.51	6.29	8.75	8.45	127	8	7.5	10.2	2.95	32.2
Manganese	7439-96-5	mg/kg	377	185	220	156	476	116	256	118	297	93.1	76.9	270	193	149	201	194	255	87	202
Nickel	7440-02-0	mg/kg	6.85	3.56	5.51	5.55	6.35	3.31	6.95	2.71	6.54	6.44	2.94	6.91	6.33	5.48	6.19	5.72	7.19	2.09	5.87
Selenium	7782-49-2	mg/kg	0.759	0.652	1.09	0.998	1.4	0 53 U	1.43	0.593 U	1.32	1.22	0.656	1.13	0.872	0.268 J	0.869	0.767	1.11	0.207 J	0.838
Silver	7440-22-4	mg/kg	<0.049	<0.051	<0.081	<0.086	<0.086	<0.076	<0.081	<0.09	<0.087	<0.1	<0.08	<0.096	<0.094	<0.086	<0.086	<0.085	<0.091	<0.088	<0.085
Thallium	7440-28-0	mg/kg	0.247 J	0.172 J	0.105 U	0.158 U	0.152 U	0.0739 U	0.136 U	<0.079	0.161 U	0.152 U	0.163 J	0.242 J	0.178 J	0.0793 J	0.129 J	0.115 J	0.16 J	<0.077	0.127 J
Vanadium	7440-62-2	mg/kg	20.7	12.6	13.4	11.7	13.3	6.99	11.1	5.27	13.8	13	12.5	12.9	17.7	12.6	9.18	7.35	18.4	7.94	15.7
Zinc	7440-66-6	mg/kg	24.5	14.4	23.9	72.9	16.1	18.8	64.5	16.7	18.1	17.7	12.9	21.9	23.8	164	19.2	16	25.1	7.69	55.5
Mercury#	7439-97-6	mg/kg	0.0538	0.00297 J	0.0115	0.0174	0.0482	0.011	0.0185	0.0135	0.0244	0.00268 J	0.00183 J	0.00506	0.000623 J	0.0264	0.0073	0.00737	0.00141 J	0.0168	0.00405 J
Cyanide	57-12-5	mg/kg	<0.75	<0.8	<0.7	1.03 J	<0.72	2.64	0.722 J	2.75	1.2 J	<0.75	<0.68	<0.67	<0.63	<0.7	<0.63	<0.62	<0.66	<0.66	<0.7
PESTICIDES and PCBs																					
4,4´-DDD	72-54-8	mg/kg	<0.00063	<0.00068	<0.00058	<0.00057	<0.0006	<0.00054	<0.00056	0.08 JH	<0.0006	<0.00064	<0.00057	<0.00062	<0.00063	<0.0012	<0.00059	<0.00059	<0.00065	<0.0062	<0.00059
4,4´-DDE	72-55-9	mg/kg	<0.00063	<0.00068	<0.00058	<0.00057	<0.0006	<0.00054	<0.00056	<0.0061	<0.0006	<0.00064	<0.00057	<0.00062	<0.00063	<0.0012	<0.00059	<0.00059	<0.00065	0.13 J	<0.00059
4,4´-DDT	50-29-3	mg/kg	<0.00063	<0.00068	<0.00058	<0.00057	<0.0006	<0.00054	<0.00056	0.033 JH	<0.0006	<0.00064	<0.00057	<0.00062	<0.00063	<0.0012	<0.00059	<0.00059	<0.00065	0.55	<0.00059
Aldrin	309-00-2	mg/kg	<0.00038	<0.00041	<0.00035	<0.00034	<0.00036	<0.00032	<0.00033	<0.0037	<0.00036	<0.00038	<0.00034	<0.00037	<0.00038	<0.00071	<0.00036	<0.00036	<0.00039	<0.0037	<0.00035
alpha-BHC	319-84-6	mg/kg	<0.00038	<0.00041	<0.00035	<0.00034	<0.00036	<0.00032	<0.00033	<0.0037	<0.00036	<0.00038	<0.00034	<0.00037	<0.00038	<0.00071	<0.00036	<0.00036	<0.00039	<0.0037	<0.00035
alpha-Chlordane	5103-71-9	mg/kg	<0.00025	<0.00027	<0.00023	<0.00023	<0.00024	<0.00021	<0.00022	<0.0025	<0.00024	<0.00026	<0.00023	<0.00025	<0.00025	<0.00047	<0.00024	<0.00024	<0.00026	<0.0025	<0.00024
beta-BHC	319-85-7	mg/kg	<0.00038	<0.00041	<0.00035	<0.00034	<0.00036	<0.00032	<0.00033	<0.0037	<0.00036	<0.00038	<0.00034	<0.00037	<0.00038	<0.00071	<0.00036	<0.00036	<0.00039	0.046 J	<0.00035
delta-BHC	319-86-8	mg/kg	<0.00025	<0.00027	<0.00023	<0.00023	<0.00024	<0.00021	<0.00022	0.019 U	<0.00024	<0.00026	<0.00023	<0.00025	<0.00025	<0.00047	<0.00024	<0.00024	<0.00026	<0.0025	<0.00024
Dieldrin	60-57-1	mg/kg	<0.00063	<0.00068	<0.00058	<0.00057	<0.0006	<0.00054	<0.00056	<0.0061	<0.0006	<0.00064	<0.00057	<0.00062	<0.00063	<0.0012	<0.00059	<0.00059	<0.00065	<0.0062	<0.00059
Endosulfan I	959-98-8	mg/kg	<0.00038	<0.00041	<0.00035	<0.00034	<0.00036	<0.00032	<0.00033	0.014 JH	<0.00036	<0.00038	<0.00034	<0.00037	<0.00038	<0.00071	<0.00036	<0.00036	<0.00039	0.061 J	<0.00035
Endosulfan II	33213-65-9	mg/kg	<0.00076	<0.00082	<0.0007	<0.00069	<0.00072	<0.00064	<0.00067	0.014 U	<0.00072	<0.00077	<0.00068	<0.00075	<0.00075	<0.0014	<0.00071	<0.00071	<0.00078	0.039 J	<0.00071
Endosulfan sulfate	1031-07-8	mg/kg	<0.00076	<0.00082	<0.0007	<0.00069	<0.00072	<0.00064	<0.00067	<0.0074	<0.00072	<0.00077	<0.00068	<0.00075	<0.00075	<0.0014	<0.00071	<0.00071	<0.00078	<0.0074	<0.00071
Endrin	72-20-8	mg/kg	<0.00076	<0.00082	<0.0007	<0.00069	<0.00072	<0.00064	<0.00067	0.036 U	<0.00072	<0.00077	<0.00068	<0.00075	<0.00075	<0.0014	<0.00071	<0.00071	<0.00078	0.12 J	<0.00071
Endrin aldehyde	7421-93-4	mg/kg	<0.00076	<0.00082	<0.0007	<0.00069	<0.00072	<0.00064	<0.00067	0.13 JH	<0.00072	<0.00077	<0.00068	<0.00075	<0.00075	<0.0014	<0.00071	<0.00071	<0.00078	0.096	<0.00071
gamma-BHC	58-89-9	mg/kg	<0.00025	<0.00027	<0.00023	<0.00023	<0.00024	<0.00021	<0.00022	<0.0025	<0.00024	<0.00026	<0.00023	<0.00025	<0.00025	<0.00047	<0.00024	<0.00024	<0.00026	<0.0025	<0.00024
gamma-Chlordane	5103-74-2	mg/kg	<0.00025	<0.00027	<0.00023	<0.00023	<0.00024	<0.00021	<0.00022	<0.0025	<0.00024	<0.00026	<0.00023	<0.00025	<0.00025	<0.00047	<0.00024	<0.00024	<0.00026	<0.0025	<0.00024
Heptachlor	76-44-8	mg/kg	<0.00038	<0.00041	<0.00035	<0.00034	<0.00036	<0.00032	<0.00033	0.031 U	<0.00036	<0.00038	<0.00034	<0.00037	<0.00038	<0.00071	<0.00036	<0.00036	<0.00039	<0.0037	<0.00035
Heptachlor epoxide	1024-57-3	mg/kg	<0.00038	<0.00041	<0.00035	<0.00034	<0.00036	<0.00032	<0.00033	<0.0037	<0.00036	<0.00038	<0.00034	<0.00037	<0.00038	<0.00071	<0.00036	<0.00036	<0.00039	<0.0037	<0.00035
Methoxychlor	72-43-5	mg/kg	<0.0043	<0.0046	<0.0039	<0.0039	<0.0041	<0.0036	<0.0038	0.23 JH	<0.0041	<0.0044	<0.0039	<0.0042	<0.0043	<0.0081	<0.004	<0.004	<0.0044	<0.042	<0.004
Toxaphene	8001-35-2	mg/kg	<0.0048	<0.0052	<0.0056	<0.0055	<0.0058	<0.0051	<0.0053	<0.059	<0.0058	<0.0062	<0.0055	<0.006	<0.006	<0.011	<0.0057	<0.0057	<0.0062	<0.059	<0.0057
Aroclor 1016	12674-11-2	mg/kg	<0.003	<0.0033	<0.0028	<0.0027	<0.0029	<0.0026	<0.0027	<0.029	<0.0029	<0.0031	<0.0027	<0.003	<0.003	<0.0028	<0.0029	<0.0028	<0.0031	<0.3	<0.0028
Aroclor 1221	11104-28-2	mg/kg	<0.003	<0.0033	<0.0028	<0.0027	<0.0029	<0.0026	<0.0027	<0.029	<0.0029	<0.0031	<0.0027	<0.003	<0.003	<0.0028	<0.0029	<0.0028	<0.0031	<0.3	<0.0028
Aroclor 1232	11141-16-5	mg/kg	<0.003	<0.0033	<0.0028	<0.0027	<0.0029	<0.0026	<0.0027	<0.029	<0.0029	<0.0031	<0.0027	<0.003	<0.003	<0.0028	<0.0029	<0.0028	<0.0031	<0.3	<0.0028
Aroclor 1242	53469-21-9	mg/kg	<0.003	<0.0033	<0.0028	<0.0027	<0.0029	<0.0026	<0.0027	<0.029	<0.0029	<0.0031	<0.0027	<0.003	<0.003	<0.0028	<0.0029	<0.0028	<0.0031	<0.3	<0.0028
Aroclor 1248	12672-29-6	mg/kg	<0.003	<0.0033	<0.0028	<0.0027	<0.0029	<0.0026	<0.0027	<0.029	<0.0029	<0.0031	<0.0027	<0.003	<0.003	<0.0028	<0.0029	<0.0028	<0.0031	<0.3	<0.0028
Aroclor 1254	11097-69-1	mg/kg	<0.003	<0.0033	<0.0028	<0.0027	<0.0029	<0.0026	<0.0027	<0.029	<0.0029	<0.0031	<0.0027	0.01 J	<0.003	<0.0028	<0.0029	<0.0028	<0.0031	9	<0.0028
Aroclor 1260	11096-82-5	mg/kg	<0.0023	<0.0025	<0.0021	<0.0021	<0.0022	<0.0019	<0.002	<0.022	<0.0022	<0.0023	<0.002	<0.0022	<0.0023	<0.0021	<0.0021	<0.0021	<0.0023	<0.22	<0.0021
Total PCBs	TPCB	mg/kg	<0.01015	<0.01115	<0.00945	<0.00915	<0.0098	<0.00875	<0.0091	<0.098	<0.0098	<0.01045	<0.0091	0.0186	<0.01015	<0.00945	<0.00975	<0.00945	<0.01045	9.86	<0.00945
VOLATILE ORGANIC COMPOUNDS																					
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.0005	<0.059	<0.00069	<0.00066	<0.00063	<0.00071	<0.00074	<0.00071	<0.00062	<0.00069	<0.00063	<0.00075	<0.00067	<0.00068 J	<0.00067	<0.00066	<0.00083	<0.00082	<0.00065
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.0005	<0.059	<0.0017	<0.0016	<0.0015	<0.0017	<0.0018	<0.0017	<0.0015	<0.0017	<0.0015	<0.0018	<0.0016	<0.0017	<0.0016	<0.0016	<0.002	<0.002	<0.0016
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.0005	<0.059	<0.00049	<0.00047	<0.00045	<0.00051	<0.00053	<0.0005	<0.00044	<0.00049	<0.00045	<0.00054	<0.00048	<0.00049	<0.00048	<0.00047	<0.00059	<0.00058	<0.00047
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.0005	<0.059	<0.0013	<0.0012	<0.0012	<0.0013	<0.0014	<0.0013	<0.0011	<0.0013	<0.0012	<0.0014	<0.0013	<0.0013	<0.0012	<0.0012	<0.0015	<0.0015	<0.0012
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.0005	<0.059	<0.002	<0.0019	<0.0018	<0.002	<0.0021	<0.002	<0.0018	<0.002	<0.0018	<0.0021	<0.0019	<0.0019	<0.0019	<0.0019	<0.0024	<0.0023	<0.0019
1 1-Dichloroethane	75-34-3	mg/kg	<0.0005	<0.059	<0.00049	<0.00047	<0.00045	<0.00051	<0.00053	<0.0005	<0.00044	<0.00049	<0.00045	<0.00054	<0.00048	<0.00049	<0.00048	<0.00047	<0.00059	<0.00058	<0.00047
1,1-Dichloroethene	75-35-4	mg/kg	<0.0005	<0.059	<0.0015	<0.0014	<0.0014	<0.0015	<0.0016	<0.0015	<0.0013	<0.0015	<0.0014	<0.0016	<0.0014	<0.0015	<0.0014	<0.0014	<0.0018	<0.0018	<0.0014
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.0006	<0.071	<0.00089	<0.00085	<0.00082	<0.00091	<0.00095	<0.00091	<0.00079	<0.00089	<0.00081	<0.00097	<0.00087	<0.00087 J	<0.00086	<0.00085	<0.0011	<0.0011	<0.00084
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.0005	<0.059	<0.00079	<0.00075	<0.00072	<0.00081	<0.00084	0.019	<0.0007	<0.00079	<0.00072	<0.00086	<0.00077	<0.00078	<0.00076	<0.00076	<0.00095	0.0024 J	<0.00075
1 2-Dibromoethane	106-93-4	mg/kg	<0.0005	<0.059	<0.00069	<0.00066	<0.00063	<0.00071	<0.00074	<0.00071	<0.00062	<0.00069	<0.00063	<0.00075	<0.00067	<0.00068	<0.00067	<0.00066	<0.00083	<0.00082	<0.00065
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.0005	<0.059	<0.00079	<0.00075	<0.00072	<0.00081	<0.00084	<0.00081	<0.0007	<0.00079	<0.00072	<0.00086	<0.00077	<0.00078 J	<0.00076	<0.00076	<0.00095	<0.00093	<0.00075
1 2-Dichloroethane	107-06-2	mg/kg	<0.0005	<0.059	<0.00059	<0.00057	<0.00054	<0.00061	<0.00063	<0.0006	<0.00053	<0.00059	<0.00054	<0.00064	<0.00058	<0.00058	<0.00057	<0.00057	<0.00071	<0.0007	<0.00056
1 2-Dichloropropane	78-87-5	mg/kg	<0.0005	<0.059	<0.00049	<0.00047	<0.00045	<0.00051	<0.00053	<0.0005	<0.00044	<0.00049	<0.00045	<0.00054	<0.00048	<0.00049	<0.00048	<0.00047	<0.00059	<0.00058	<0.00047
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.0005	<0.059	<0.00079	<0.00075	<0.00072	<0.00081	<0.00084	0.0044 J	<0.0007	<0.00079	<0.00072	<0.00086	<0.00077	<0.00078 J	<0.00076	<0.00076	<0.00095	<0.00093	<0.00075
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.0005	<0.059	<0.00089	<0.00085	<0.00082	<0.00091	<0.00095	<0.00091	<0.00079	<0.00089	<0.00081	<0.00097	<0.00087	<0.00087 J	<0.00086	<0.00085	<0.0011	<0.0011	<0.00084
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.0005	<0.059	<0.00069	<0.00066	<0.00063	<0.00071	<0.00074	<0.00071	<0.00062	<0.00069	<0.00063	<0.00075	<0.00067	<0.00068 J	<0.00067	<0.00066	<0.00083	<0.00082	<0.00065
2-Butanone	78-93-3	mg/kg	0.011	<0.17	<0.0022	<0.0021	<0.002	<0.0022	<0.0023	0.031	<0.0019	<0.0022	<0.002	<0.0024	<0.0021	<0.0021	<0.0021	<0.0021	<0.0026	<0.0026	<0.0021
2-Hexanone	591-78-6	mg/kg	<0.00099	2.3	<0.0017	<0.0016	<0.0015	<0.0017	<0.0018	<0.0017	<0.0015	<0.0017	<0.0015	<0.0018	<0.0016	<0.0017	<0.0016	<0.0016	<0.002	<0.002	<0.0016
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.00099	<0.12	<0.00099	<0.00094	<0.00091	<0.001	<0.0011	0.0074 J	<0.00088	<0.00098	<0.0009	<0.0011	<0.00096	<0.00097	<0.00096	<0.00095	<0.0012	<0.0012	<0.00093
Acetone	67-64-1	mg/kg	0.069 U	<0.24	<0.0045	<0.0043	<0.0042	<0.0046	<0.0048	0.16	<0.0041	<0.0045	<0.0041	<0.0049	<0.0044	<0.0045	<0.0044	<0.0044	<0.0055	0.056	<0.0043
Benzene#	71-43-2	mg/kg	0.0091	<0.059	<0.00059	<0.00057	<0.00054	<0.00061	<0.00063	0.045	<0.00053	<0.00059	<0.00054	<0.00064	<0.00058	<0.00058	<0.00057	<0.00057	<0.00071	0.18	<0.00056
Bromodichloromethane	75-27-4	mg/kg	<0.0005	<0.059	<0.00059	<0.00057	<0.00054	<0.00061	<0.00063	<0.0006	<0.00053	<0.00059	<0.00054	<0.00064	<0.00058	<0.00058	<0.00057	<0.00057	<0.00071	<0.0007	<0.00056
Bromoform	75-25-2	mg/kg	<0.0005	<0.059	<0.00069	<0.00066	<0.00063	<0.00071	<0.00074	<0.00071	<0.00062	<0.00069	<0.00063	<0.00075	<0.00067	<0.00068	<0.00067	<0.00066	<0.00083	<0.00082	<0.00065
Bromomethane	74-83-9	mg/kg	<0.00099	<0.12	<0.00099	<0.00094	<0.00091	<0.001	<0.0011	<0.001	<0.00088	<0.00098	<0.0009	<0.0011	<0.00096	<0.00097	<0.00096	<0.00095	<0.0012	<0.0012	<0.00093
Carbon disulfide	75-15-0	mg/kg	0.014	<0.12	<0.0016	<0.0015	<0.0014	<0.0016	<0.0017	0.007 J	<0.0014	<0.0016	<0.0014	<0.0017	<0.0015	<0.0016	<0.0015	<0.0015	<0.0019	<0.0019	<0.0015
Carbon tetrachloride	56-23-5	mg/kg	<0.0005	<0.059	<0.0012	<0.0011	<0.0011	<0.0012	<0.0013	<0.0012	<0.0011	<0.0012	<0.0011	<0.0013	<0.0012	<0.0012	<0.0011	<0.0011	<0.0014	<0.0014	<0.0011

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			ESSB08	ESSB08	ESSB10	ESSB10	ESSB10	ESSB11	ESSB11	ESSB11	ESSB12	ESSB12	ESSB13	ESSB13	ESSB13	ESSB14	ESSB14	ESSB14	ESSB14	ESSB14	ESSB15
Depth Interval			4-5 ft	15-16 ft	0-0.5 ft	1-2 ft	5-6 ft	0-0.5 ft	1-2 ft	5-6 ft	1-2 ft	4-5 ft	1-2 ft	4-5 ft	9-10 ft	1-2 ft	4-5 ft	4-5 ft	9-10 ft	12-13 ft	1-2 ft
Sample Date			11/4/2010	11/4/2010	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/7/2012
Analyte	CAS No.	Units																			
Chlorobenzene	108-90-7	mg/kg	<0.0005	<0.059	<0.00049	<0.00047	<0.00045	<0.00051	<0.00053	<0.0005	<0.00044	<0.00049	<0.00045	<0.00054	<0.00048	<0.00049	<0.00048	<0.00047	<0.00059	<0.00058	<0.00047
Chloroethane	75-00-3	mg/kg	<0.00099	<0.12	<0.00099	<0.00094	<0.00091	<0.001	<0.0011	<0.001	<0.00088	<0.00098	<0.0009	<0.0011	<0.00096	<0.00097	<0.00096	<0.00095	<0.0012	<0.0012	<0.00093
Chloroform	67-66-3	mg/kg	<0.0005	<0.059	<0.0018	<0.0017	<0.0016	<0.0018	<0.0019	<0.0018	<0.0016	<0.0018	<0.0016	<0.0019	<0.0017	<0.0017	<0.0017	<0.0017	<0.0021	<0.0021	<0.0017
Chloromethane	74-87-3	mg/kg	<0.00099	<0.12	<0.00089	<0.00085	<0.00082	<0.00091	<0.00095	<0.00091	<0.00079	<0.00089	<0.00081	<0.00097	<0.00087	<0.00087	<0.00086	<0.00085	<0.0011	<0.0011	<0.00084
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.0005	<0.059	<0.0015	<0.0014	<0.0014	<0.0015	<0.0016	<0.0015	<0.0013	<0.0015	<0.0014	<0.0016	<0.0014	<0.0015	<0.0014	<0.0014	<0.0018	<0.0018	<0.0014
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.0005	<0.059	<0.00049	<0.00047	<0.00045	<0.00051	<0.00053	<0.0005	<0.00044	<0.00049	<0.00045	<0.00054	<0.00048	<0.00049	<0.00048	<0.00047	<0.00059	<0.00058	<0.00047
Cyclohexane	110-82-7	mg/kg	<0.0005	12	<0.0012	<0.0011	<0.0011	<0.0012	<0.0013	<0.0012	<0.0011	<0.0012	<0.0011	<0.0013	<0.0012	<0.0012	<0.0011	<0.0011	<0.0014	<0.0014	<0.0011
Dibromochloromethane	124-48-1	mg/kg	<0.0005	<0.059	<0.00049	<0.00047	<0.00045	<0.00051	<0.00053	<0.0005	<0.00044	<0.00049	<0.00045	<0.00054	<0.00048	<0.00049	<0.00048	<0.00047	<0.00059	<0.00058	<0.00047
Dichlorodifluoromethane	75-71-8	mg/kg	<0.0005	<0.059	<0.0018	<0.0017	<0.0016	<0.0018	<0.0019	<0.0018	<0.0016	<0.0018	<0.0016	<0.0019	<0.0017	<0.0017	<0.0017	<0.0017	<0.0021	<0.0021	<0.0017
Ethylbenzene	100-41-4	mg/kg	1.9	3.3	<0.00089	<0.00085	<0.00082	<0.00091	<0.00095	0.017	<0.00079	<0.00089	<0.00081	<0.00097	<0.00087	<0.00087	<0.00086	<0.00085	<0.0011	0.0084	<0.00084
Isopropylbenzene	98-82-8	mg/kg	2.3	1.6	<0.00099	<0.00094	<0.00091	<0.001	<0.0011	<0.001	<0.00088	<0.00098	<0.0009	<0.0011	<0.00096	<0.00097	<0.00096	<0.00095	<0.0012	0.0013 J	<0.00093
Methyl acetate	79-20-9	mg/kg	<0.0005	<0.059	<0.00099	<0.00094	<0.00091	<0.001	<0.0011	<0.001	<0.00088	<0.00098	<0.0009	<0.0011	<0.00096	<0.00097	<0.00096	<0.00095	<0.0012	<0.0012	<0.00093
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.0005	<0.059	<0.0019	<0.0018	<0.0017	<0.0019	<0.002	<0.0019	<0.0017	<0.0019	<0.0017	<0.002	<0.0018	<0.0018	<0.0018	<0.0018	<0.0023	<0.0022	<0.0018
Methylcyclohexane	108-87-2	mg/kg	<0.0005	47	<0.0015	<0.0014	<0.0014	<0.0015	<0.0016	0.0023 J	<0.0013	<0.0015	<0.0014	<0.0016	<0.0014	<0.0015	<0.0014	<0.0014	<0.0018	<0.0018	<0.0014
Methylene chloride	75-09-2	mg/kg	<0.00099	<0.12	<0.0025	<0.0024	<0.0023	0.0034 J	0.0049 J	0.0032 J	0.0036 JH	<0.0025	<0.0023	<0.0027	<0.0024	<0.0024	<0.0024	<0.0024	<0.003	<0.0029	<0.0023
Naphthalene	91-20-3	mg/kg	<0.0005	2.3	<0.00079	<0.00075	<0.00072	<0.00081	<0.00084	0.056	<0.0007	<0.00079	<0.00072	<0.00086	<0.00077	<0.00078 J	<0.00076	<0.00076	<0.00095	0.0025 J	<0.00075
n-Butylbenzene	104-51-8	mg/kg	<0.0005	0.5 J	<0.00059	<0.00057	<0.00054	<0.00061	<0.00063	<0.0006	<0.00053	<0.00059	<0.00054	<0.00064	<0.00058	<0.00058	<0.00057	<0.00057	<0.00071	<0.0007	<0.00056
n-Propylbenzene	103-65-1	mg/kg	7.3	2.1	<0.00089	<0.00085	<0.00082	<0.00091	<0.00095	0.0015 J	<0.00079	<0.00089	<0.00081	<0.00097	<0.00087	<0.00087 J	<0.00086	<0.00085	<0.0011	<0.0011	<0.00084
sec-Butylbenzene	135-98-8	mg/kg	0.15	0.9	<0.00059	<0.00057	<0.00054	<0.00061	<0.00063	0.0011 J	<0.00053	<0.00059	<0.00054	<0.00064	<0.00058	<0.00058 J	<0.00057	<0.00057	<0.00071	<0.0007	<0.00056
Styrene	100-42-5	mg/kg	<0.0005	0.099 J	<0.00059	<0.00057	<0.00054	<0.00061	<0.00063	<0.0006	<0.00053	<0.00059	<0.00054	<0.00064	<0.00058	<0.00058	<0.00057	<0.00057	<0.00071	<0.0007	<0.00056
tert-Butylbenzene	98-06-6	mg/kg	<0.0005	0.55 J	<0.00059	<0.00057	<0.00054	<0.00061	<0.00063	<0.0006	<0.00053	<0.00059	<0.00054	<0.00064	<0.00058	<0.00058	<0.00057	<0.00057	<0.00071	<0.0007	<0.00056
Tetrachloroethene	127-18-4	mg/kg	<0.0006	<0.071	<0.00099	<0.00094	<0.00091	<0.001	<0.0011	<0.001	<0.00088	<0.00098	<0.0009	<0.0011	<0.00096	<0.00097	<0.00096	<0.00095	<0.0012	<0.0012	<0.00093
Toluene	108-88-3	mg/kg	<0.0005	<0.059	<0.00069	<0.00066	<0.00063	<0.00071	<0.00074	0.027	<0.00062	<0.00069	<0.00063	<0.00075	<0.00067	<0.00068	<0.00067	<0.00066	<0.00083	0.0071	<0.00065
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.0005	<0.059	<0.00089	<0.00085	<0.00082	<0.00091	<0.00095	<0.00091	<0.00079	<0.00089	<0.00081	<0.00097	<0.00087	<0.00087	<0.00086	<0.00085	<0.0011	<0.0011	<0.00084
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.0005	<0.059	<0.00049	<0.00047	<0.00045	<0.00051	<0.00053	<0.0005	<0.00044	<0.00049	<0.00045	<0.00054	<0.00048	<0.00049	<0.00048	<0.00047	<0.00059	<0.00058	<0.00047
Trichloroethene	79-01-6	mg/kg	<0.0005	<0.059	<0.0016	<0.0015	<0.0014	<0.0016	<0.0017	<0.0016	<0.0014	<0.0016	<0.0014	<0.0017	<0.0015	<0.0016	<0.0015	<0.0015	<0.0019	<0.0019	<0.0015
Trichlorofluoromethane	75-69-4	mg/kg	<0.0005	<0.059	<0.00079	<0.00075	<0.00072	<0.00081	<0.00084	<0.00081	<0.0007	<0.00079	<0.00072	<0.00086	<0.00077	<0.00078	<0.00076	<0.00076	<0.00095	<0.00093	<0.00075
Vinyl chloride	75-01-4	mg/kg	<0.0005	<0.059	<0.00099	<0.00094	<0.00091	<0.001	<0.0011	<0.001	<0.00088	<0.00098	<0.0009	<0.0011	<0.00096	<0.00097	<0.00096	<0.00095	<0.0012	<0.0012	<0.00093
Xylenes, Total	1330-20-7	mg/kg	<0.0015	2.8	<0.0026	<0.0025	<0.0024	<0.0026	<0.0027	0.07	<0.0023	<0.0026	<0.0023	<0.0028	<0.0025	<0.0025	<0.0025	<0.0025	<0.0031	0.018	<0.0024
SEMIVOLATILE ORGANIC COMPOUNDS																					
1,1´-Biphenyl	92-52-4	mg/kg	<0.0037	<0.004	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	1	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	0.0044 J	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
1-Methylnaphthalene#	90-12-0	mg/kg	<0.0029	1.9	<0.0019	0.0031 J	<0.0019	<0.0017	0.002 J	4.8	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	0.012	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0035	<0.0038 JL	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.0042	<0.0045 JL	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0028	<0.003 JL	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
2 4-Dimethylphenol	105-67-9	mg/kg	<0.0042	<0.0045 JL	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
2 4-Dinitrophenol	51-28-5	mg/kg	<0.0042 JL	<0.0045 JL	<0.0038	<0.0038	<0.004	<0.0036	<0.0037	<0.004	<0.004	<0.0042	<0.0038	<0.0041 JL	<0.0041 JL	<0.0039	<0.0039	<0.0039	<0.0043	<0.0041	<0.0039 JL
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.0042	<0.0045	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.0041	<0.0044	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
2-Chloronaphthalene	91-58-7	mg/kg	<0.0052	<0.0056	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
2-Chlorophenol	95-57-8	mg/kg	<0.0041	<0.0044 JL	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
2-Methylnaphthalene	91-57-6	mg/kg	<0.0034	2	<0.0019	0.0061 J	<0.0019	0.0037 J	0.0066 J	7.5	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	0.036	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
2-Methylphenol	95-48-7	mg/kg	<0.0037	<0.004 JL	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	2.7	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	0.012	<0.0019 JL
2-Nitroaniline	88-74-4	mg/kg	<0.0042	<0.0045	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
2-Nitrophenol	88-75-5	mg/kg	<0.0058	<0.0063 JL	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
3&4-Methylphenol	106-44-5	mg/kg	<0.0035	<0.0038 JL	<0.0019	0.0024 J	<0.0019	<0.0017	<0.0018	3.4	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	0.0022 J	<0.0019	<0.0019	<0.0021	0.0028 J	<0.0019 JL
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0039	<0.0042	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
3-Nitroaniline	99-09-2	mg/kg	<0.0033	<0.0036	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.0042	<0.0045 JL	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.0042	<0.0045	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.0042	<0.0045 JL	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
4-Chloroaniline	106-47-8	mg/kg	<0.0028	<0.003	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0028	<0.003	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
4-Nitroaniline	100-01-6	mg/kg	<0.0042	<0.0045	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
4-Nitrophenol	100-02-7	mg/kg	<0.0048	<0.0052 JL	<0.0038	<0.0038	<0.004	<0.0036	<0.0037	<0.004	<0.004	<0.0042	<0.0038	<0.0041	<0.0041 JL	<0.0039	<0.0039	<0.0039	<0.0043	<0.0041	<0.0039 JL
Acenaphthene	83-32-9	mg/kg	<0.0028	0.11	0.0021 J	<0.0018	<0.0019	<0.0017	<0.0018	0.23	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	0.0098	<0.0019	<0.0019	<0.0021	0.0074 J	<0.0019 JL
Acenaphthylene	208-96-8	mg/kg	<0.0028	0.17	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	0.081	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	0.0074 J	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Acetophenone	98-86-2	mg/kg	0.0089 U	<0.0033	<0.0019	0.0024 U	<0.0019	<0.0017	0.01 U	0.91	<0.0019	0.0027 U	<0.0018	<0.002	<0.002 JL	0.0045 J	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Anthracene	120-12-7	mg/kg	<0.0028	0.067	0.0044 J	0.0047 J	<0.0019	0.0024 J	<0.0018	0.094	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	0.046	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Benz(a)anthracene	56-55-3	mg/kg	<0.0035	0.0073 J	0.014	0.025	0.0042 J	0.014	0.0065 J	0.098	0.0029 J	<0.0021	<0.0018	<0.002	0.0027 JL	0.13	<0.0019	<0.0019	<0.0021	<0.002	0.0063 JL
Benzaldehyde	100-52-7	mg/kg	0.0089 JL	<0.0063 JL	<0.0019	<0.0018 JL	0.0047 J	0.0076	0.01	<0.002	0.0061 J	0.0077 J	<0.0018 JL	<0.002 JL	<0.002 JL	<0.0019 JL	<0.0019 JL	<0.0019 JL	<0.0021 JL	<0.002 JL	<0.0019 JL
Benzo(a)pyrene	50-32-8	mg/kg	<0.0029	0.0038 J	0.012	0.027	0.0044 J	0.016	0.0067 J	0.087	0.0026 J	<0.0021	<0.0018	<0.002	0.0027 UJL	0.18	<0.0019	<0.0019	<0.0021	<0.002	0.0045 JL
Benzo(b)fluoranthene	205-99-2	mg/kg	<0.0042	<0.0045	0.018	0.032	0.0031 J	0.017	0.0079	0.059	0.0033 J	<0.0021	<0.0018	<0.002	0.0032 JL	0.17	<0.0019	<0.0019	<0.0021	<0.002	0.0079 JL
Benzo(g h i)perylene	191-24-2	mg/kg	<0.0037	<0.004	0.011	0.024	0.0055 J	0.013	0.0069 J	0.078	0.0029 J	0.0084 J	<0.0019	<0.0021	0.0022 UJL	0.11	<0.002	<0.002	<0.0022	<0.0021	0.0035 JL
Benzo(k)fluoranthene	207-08-9	mg/kg	<0.0042	<0.0045	0.0081	0.014	<0.0019	0.009	0.0037 J	0.013	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	0.11	<0.0019	<0.0019	<0.0021	<0.002	0.0024 JL
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.003	<0.0033	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0035	<0.0038	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0034	<0.0037	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	<0.0084	<0.009	0.0051 U	0.012	0.0069 U	0.0088 U	0.0051 U	<0.002	0.015	0.0065 U	<0.0018	0.0081 U	<0.002 JL	0.019 U	0.0063 U	0.007 U	<0.0021	0.006 U	0.015 UJL
Butyl benzyl phthalate	85-68-7	mg/kg	<0.0032	<0.0034	<0.0032	<0.0032	<0.0034	0.0047 J	<0.0031	<0.0034	<0.0034	<0.0036	<0.0032	<0.0035	<0.0035 JL	<0.0033	<0.0033	<0.0033	<0.0036	<0.0035	<0.0033 JL
Caprolactam	105-60-2	mg/kg	<0.003	<0.0033	<0.0023	<0.0023	<0.0024	<0.0022	<0.0022	<0.0025	0.0047 J	<0.0026	<0.0023	<0.0025	<0.0025 JL	<0.0024	<0.0024	<0.0024	<0.0026	<0.0025	0.0067 JL
Carbazole	86-74-8	mg/kg	<0.0028	<0.003	0.003 J	0.0036 J	<0.0019	0.0022 J	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	0.025	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Chrysene	218-01-9	mg/kg	<0.0037	0.01	0.014	0.027	0.0048 J	0.014	0.0073 J	0.16	0.0027 U	<0.0021	<0.0018	<0.002	0.0033 JL	0.19	<0.0019	<0.0019	<0.0021	<0.002	0.0065 JL
Dibenz(a h)anthracene	53-70-3	mg/kg	<0.0028	<0.003	0.0038 J	<0.0023	0.0024 J	0.0036 J	0.0039 J	0.038	<0.0024	<0.0026	<0.0023	<0.0025	<0.0025 JL	0.051	<0.0024	<0.0024	<0.0026	<0.0025	<0.0024 JL
Dibenzofuran	132-64-9	mg/kg	<0.0028	0.34	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	0.23	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	0.008	<0.0019	<0.0019	<0.0021	0.003 J	<0.0019 JL
Diethyl phthalate	84-66-2	mg/kg	<0.0042	<0.0045	<0.0019	<0.0018	0.0026 U	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	0.002 UJL
Dimethyl phthalate	131-11-3	mg/kg	<0.003	<0.0033	<0.0023	<0.0023	<0.0024	<0.0022	<0.0022	<0.0025	<0.0024	<0.0026	<0.0023	<0.0025	<0.0025 JL	<0.0024	<0.0024	<0.0024	<0.0026	<0.0025	<0.0024 JL
Di-n-butyl phthalate	84-74-2	mg/kg	<0.0032	0.035 U	<0.0023	0.0047 U	0.0064 J	0.004 U	0.004 U	0.033	0.0043 U	0.0053 U	<0.0023	<0.0025	<0.0025 JL	<0.0024	<0.0024	<0.0024	<0.0026	<0.0025	0.003 UJL
Di-n-octyl phthalate	117-84-0	mg/kg	<0.0037	<0.004	<0.0023	0.0023 U	<0.0024	<0.0022	<0.0022	<0.0025	<0.0024	<0.0026	<0.0023	0.0027 U	<0.0025 JL	<0.0024	<0.0024	<0.0024	<0.0026	<0.0025	<0.0024 JL
Fluoranthene	206-44-0	mg/kg	<0.0028	0.024	0.02	0.036	0.0024 J	0.024	0.0079	0.087	0.0048 J	0.0022 J	<0.0018	<0.002	0.003 UJL	0.22	<0.0019	<0.0019	<0.0021	<0.002	0.013 JL
Fluorene	86-73-7	mg/kg	<0.0028	0.25	<0.0019	0.0024 J	<0.0019	<0.0017	<0.0018	0.39	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	0.011	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			ESSB08	ESSB08	ESSB10	ESSB10	ESSB10	ESSB11	ESSB11	ESSB11	ESSB12	ESSB12	ESSB13	ESSB13	ESSB13	ESSB14	ESSB14	ESSB14	ESSB14	ESSB14	ESSB15
Depth Interval			4-5 ft	15-16 ft	0-0.5 ft	1-2 ft	5-6 ft	0-0.5 ft	1-2 ft	5-6 ft	1-2 ft	4-5 ft	1-2 ft	4-5 ft	9-10 ft	1-2 ft	4-5 ft	4-5 ft	9-10 ft	12-13 ft	1-2 ft
Sample Date			11/4/2010	11/4/2010	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/7/2012
Analyte	CAS No.	Units																			
Hexachlorobenzene	118-74-1	mg/kg	<0.0033	<0.0036	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Hexachlorobutadiene	87-68-3	mg/kg	<0.0056	<0.006	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0046	<0.0049	<0.0019	<0.0018 JL	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Hexachloroethane	67-72-1	mg/kg	<0.0049	<0.0053	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	<0.0044	<0.0048	0.0095	0.022	<0.0019	0.013	0.0061 J	0.031	0.0027 J	<0.0021	<0.0018	<0.002	<0.002 JL	0.09	<0.0019	<0.0019	<0.0021	<0.002	0.0037 JL
Isophorone	78-59-1	mg/kg	<0.0038	<0.0041	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Naphthalene	91-20-3	mg/kg	<0.0042	0.082	<0.0019	0.0029 J	<0.0019	0.0023 J	0.0037 J	1.8	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	0.019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
Nitrobenzene	98-95-3	mg/kg	<0.0042	<0.0045	<0.0019	<0.0018	<0.0019	<0.0017	<0.0018	<0.002	<0.0019	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.0019	<0.0019	<0.0021	<0.002	<0.0019 JL
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0051	<0.0055	<0.0023	<0.0023	<0.0024	<0.0022	<0.0022	<0.0025	<0.0024	<0.0026	<0.0023	<0.0025	<0.0025 JL	<0.0024	<0.0024	<0.0024	<0.0026	<0.0025	<0.0024 JL
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0028	<0.003	<0.0023	<0.0023	<0.0024	<0.0022	<0.0022	<0.0025	<0.0024	<0.0026	<0.0023	<0.0025	<0.0025 JL	<0.0024	<0.0024	<0.0024	<0.0026	<0.0025	<0.0024 JL
Pentachlorophenol	87-86-5	mg/kg	<0.0035 JL	<0.0038 JL	<0.0021	<0.0021	<0.0022	<0.0019	<0.002	<0.0022	<0.0022	<0.0023	<0.0021	<0.0022	<0.0023 JL	<0.0021	<0.0021	<0.0021	<0.0023	<0.0022	<0.0021 JL
Phenanthrene	85-01-8	mg/kg	0.006 J	0.34	0.014	0.021	<0.003	0.012	0.0052 J	2.4	0.0033 U	<0.0032	<0.0028	<0.0031	<0.0031 JL	0.12	<0.003	<0.003	<0.0032	<0.0031	0.0062 JL
Phenol	108-95-2	mg/kg	<0.0042	<0.0045 JL	<0.0023	<0.0023	<0.0024	<0.0022	<0.0022	2	<0.0024	<0.0026	<0.0023	<0.0025	<0.0025 JL	<0.0024	<0.0024	<0.0024	<0.0026	<0.0025	<0.0024 JL
Pyrene	129-00-0	mg/kg	<0.0028	0.018	0.017	0.036	0.0032 U	0.022	0.0084	0.2	0.0031 U	0.0026 U	<0.0018	<0.002	0.0033 JL	0.22	<0.0019	<0.0019	<0.0021	<0.002	0.011 JL

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			ESSB15	ESSB15	ESSS01	ESSS02	ESSS03	ESSS04	ESSS05	ESSS05	ESSS12	ESSS13	SPSB01	SPSB01	SPSB02	SPSB02	SPSB02	SPSB03	SPSB03	SPSB04	SPSB04
Depth Interval			4-5 ft	9-10 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	1-2 ft	2-3 ft	1-2 ft	2-3 ft	2-3 ft	1-2 ft	2-3 ft	1-2 ft	3-4 ft
Sample Date			3/7/2012	3/7/2012	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	1/4/2012	12/4/2012	12/2/2010	12/2/2010	12/2/2010	12/2/2010	12/2/2010	12/1/2010	12/1/2010	12/2/2010	12/2/2010
Analyte	CAS No.	Units																			
METALS																					
Aluminum	7429-90-5	mg/kg	8850	4480	4890	6540	10700	14700	7780	8790	7800	---	7970	11200	19500	8060 J	15200 J	10600	4410	17300	8660
Antimony	7440-36-0	mg/kg	<0.22	<0.23	<0.25	<0.3	<0.25	<0.28	<0.26	<0.27	<0.21	---	<0.27	<0 29	<0.28	<0.3	<0.25	<0 26	0.986	<0.28	<0.27
Arsenic	7440-38-2	mg/kg	2.55	2.26	2.35	2.61	6.68	5.32	7.03	6.6	2.54	4.22	2.13	4.59	4.85	1.76 J	5.78 J	3.92	94.5	8.74	1.62
Barium	7440-39-3	mg/kg	130	85.4	156	467	1180	301	1070	1000	224	---	488	157	799	70.2 J	762 J	181	212	1430	246
Beryllium	7440-41-7	mg/kg	0.606	0.321 J	0.272 J	0.406 J	0.531	0.811	0.521	0.56	0.563	---	0.47 J	0.639	0.635	0.409 J	0.502	0.496 J	0.226 J	0.53 J	0.371 J
Cadmium	7440-43-9	mg/kg	0.246 J	0.113 J	0.126 J	0.214 J	1.78	0.4 J	5.69	5.73	0.147 J	---	0.186 J	0.24 J	0.385 J	0.14 J	0.606	0.214 J	1.15	0.814	0.105 J
Chromium	7440-47-3	mg/kg	5.81	3.04	3.03	4.23	178	8.38	34.8	31.4	5.86	---	7.6	8.27	50	6.74 J	53.3 J	14.6	19.2	121	6.66
Cobalt	7440-48-4	mg/kg	3.92	2.38	2.24	2.94	6.51	5.79	5.42	4.99	3.48	---	2.92	3.8	5.13	2.38	4.17	3.46	2.78	7.2	2.57
Copper	7440-50-8	mg/kg	6.25	2.72	2.91	5.53	70.3	8.72	39.9	37.4	6.04	---	17.2	9.78	19.2	9.19 J	33.6 J	8.16	26	89	5.46
Lead#	7439-92-1	mg/kg	8.3	4.56	5.14	10.5	143	29.7	114	100	9.33	---	23.2	46.8	87.9	15.5 J	48.2 J	20.6	80.5	118	7.48
Manganese	7439-96-5	mg/kg	232	536	121	180	213	324	286	288	120	---	177	138	313	72.2 J	142 J	193	136	359	114
Nickel	7440-02-0	mg/kg	6.22	3.75	3.15	4.76	9.27	9	7.69	7.34	5.31	---	5.84	7.04	10.4	4.97 J	10.5 J	6.31	6.85	17.5	3.5
Selenium	7782-49-2	mg/kg	0.976	0.553 J	<0.25	<0.3	0.571	0.503 J	1.7	1.42	1.19	---	0.623	0.48 J	0.666	0.446 J	0.578	0.423 J	0.491 J	0.634	0.514 J
Silver	7440-22-4	mg/kg	<0.09	<0.092	<0.041	<0.048	0.378 J	<0.044	0.593	0.611	<0.083	---	0.0706 J	0.161 J	0.147 J	0.0549 J	0.169 J	0.0431 J	0.181 J	0.166 J	<0.044
Thallium	7440-28-0	mg/kg	0.112 J	0.102 J	0.174 J	0.15 J	0.167 J	0.226 J	0.158 J	0.164 J	0.188 U	---	0.144 J	0.141 J	0.166 J	0.093 J	0.171 J	0.13 J	<0.074	0.165 J	0.0953 J
Vanadium	7440-62-2	mg/kg	11.2	10.3	9.89	10.9	17.1	20.5	15.4	15.5	9.62	---	12.2	19.6	18.7	7.18 J	14.4 J	15.6	8.81	21.9	15.9
Zinc	7440-66-6	mg/kg	18.5	10.6	12.8	25.9	383	42.5	811	832	18.3	---	32.2	46.4	73.4	21.5 J	86.1 J	61.1	192	157	17.8
Mercury#	7439-97-6	mg/kg	0.00578	0.00299 J	0.00602	0.0133	1.98	0.0439	5.57 J	2.32 J	0.0124	0.0603	0.0122	0.0602	0.109	1.79 J	0.184 J	0.807	3.59	0.0479	0.0213
Cyanide	57-12-5	mg/kg	<0.6	<0.67	<0.65	<0.76	<0.65	0.733 J	0.683 J	0.685 J	4.55	---	<0.68	<0.73	<0.68	<0.76	<0.68	<0.69	<0.7	<0.76	<0.68
PESTICIDES and PCBs																					
4,4´-DDD	72-54-8	mg/kg	<0.00059	<0.00061	<0.00056	<0.00064	0.11 J	<0.0029	0.061 J	0.03 J	<0.00058	---	<0.0029	<0.00061	<0.0058	<0.032	<0.028	<0.0059	<0.0059	<0.064	<0.029
4,4´-DDE	72-55-9	mg/kg	<0.00059	<0.00061	<0.00056	<0.00064	0.033 J	<0.0029	<0.0058	<0.0058	<0.00058	---	<0.0029	<0.00061	<0.0058	<0.032	0.15 J	<0.0059	<0.0059	<0.064	<0.029
4,4´-DDT	50-29-3	mg/kg	<0.00059	<0.00061	<0.00056	0.0029 J	0.032 J	<0.0029	0.034 J	0.025 J	<0.00058	---	<0.0029	<0.00061	0.051	<0.032	<0.028	<0.0059	<0.0059	<0.064	<0.029
Aldrin	309-00-2	mg/kg	<0.00035	<0.00037	<0.00033	<0.00038	<0.0033	<0.0018	<0.0035	<0.0035	<0.00035	---	<0.0017	<0.00037	<0.0035	<0.019	<0.017	<0.0035	<0.0035	<0.038	<0.017
alpha-BHC	319-84-6	mg/kg	<0.00035	<0.00037	<0.00033	<0.00038	<0.0033	<0.0018	<0.0035	<0.0035	<0.00035	---	<0.0017	<0.00037	<0.0035	<0.019	<0.017	<0.0035	<0.0035	<0.038	<0.017
alpha-Chlordane	5103-71-9	mg/kg	<0.00023	<0.00024	<0.00022	<0.00025	<0.0022	<0.0012	<0.0023	<0.0023	<0.00023	---	<0.0011	<0.00024	<0.0023	<0.013	<0.011	<0.0024	0.1 J	<0.026	<0.011
beta-BHC	319-85-7	mg/kg	<0.00035	<0.00037	<0.00033	<0.00038	0.23	<0.0018	0.023 U	0.022 U	<0.00035	---	<0.0017	<0.00037	<0.0035	0.13	0.048 J	<0.0035	<0.0035	<0.038	<0.017
delta-BHC	319-86-8	mg/kg	<0.00023	<0.00024	<0.00022	<0.00025	<0.0022	<0.0012	<0.0023	<0.0023	<0.00023	---	<0.0011	<0.00024	<0.0023	<0.013	<0.011	<0.0024	0.49	<0.026	<0.011
Dieldrin	60-57-1	mg/kg	<0.00059	<0.00061	<0.00056	<0.00064	0.057 J	<0.0029	<0.0058	<0.0058	<0.00058	---	<0.0029	<0.00061	<0.0058	<0.032	<0.028	<0.0059	0.094	<0.064	<0.029
Endosulfan I	959-98-8	mg/kg	<0.00035	<0.00037	<0.00033	<0.00038	0.027 J	<0.0018	0.02	0.017 J	<0.00035	---	<0.0017	<0.00037	<0.0035	<0.019	<0.017	<0.0035	<0.0035	<0.038	<0.017
Endosulfan II	33213-65-9	mg/kg	<0.0007	<0.00073	<0.00067	<0.00076	0.024 J	<0.0035	<0.007	<0.007	<0.00069	---	<0.0034	<0.00073	<0.0069	<0.038	<0.034	<0.0071	<0.0071	<0.077	<0.034
Endosulfan sulfate	1031-07-8	mg/kg	<0.0007	<0.00073	<0.00067	<0.00076	0.032 J	<0.0035	<0.007	<0.007	<0.00069	---	<0.0034	<0.00073	<0.0069	<0.038	<0.034	<0.0071	<0.0071	<0.077	<0.034
Endrin	72-20-8	mg/kg	<0.0007	<0.00073	<0.00067	<0.00076	0.022 J	<0.0035	<0.007	<0.007	<0.00069	---	<0.0034	<0.00073	<0.0069	<0.038	<0.034	<0.0071	<0.0071	<0.077	<0.034
Endrin aldehyde	7421-93-4	mg/kg	<0.0007	<0.00073	<0.00067	<0.00076	0.1 J	<0.0035	<0.007	<0.007	<0.00069	---	<0.0034	<0.00073	<0.0069	<0.038	<0.034	<0.0071	<0.0071	<0.077	0.17 J
gamma-BHC	58-89-9	mg/kg	<0.00023	<0.00024	<0.00022	<0.00025	0.013 J	<0.0012	<0.0023	<0.0023	<0.00023	---	<0.0011	<0.00024	<0.0023	<0.013	<0.011	<0.0024	<0.0024	<0.026	<0.011
gamma-Chlordane	5103-74-2	mg/kg	<0.00023	<0.00024	<0.00022	<0.00025	0.21 J	<0.0012	0.023 J	0.03 J	<0.00023	---	<0.0011	<0.00024	<0.0023	<0.013	<0.011	<0.0024	0.1	<0.026	<0.011
Heptachlor	76-44-8	mg/kg	<0.00035	<0.00037	<0.00033	<0.00038	<0.0033	<0.0018	<0.0035	<0.0035	<0.00035	---	<0.0017	<0.00037	<0.0035	<0.019	<0.017	<0.0035	<0.0035	<0.038	<0.017
Heptachlor epoxide	1024-57-3	mg/kg	<0.00035	<0.00037	<0.00033	<0.00038	0.017 J	<0.0018	<0.0035	<0.0035	<0.00035	---	<0.0017	<0.00037	<0.0035	0.17 J	0.055 U	<0.0035	<0.0035	0.33 J	0.79 J
Methoxychlor	72-43-5	mg/kg	<0.004	<0.0042	<0.0038	<0.0043	<0.037	<0.02	<0.04	<0.039	<0.0039	---	<0.019	<0.0042	<0.039	<0.22	<0.19	<0.04	<0.04	<0.43	0.6 J
Toxaphene	8001-35-2	mg/kg	<0.0056	<0.0059	<0.0042	<0.0048	<0.042	<0.022	<0.044	<0.044	<0.0055	---	<0.022	<0.0047	<0.044	<0.24	<0.22	<0.045	<0.045	<0.48	<0.22
Aroclor 1016	12674-11-2	mg/kg	<0.0028	<0.0029	<0.0027	<0.0031	<0.026	<0.0028	<0.0028	<0.0028	<0.0028	---	<0.0028	<0.0029	<0.028	<0.031	<0.027	<0.0028	<0.0028	<0.031	<0.27
Aroclor 1221	11104-28-2	mg/kg	<0.0028	<0.0029	<0.0027	<0.0031	<0.026	<0.0028	<0.0028	<0.0028	<0.0028	---	<0.0028	<0.0029	<0.028	<0.031	<0.027	<0.0028	<0.0028	<0.031	<0.27
Aroclor 1232	11141-16-5	mg/kg	<0.0028	<0.0029	<0.0027	<0.0031	<0.026	<0.0028	<0.0028	<0.0028	<0.0028	---	<0.0028	<0.0029	<0.028	<0.031	<0.027	<0.0028	<0.0028	<0.031	<0.27
Aroclor 1242	53469-21-9	mg/kg	<0.0028	<0.0029	<0.0027	<0.0031	<0.026	<0.0028	<0.0028	<0.0028	<0.0028	---	<0.0028	<0.0029	<0.028	<0.031	<0.027	<0.0028	<0.0028	<0.031	<0.27
Aroclor 1248	12672-29-6	mg/kg	<0.0028	<0.0029	<0.0027	<0.0031	<0.026	<0.0028	<0.0028	<0.0028	<0.0028	---	<0.0028	<0.0029	<0.028	<0.031	<0.027	<0.0028	<0.0028	<0.031	<0.27
Aroclor 1254	11097-69-1	mg/kg	0.012 J	<0.0029	<0.0027	<0.0031	<0.026	<0.0028	<0.0028	<0.0028	<0.0028	---	<0.0028	<0.0029	<0.028	<0.031	<0.027	0.032	<0.0028	<0.031	<0.27
Aroclor 1260	11096-82-5	mg/kg	<0.0021	<0.0022	<0.002	<0.0023	0.29	<0.0021	0.19	0.12	<0.0021	---	0.012 J	<0.0022	0.13 J	0.15 J	<0.02 J	<0.0021	0.079	<0.023	<0.21
Total PCBs	TPCB	mg/kg	0.02005	<0.0098	<0.0091	<0.01045	0.368	<0.00945	0.1984	0.1284	<0.00945	---	0.0204	<0.0098	0.214	0.243	<0.091	0.04005	0.0874	<0.1045	<0.915
VOLATILE ORGANIC COMPOUNDS																					
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.00064	<0.00066	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00077	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.0016	<0.0016	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0019	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.00046	<0.00047	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00055	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.0012	<0.0012	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0014	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.0018	<0.0019	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0022	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
1 1-Dichloroethane	75-34-3	mg/kg	<0.00046	<0.00047	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00055	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
1,1-Dichloroethene	75-35-4	mg/kg	<0.0014	<0.0014	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0017	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.00083	<0.00085	<0.0006	<0.00075	<0.00066	<0.00071	<0.00084	<0.0008	<0.00099	---	<0.00052	<0.00053	<0.00051	<0.00054	<0.00056	<0.00057	<0.00054	<0.00062	<0.00052
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.00073	<0.00076	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00088	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	0.033
1 2-Dibromoethane	106-93-4	mg/kg	<0.00064	<0.00066	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00077	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.00073	<0.00076	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00088	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
1 2-Dichloroethane	107-06-2	mg/kg	<0.00055	<0.00057	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00066	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
1 2-Dichloropropane	78-87-5	mg/kg	<0.00046	<0.00047	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00055	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.00073	<0.00076	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00088	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	0.0055	<0.00045	<0.00052	<0.00044
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.00083	<0.00085	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00099	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.00064	<0.00066	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00077	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
2-Butanone	78-93-3	mg/kg	<0.002	<0.0021	<0.0014	<0.0018	<0.0015	<0.0017	<0.002	<0.0019	<0.0024	---	<0.0012	<0.0012	<0.0012	<0.0013	<0.0013	<0.0013	<0.0013	0.014	0.011
2-Hexanone	591-78-6	mg/kg	<0.0016	<0.0016	<0.00099	<0.0013	<0.0011	<0.0012	<0.0014	<0.0013	<0.0019	---	<0.00086	<0.00089	<0.00085	<0.00091	<0.00093	<0.00095	<0.0009	<0.001	<0.00087
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.00092	<0.00095	<0.00099	<0.0013	<0.0011	<0.0012	<0.0014	<0.0013	<0.0011	---	<0.00086	<0.00089	<0.00085	<0.00091	<0.00093	<0.00095	<0.0009	<0.001	<0.00087
Acetone	67-64-1	mg/kg	<0.0042	<0.0044	<0.002	<0.0025	<0.0022	<0.0024	<0.0028	<0.0027	<0.0051	---	<0.0017	0.035	<0.0017	<0.0018	<0.0019	0.079	<0.0018	0.097	0.12
Benzene#	71-43-2	mg/kg	<0.00055	<0.00057	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00066	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	0.0022 J	0.059
Bromodichloromethane	75-27-4	mg/kg	<0.00055	<0.00057	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00066	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Bromoform	75-25-2	mg/kg	<0.00064	<0.00066	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00077	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Bromomethane	74-83-9	mg/kg	<0.00092	<0.00095	<0.00099	<0.0013	<0.0011	<0.0012	<0.0014	<0.0013	<0.0011	---	<0.00086	<0.00089	<0.00085	<0.00091	<0.00093	<0.00095	<0.0009	<0.001	<0.00087
Carbon disulfide	75-15-0	mg/kg	<0.0015	<0.0015	<0.00099	<0.0013	<0.0011	<0.0012	<0.0014	<0.0013	<0.0018	---	<0.00086	<0.00089	<0.00085	<0.00091	<0.00093	<0.00095	<0.0009	<0.001	0.017
Carbon tetrachloride	56-23-5	mg/kg	<0.0011	<0.0011	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0013	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			ESSB15	ESSB15	ESSS01	ESSS02	ESSS03	ESSS04	ESSS05	ESSS05	ESSS12	ESSS13	SPSB01	SPSB01	SPSB02	SPSB02	SPSB02	SPSB03	SPSB03	SPSB04	SPSB04
Depth Interval			4-5 ft	9-10 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	1-2 ft	2-3 ft	1-2 ft	2-3 ft	2-3 ft	1-2 ft	2-3 ft	1-2 ft	3-4 ft
Sample Date			3/7/2012	3/7/2012	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	1/4/2012	12/4/2012	12/2/2010	12/2/2010	12/2/2010	12/2/2010	12/2/2010	12/1/2010	12/1/2010	12/2/2010	12/2/2010
Analyte	CAS No.	Units																			
Chlorobenzene	108-90-7	mg/kg	<0.00046	<0.00047	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00055	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Chloroethane	75-00-3	mg/kg	<0.00092	<0.00095	<0.00099	<0.0013	<0.0011	<0.0012	<0.0014	<0.0013	<0.0011	---	<0.00086	<0.00089	<0.00085	<0.00091	<0.00093	<0.00095	<0.0009	<0.001	<0.00087
Chloroform	67-66-3	mg/kg	<0.0017	<0.0017	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.002	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Chloromethane	74-87-3	mg/kg	<0.00083	<0.00085	<0.00099	<0.0013	<0.0011	<0.0012	<0.0014	<0.0013	<0.00099	---	<0.00086	<0.00089	<0.00085	<0.00091	<0.00093	<0.00095	<0.0009	<0.001	<0.00087
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.0014	<0.0014	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0017	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.00046	<0.00047	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00055	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Cyclohexane	110-82-7	mg/kg	<0.0011	<0.0011	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0013	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	0.026
Dibromochloromethane	124-48-1	mg/kg	<0.00046	<0.00047	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00055	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Dichlorodifluoromethane	75-71-8	mg/kg	<0.0017	<0.0017	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.002	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Ethylbenzene	100-41-4	mg/kg	<0.00083	<0.00085	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00099	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	0.0046 J	<0.00045	0.0044 J	0.12
Isopropylbenzene	98-82-8	mg/kg	<0.00092	<0.00095	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0011	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	0.0012 J	<0.00045	0.0046 J	0.023
Methyl acetate	79-20-9	mg/kg	<0.00092	<0.00095	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0011	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.0017	<0.0018	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0021	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Methylcyclohexane	108-87-2	mg/kg	<0.0014	<0.0014	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0017	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	0.057
Methylene chloride	75-09-2	mg/kg	<0.0023	<0.0024	0.0022 U	0.002 U	<0.0011	<0.0012	<0.0014	<0.0013	0.0034 J	---	<0.00086	<0.00089	<0.00085	<0.00091	<0.00093	<0.00095	<0.0009	<0.001	<0.00087
Naphthalene	91-20-3	mg/kg	<0.00073	<0.00076	<0.0005	0.00065 U	<0.00055	<0.00059	<0.0007 J	<0.00066 J	<0.00088	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	0.018	<0.00045	0.0067	0.11
n-Butylbenzene	104-51-8	mg/kg	<0.00055	<0.00057	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00066	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
n-Propylbenzene	103-65-1	mg/kg	<0.00083	<0.00085	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00099	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	0.0025 J	<0.00045	<0.00052	0.014
sec-Butylbenzene	135-98-8	mg/kg	<0.00055	<0.00057	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00066	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Styrene	100-42-5	mg/kg	<0.00055	<0.00057	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00066	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	0.013	0.007
tert-Butylbenzene	98-06-6	mg/kg	<0.00055	<0.00057	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00066	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Tetrachloroethene	127-18-4	mg/kg	<0.00092	<0.00095	<0.0006	<0.00075	<0.00066	<0.00071	<0.00084	<0.0008	<0.0011	---	<0.00052	<0.00053	<0.00051	<0.00054	<0.00056	<0.00057	<0.00054	<0.00062	<0.00052
Toluene	108-88-3	mg/kg	<0.00064	<0.00066	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00077	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	0.074
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.00083	<0.00085	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00099	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00046	<0.00047	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00055	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Trichloroethene	79-01-6	mg/kg	<0.0015	<0.0015	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0018	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Trichlorofluoromethane	75-69-4	mg/kg	<0.00073	<0.00076	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.00088	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Vinyl chloride	75-01-4	mg/kg	<0.00092	<0.00095	<0.0005	<0.00063	<0.00055	<0.00059	<0.0007	<0.00066	<0.0011	---	<0.00043	<0.00045	<0.00042	<0.00045	<0.00046	<0.00048	<0.00045	<0.00052	<0.00044
Xylenes, Total	1330-20-7	mg/kg	<0.0024	<0.0025	<0.0015	<0.0019	<0.0016	<0.0018	<0.0021	<0.002	<0.0029	---	<0.0013	<0.0013	<0.0013	<0.0014	<0.0014	0.0033 J	<0.0014	<0.0016	<0.0013
SEMIVOLATILE ORGANIC COMPOUNDS																					
1,1´-Biphenyl	92-52-4	mg/kg	<0.0019 JL	<0.002 JL	<0.0032	<0.0037	0.24	<0.0034	0.0049 J	<0.034	<0.0019	---	<0.033	<0.036	<0.033	<0.19	<0.033	<0.0034	<0.0034	0.7	24
1-Methylnaphthalene#	90-12-0	mg/kg	<0.0019 JL	<0.002 JL	<0.0026	<0.0029	0.51	<0.0027	0.015 J	0.054 J	0.0021 J	---	<0.026	<0.028	<0.027	0.59	<0.026	0.0036 J	0.0031 J	0.49	24
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0019 JL	<0.002 JL	<0.0031	<0.0036	<0.031	<0.0033	<0.0033	<0.033	<0.0019	---	<0.032	<0.034	<0.032	<0.18	<0.032	<0.0033	<0.0033	<0.18	<0.032
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.0019 JL	<0.002 JL	<0.0037	<0.0042	<0.036	<0.0039	<0.0039	<0.038	<0.0019	---	<0.038	<0.04	<0.038	<0.21	<0.038	<0.0039	<0.0039	<0.21	<0.038
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0019 JL	<0.002 JL	<0.0024	<0.0028	<0.024	<0.0026	<0.0026	<0.026	<0.0019	---	<0.025	<0.027	<0.025	<0.14	<0.025	<0.0026	<0.0026	<0.14	<0.025
2 4-Dimethylphenol	105-67-9	mg/kg	<0.0019 JL	<0.002 JL	<0.0037 JL	<0.0042 JL	<0.036 JL	<0.0039 JL	<0.0039 JL	<0.038 JL	<0.0038	---	<0.038	<0.04	<0.038	<0.21	<0.038	<0.0039	<0.0039	<0.21	<0.038
2 4-Dinitrophenol	51-28-5	mg/kg	<0.0039 JL	<0.004 JL	<0.0037 JL	<0.0042 JL	<0.036 JL	<0.0039 JL	<0.0039 JL	<0.038 JL	<0.0038	---	<0.038	<0.04	<0.038	<0.21	<0.038	<0.0039	<0.0039	<0.21	<0.038
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.0019 JL	<0.002 JL	<0.0037	<0.0042	<0.036	<0.0039	<0.0039	<0.038	<0.0019	---	<0.038	<0.04	<0.038	<0.21	<0.038	<0.0039	<0.0039	<0.21	<0.038
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.0019 JL	<0.002 JL	<0.0036	<0.0041	<0.035	<0.0038	<0.0037	<0.037	<0.0019	---	<0.037	<0.039	<0.037	<0.2	<0.036	<0.0038	<0.0038	<0.2	<0.037
2-Chloronaphthalene	91-58-7	mg/kg	<0.0019 JL	<0.002 JL	<0.0046	<0.0052	<0.045	<0.0048	<0.0048	<0.048	<0.0019	---	<0.047	<0.05	<0.047	<0.26	<0.047	<0.0048	<0.0048	<0.26	<0.047
2-Chlorophenol	95-57-8	mg/kg	<0.0019 JL	<0.002 JL	<0.0036	<0.0041	<0.035	<0.0038	<0.0037	<0.037	<0.0019	---	<0.037	<0.039	<0.037	<0.2	<0.036	<0.0038	<0.0038	<0.2	<0.037
2-Methylnaphthalene	91-57-6	mg/kg	<0.0019 JL	<0.002 JL	<0.003	<0.0034	1.9	0.0062 J	0.045 J	0.18 J	0.0041 J	---	<0.031	<0.033	<0.031	0.29 J	0.047 J	0.0055 J	0.0052 J	1.3	45
2-Methylphenol	95-48-7	mg/kg	<0.0019 JL	<0.002 JL	<0.0032	<0.0037	<0.032	<0.0034	<0.0034	<0.034	<0.0019	---	<0.033	<0.036	<0.033	<0.19	<0.033	<0.0034	0.0037 J	<0.18	0.68
2-Nitroaniline	88-74-4	mg/kg	<0.0019 JL	<0.002 JL	<0.0037	<0.0042	<0.036	<0.0039	<0.0039	<0.038	<0.0019	---	<0.038	<0.04	<0.038	<0.21	<0.038	<0.0039	<0.0039	<0.21	<0.038
2-Nitrophenol	88-75-5	mg/kg	<0.0019 JL	<0.002 JL	<0.0051	<0.0059	<0.051	<0.0054	<0.0054	<0.053	<0.0019	---	<0.053	<0.056	<0.053	<0.29	<0.052	<0.0054	<0.0054	<0.29	<0.053
3&4-Methylphenol	106-44-5	mg/kg	<0.0019 JL	<0.002 JL	<0.0031	<0.0036	<0.031	<0.0033	<0.0033	<0.033	<0.0019	---	<0.032	<0.034	<0.032	<0.18	<0.032	<0.0033	<0.0033	<0.18	0.85
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0019 JL	<0.002 JL	<0.0034	<0.0039	<0.034	<0.0037	<0.0036	<0.036	<0.0019	---	<0.035	<0.038	<0.036	<0.2	<0.035	<0.0036	<0.0036	<0.2	<0.035
3-Nitroaniline	99-09-2	mg/kg	<0.0019 JL	<0.002 JL	<0.0029	<0.0033	<0.029	<0.0031	<0.003	<0.03	<0.0019	---	<0.03	<0.032	<0.03	<0.17	<0.03	<0.0031	<0.0031	<0.17	<0.03
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.0019 JL	<0.002 JL	<0.0037	<0.0042	<0.036	<0.0039	<0.0039	<0.038	<0.0019	---	<0.038	<0.04	<0.038	<0.21	<0.038	<0.0039	<0.0039	<0.21	<0.038
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.0019 JL	<0.002 JL	<0.0037	<0.0042	<0.036	<0.0039	<0.0039	<0.038	<0.0019	---	<0.038	<0.04	<0.038	<0.21	<0.038	<0.0039	<0.0039	<0.21	<0.038
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.0019 JL	<0.002 JL	<0.0037	<0.0042	<0.036	<0.0039	<0.0039	<0.038	<0.0019	---	<0.038	<0.04	<0.038	<0.21	<0.038	<0.0039	<0.0039	<0.21	<0.038
4-Chloroaniline	106-47-8	mg/kg	<0.0019 JL	<0.002 JL	<0.0024	<0.0028	<0.024	<0.0026	<0.0026	<0.026	<0.0019	---	<0.025	<0.027	<0.025	<0.14	<0.025	<0.0026	<0.0026	<0.14	<0.025
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0019 JL	<0.002 JL	<0.0024	<0.0028	<0.024	<0.0026	<0.0026	<0.026	<0.0019	---	<0.025	<0.027	<0.025	<0.14	<0.025	<0.0026	<0.0026	<0.14	<0.025
4-Nitroaniline	100-01-6	mg/kg	<0.0019 JL	<0.002 JL	<0.0037	<0.0042	<0.036	<0.0039	<0.0039	<0.038	<0.0019	---	<0.038	<0.04	<0.038	<0.21	<0.038	<0.0039	<0.0039	<0.21	<0.038
4-Nitrophenol	100-02-7	mg/kg	<0.0039 JL	<0.004 JL	<0.0042	<0.0048	<0.042	<0.0045	<0.0044	<0.044	<0.0038	---	<0.043	<0.047	<0.044	<0.24	<0.043	<0.0045	<0.0045	<0.24	<0.043
Acenaphthene	83-32-9	mg/kg	<0.0019 JL	<0.002 JL	<0.0024	<0.0028	<0.024	<0.0026	<0.0026	<0.026	<0.0019	---	<0.025	<0.027	<0.025	0.41 J	<0.025	<0.0026	<0.0026	<0.14	1.1
Acenaphthylene	208-96-8	mg/kg	<0.0019 JL	<0.002 JL	<0.0024	<0.0028	<0.024	0.0054 J	0.0085 J	0.041 J	<0.0019	---	<0.025	<0.027	<0.025	0.29 J	<0.025	<0.0026	<0.0026	<0.14	0.56
Acetophenone	98-86-2	mg/kg	<0.0019 JL	<0.002 JL	<0.0027	<0.0031	2.8	0.014	0.11 J	0.54 J	0.0051 U	---	<0.027	<0.029	<0.028	2.6 J	0.43 J	0.0036 J	0.011	5.6	1.5
Anthracene	120-12-7	mg/kg	<0.0019 JL	<0.002 JL	<0.0024	<0.0028	0.054 J	0.011	0.012 J	0.067 J	0.0024 J	---	0.11	<0.027	<0.025	2.1 J	0.13 J	0.0033 J	0.016	1.9	3.8
Benz(a)anthracene	56-55-3	mg/kg	<0.0019 JL	<0.002 JL	<0.0031	0.01	0.11	0.022	0.017 J	0.089 J	0.0099	---	0.24	<0.034	<0.032	3.3 J	<0.032 J	<0.0033	<0.0033	0.63	0.71
Benzaldehyde	100-52-7	mg/kg	<0.0019 JL	<0.002 JL	<0.0051 JL	<0.0059 JL	<0.051 JL	<0.0054 JL	<0.0054 JL	<0.053 JL	0.0047 J	---	<0.053 JL	<0.056 JL	<0.053 JL	<0.29 JL	<0.052 JL	<0.0054	<0.0054	<0.29 JL	<0.053 JL
Benzo(a)pyrene	50-32-8	mg/kg	<0.0019 JL	<0.002 JL	<0.0026	0.011	0.3	0.037	0.033 J	<0.027 J	0.0091	---	<0.026	<0.028	<0.027	7.4 J	<0.026 J	<0.0027	<0.0027	<0.15	0.8
Benzo(b)fluoranthene	205-99-2	mg/kg	<0.0019 JL	<0.002 JL	<0.0037	0.015	<0.036	0.03	0.018 J	0.08 J	0.014	---	<0.038	<0.04	<0.038	1.4 J	<0.038 J	<0.0039	<0.0039	<0.21	<0.038
Benzo(g h i)perylene	191-24-2	mg/kg	<0.002 JL	<0.0021 JL	<0.0032	0.0096	0.44	0.028	0.065 J	0.37 J	0.021	---	<0.033	<0.036	<0.033	<0.19	<0.033	<0.0034	<0.0034	<0.18	<0.033
Benzo(k)fluoranthene	207-08-9	mg/kg	<0.0019 JL	<0.002 JL	<0.0037	0.0058 J	<0.036	0.028	0.014 J	0.081 J	0.0072 J	---	<0.038	<0.04	<0.038	1.5 J	<0.038 J	<0.0039	<0.0039	<0.21	<0.038
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.0019 JL	<0.002 JL	<0.0027	<0.0031	<0.026	<0.0028	<0.0028	<0.028	<0.0019	---	<0.027	<0.029	<0.028	<0.15	<0.027	<0.0028	<0.0028	<0.15	<0.027
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0019 JL	<0.002 JL	<0.0031	<0.0036	<0.031	<0.0033	<0.0033	<0.033	<0.0019	---	<0.032	<0.034	<0.032	<0.18	<0.032	<0.0033	<0.0033	<0.18	<0.032
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0019 JL	<0.002 JL	<0.003	<0.0034	<0.03	<0.0032	<0.0032	<0.031	<0.0019	---	<0.031	<0.033	<0.031	<0.17	<0.031	<0.0032	<0.0032	<0.17	<0.031
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	0.012 UJL	0.021 UJL	<0.0073	0.011 U	<0.073	0.017 U	<0.0077	<0.077	0.011	---	<0.075	<0.081	<0.076	<0.42	<0.075	<0.0078	0.0099	<0.42	<0.075
Butyl benzyl phthalate	85-68-7	mg/kg	<0.0033 JL	0.0035 UJL	<0.0028	<0.0032	<0.028	<0.0029	<0.0029	<0.029	0.0054 J	---	<0.029	<0.031	<0.029	<0.16	<0.028	<0.0029	<0.0029	<0.16	<0.029
Caprolactam	105-60-2	mg/kg	0.0036 JL	0.0071 JL	<0.0027	<0.0031	<0.026	<0.0028	<0.0028	<0.028	<0.0023	---	<0.027	<0.029	<0.028	<0.15	<0.027	<0.0028	<0.0028	<0.15	<0.027
Carbazole	86-74-8	mg/kg	<0.0019 JL	<0.002 JL	<0.0024	<0.0028	<0.024	0.0046 J	<0.0026	<0.026	0.0024 J	---	0.08	<0.027	<0.025	<0.14	0.073 J	<0.0026	<0.0026	<0.14	<0.025
Chrysene	218-01-9	mg/kg	<0.0019 JL	<0.002 JL	<0.0032	0.011	0.25	0.032	0.027 J	0.13 J	0.0088	---	0.41	<0.036	<0.033	2.8 J	<0.033 J	<0.0034	<0.0034	1.2	1.9
Dibenz(a h)anthracene	53-70-3	mg/kg	<0.0023 JL	<0.0024 JL	<0.0024	<0.0028	0.13	<0.0026	<0.0026	<0.026	0.0042 J	---	<0.025	<0.027	<0.025	<0.14	<0.025	<0.0026	<0.0026	<0.14	<0.025
Dibenzofuran	132-64-9	mg/kg	<0.0019 JL	<0.002 JL	<0.0024	<0.0028	0.075	<0.0026	0.0036 J	<0.026	<0.0019	---	<0.025	<0.027	<0.025	<0.14	<0.025	<0.0026	<0.0026	<0.14	<0.025
Diethyl phthalate	84-66-2	mg/kg	<0.0019 JL	0.0029 UJL	<0.0037	<0.0042	<0.036	<0.0039	<0.0039	<0.038	0.0021 U	---	<0.038	<0.04	<0.038	<0.21	<0.038	<0.0039	<0.0039	<0.21	<0.038
Dimethyl phthalate	131-11-3	mg/kg	<0.0023 JL	<0.0024 JL	<0.0027	<0.0031	<0.026	<0.0028	<0.0028	<0.028	<0.0023	---	<0.027	<0.029	<0.028	<0.15	<0.027	<0.0028	<0.0028	<0.15	<0.027
Di-n-butyl phthalate	84-74-2	mg/kg	0.0024 UJL	0.0033 UJL	<0.0028	<0.0032	<0.028	0.0037 U	<0.0029	<0.029	0.0065 J	---	<0.029	<0.031	<0.029	0.46	<0.028	<0.0029	<0.0029	<0.16	<0.029
Di-n-octyl phthalate	117-84-0	mg/kg	<0.0023 JL	<0.0024 JL	<0.0032	<0.0037	<0.032	<0.0034	<0.0034	<0.034	<0.0023	---	<0.033	<0.036	<0.033	<0.19	<0.033	<0.0034	<0.0034	<0.18	<0.033
Fluoranthene	206-44-0	mg/kg	<0.0019 JL	<0.002 JL	0.0031 J	0.02	0.091	0.047	0.034 J	0.18 J	0.015	---	0.59	0.082	0.11	1.5 J	<0.025 J	<0.0026	0.019	<0.14	1.1
Fluorene	86-73-7	mg/kg	<0.0019 JL	<0.002 JL	<0.0024	<0.0028	<0.024	<0.0026	<0.0026	<0.026	<0.0019	---	0.033 J	<0.027	<0.025	1.2	<0.025	<0.0026	<0.0026	0.71	7.9

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			ESSB15	ESSB15	ESSS01	ESSS02	ESSS03	ESSS04	ESSS05	ESSS05	ESSS12	ESSS13	SPSB01	SPSB01	SPSB02	SPSB02	SPSB02	SPSB03	SPSB03	SPSB04	SPSB04
Depth Interval			4-5 ft	9-10 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	1-2 ft	2-3 ft	1-2 ft	2-3 ft	2-3 ft	1-2 ft	2-3 ft	1-2 ft	3-4 ft
Sample Date			3/7/2012	3/7/2012	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	1/4/2012	12/4/2012	12/2/2010	12/2/2010	12/2/2010	12/2/2010	12/2/2010	12/1/2010	12/1/2010	12/2/2010	12/2/2010
Analyte	CAS No.	Units																			
Hexachlorobenzene	118-74-1	mg/kg	<0.0019 JL	<0.002 JL	<0.0029	<0.0033	<0.029	<0.0031	<0.003	<0.03	<0.0019	---	<0.03	<0.032	<0.03	<0.17	<0.03	<0.0031	<0.0031	<0.17	<0.03
Hexachlorobutadiene	87-68-3	mg/kg	<0.0019 JL	<0.002 JL	<0.0049	<0.0056	<0.048	<0.0052	<0.0051	<0.051	<0.0019	---	<0.05	<0.054	<0.051	<0.28	<0.05	<0.0052	<0.0052	<0.28	<0.05
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0019 JL	<0.002 JL	<0.004	<0.0046	<0.04	<0.0042	<0.0042	<0.042	<0.0019	---	<0.041	<0.044	<0.042	<0.23	<0.041	<0.0042	<0.0042	<0.23	<0.041
Hexachloroethane	67-72-1	mg/kg	<0.0019 JL	<0.002 JL	<0.0043	<0.005	<0.043	<0.0046	<0.0046	<0.045	<0.0019	---	<0.045	<0.048	<0.045	<0.25	<0.044	<0.0046	<0.0046	<0.25	<0.045
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	<0.0019 JL	<0.002 JL	<0.0039	0.0094	0.11	0.025	0.021	<0.041	0.0081	---	<0.04	<0.043	<0.04	<0.22	<0.04	<0.0041	<0.0041	<0.22	<0.04
Isophorone	78-59-1	mg/kg	<0.0019 JL	<0.002 JL	<0.0033	<0.0038	<0.033	<0.0035	<0.0035	<0.035	<0.0019	---	<0.034	<0.037	<0.035	<0.19	<0.034	<0.0035	<0.0035	<0.19	<0.034
Naphthalene	91-20-3	mg/kg	<0.0019 JL	<0.002 JL	<0.0037	<0.0042	0.83	<0.0039	0.019	0.083	0.0043 J	---	<0.038	<0.04	<0.038	<0.21	<0.038	<0.0039	0.0046 J	0.57	9.2
Nitrobenzene	98-95-3	mg/kg	<0.0019 JL	<0.002 JL	<0.0037	<0.0042	<0.036	<0.0039	<0.0039	<0.038	<0.0019	---	<0.038	<0.04	<0.038	<0.21	<0.038	<0.0039	<0.0039	<0.21	<0.038
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0023 JL	<0.0024 JL	<0.0044	<0.0051	<0.044	<0.0047	<0.0047	<0.047	<0.0023	---	<0.046	<0.049	<0.046	<0.26	<0.046	<0.0047	<0.0047	<0.25	<0.046
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0023 JL	<0.0024 JL	<0.0024	<0.0028	<0.024	<0.0026	<0.0026	<0.026	<0.0023	---	<0.025	<0.027	<0.025	<0.14	<0.025	<0.0026	<0.0026	<0.14	<0.025
Pentachlorophenol	87-86-5	mg/kg	<0.0021 JL	<0.0022 JL	<0.0031	<0.0036	<0.031	<0.0033	<0.0033	<0.033	<0.0021	---	<0.032 JL	<0.034 JL	<0.032 JL	<0.18 JL	<0.032 JL	<0.0033	<0.0033	<0.18 JL	<0.032 JL
Phenanthrene	85-01-8	mg/kg	<0.0029 JL	<0.0031 JL	<0.0033	0.0087	0.26	0.015	0.032 J	0.18 J	0.008	---	0.41	0.067 J	<0.035	2.9 J	0.34 J	0.004 J	0.0085	1.8	61
Phenol	108-95-2	mg/kg	<0.0023 JL	<0.0024 JL	<0.0037	<0.0042	<0.036	<0.0039	<0.0039	<0.038	<0.0023	---	<0.038	<0.04	<0.038	<0.21	0.047 J	<0.0039	0.0047 J	<0.21	0.12
Pyrene	129-00-0	mg/kg	<0.0019 JL	<0.002 JL	<0.0024	0.016	0.17	0.038	0.038 J	0.14 J	0.014	---	0.4	0.089	0.13	13 J	<0.025 J	<0.0026	0.0076 J	3.1	4.7

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			SPSB05	SPSB05	SPSB06	SPSB06	SPSB07	SPSB07	SPSB08	SPSB08	SPSB08	SPSB09	SPSB09	SPSB09	SPSB10	SPSB10	SPSB11	SPSB11	SPSB11	SPSB12	SPSB13
Depth Interval			1-2 ft	2-3 ft	1-2 ft	2-3 ft	1-2 ft	3-4 ft	1-2 ft	3-4 ft	7-8 ft	1-2 ft	1-2 ft	2-3 ft	1-2 ft	3-4 ft	1-2 ft	3-4 ft	11-12 ft	2-3 ft	2-3 ft
Sample Date			12/3/2010	12/3/2010	12/3/2010	12/3/2010	12/1/2010	12/1/2010	12/1/2010	12/1/2010	12/1/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	1/3/2012	1/3/2012
Analyte	CAS No.	Units																			
METALS																					
Aluminum	7429-90-5	mg/kg	18100	19500	15900	16400	12500	9430	10400	9620	12600	8000 J	4740 J	12600	5540	6660	10200	11100	10600	---	---
Antimony	7440-36-0	mg/kg	0.365 J	<0.28	1.06	<0.28	<0.29	<0.31	0.61	<0.28	<0.35	<0.25	0.39 J	<0 28	<0.25	<0.28	<0.27	<0 27	<0.26	---	---
Arsenic	7440-38-2	mg/kg	7.3	5.49	5.28	4.69	4	4.09	11.5	8.94	7.47	3.24	2.3	2.32	2.2	6.25	2.81	2.75	2.99	5.85	4.83
Barium	7440-39-3	mg/kg	609	1770	2220	2780	176	183	2160	327	250	241	177	253	670	3810	175	249	100	---	---
Beryllium	7440-41-7	mg/kg	0.673	0.572	0.444 J	0.373 J	0.679	0.658	0.583	0.685	0.838	0.441 J	0.285 J	0.682	0.33 J	0.5 J	0.53 J	0.639	0.623	---	---
Cadmium	7440-43-9	mg/kg	9.07	4.35	0.696	0.344 J	0.261 J	0.211 J	19.6	0.305 J	0.212 J	0.208 J	0.223 J	0.252 J	0.208 J	0.163 J	0.19 J	0.146 J	0.0895 J	---	---
Chromium	7440-47-3	mg/kg	21	21.4	77.5	97	8.55	8.23	80.6	10.2	9.56	10.7	15.3	9.33	9.98	30.3	8.65	7.23	7.58	---	---
Cobalt	7440-48-4	mg/kg	4.47	4.36	4.78	3.97	4.73	4.79	8.57	5.28	6.51	3.49	2.02	4.31	2.19	3.76	3.75	4.24	4.52	---	---
Copper	7440-50-8	mg/kg	40.3	23.3	63.8	47.2	9.4	7.77	179	11.1	16.1	13.2	9.16	11.9	5.86	35.2	5.62	6.36	6.06	---	---
Lead#	7439-92-1	mg/kg	124	67.1	142	93.1	9.45	12.2	359	18.9	11.5	24.2 J	68.8 J	109	27.3	41.3	16.8	7.87	8.88	---	---
Manganese	7439-96-5	mg/kg	251	320	270	108	283	317	483	342	312	176 J	99.1 J	126	156	206	192	221	215	---	---
Nickel	7440-02-0	mg/kg	7.59	7.03	27.8	7.61	8.39	7.42	60.1	9.37	9.42	5.93	4.01	7.9	4.86	6.44	7.23	7.08	6.82	---	---
Selenium	7782-49-2	mg/kg	1.6	1.3	1.67	1.16	0.656	0.616 J	2.5	1.23	0.808	0.5 J	0.317 J	0.693	0.403 J	0.402 J	0.43 J	0.476 J	0.538	---	---
Silver	7440-22-4	mg/kg	0.909	0.447 J	0.212 J	0.16 J	0.0549 J	<0.05	1.6	<0.045	<0.056	0.0704 J	0.0475 J	0.123 J	0.0451 J	0.107 J	<0.044	<0.043	<0.042	---	---
Thallium	7440-28-0	mg/kg	0.221 J	0.174 J	0.148 J	0.108 J	0.162 J	0.222 J	0.196 J	0.156 J	0.186 J	0.138 J	0.072 J	0.142 J	0.072 J	0.156 J	0.117 J	0.147 J	0.171 J	---	---
Vanadium	7440-62-2	mg/kg	21.2	17.4	17.7	15	19.3	21.4	16.4	23.7	26.9	14.8 J	8.76 J	20.1	13	16	17.7	22.7	16.3	---	---
Zinc	7440-66-6	mg/kg	1160	711	190	119	58.3	42.3	1540	35.1	34.5	30	32.4	39.2	36.5	48.9	64	21.4	27.3	---	---
Mercury#	7439-97-6	mg/kg	2.2	0.582	0.581	2.39	0.108	0.0675	0.428	0.0312	0.011	0.0393 J	0.0821 J	0.00744	0.0195	0.176	0.00528	0.00224 J	0.00259 J	---	---
Cyanide	57-12-5	mg/kg	<0.7	<0.69	<0.68	<0.71	<0.72	<0.77	<0.69	<0.75	<0.96	<0.66	<0.62	<0.68	<0.67	<0.7	<0.67	<0.7	<0.69	---	---
PESTICIDES and PCBs																					
4,4´-DDD	72-54-8	mg/kg	<0.003	<0.00058	0.035 J	0.15 J	<0.003	<0.00064	0.04	<0.0032	0.071	0.027 J	0.029 J	0.024 J	0.086	<0.003	<0.0058	<0.00061	<0.0006	---	---
4,4´-DDE	72-55-9	mg/kg	<0.003	<0.00058	<0.0057	<0.03	<0.003	<0.00064	<0.0059	<0.0032	<0.0081	<0.0058	<0.0056	<0.006	<0.0057	<0.003	<0.0058	<0.00061	<0.0006	---	---
4,4´-DDT	50-29-3	mg/kg	<0.003	<0.00058	<0.0057	0.14 J	<0.003	0.0045	0.058	<0.0032	0.11	<0.0058	0.088	0.051	<0.0057	<0.003	<0.0058	<0.00061	<0.0006	---	---
Aldrin	309-00-2	mg/kg	<0.0018	<0.00035	<0.0034	<0.018	<0.0018	<0.00039	<0.0035	<0.0019	<0.0049	<0.0035	<0.0034	<0.0036	<0.0034	<0.0018	<0.0035	<0.00036	<0.00036	---	---
alpha-BHC	319-84-6	mg/kg	<0.0018	<0.00035	<0.0034	<0.018	<0.0018	0.0013 J	<0.0035	<0.0019	<0.0049	<0.0035	<0.0034	<0.0036	<0.0034	<0.0018	<0.0035	<0.00036	<0.00036	---	---
alpha-Chlordane	5103-71-9	mg/kg	<0.0012	<0.00023	<0.0023	<0.012	<0.0012	<0.00026	<0.0023	<0.0013	<0.0032	0.011 J	0.011 J	<0.0024	0.25 J	<0.0012	<0.0023	<0.00024	0.0015 J	---	---
beta-BHC	319-85-7	mg/kg	0.0091 U	<0.00035	0.063	0.11	<0.0018	0.002 J	0.021	<0.0019	0.023 J	0.018 U	<0.0034	<0.0036	<0.0034	<0.0018	<0.0035	<0.00036	<0.00036	---	---
delta-BHC	319-86-8	mg/kg	<0.0012	<0.00023	<0.0023	<0.012	<0.0012	<0.00026	<0.0023	<0.0013	<0.0032	<0.0023	<0.0023	<0.0024	<0.0023	<0.0012	<0.0023	<0.00024	<0.00024	---	---
Dieldrin	60-57-1	mg/kg	<0.003	<0.00058	<0.0057	<0.03	<0.003	<0.00064	<0.0059	<0.0032	<0.0081	<0.0058	0.025 J	0.012 J	<0.0057	<0.003	<0.0058	<0.00061	<0.0006	---	---
Endosulfan I	959-98-8	mg/kg	<0.0018	<0.00035	<0.0034	<0.018	<0.0018	<0.00039	<0.0035	<0.0019	<0.0049	<0.0035	<0.0034	<0.0036	<0.0034	<0.0018	<0.0035	<0.00036	<0.00036	---	---
Endosulfan II	33213-65-9	mg/kg	<0.0036	<0.0007	<0.0068	<0.036	<0.0036	<0.00077	<0.007	<0.0038	0.054 J	<0.0069	<0.0068	<0.0072	<0.0068	<0.0036	<0.0069	<0.00073	<0.00072	---	---
Endosulfan sulfate	1031-07-8	mg/kg	<0.0036	<0.0007	<0.0068	<0.036	<0.0036	<0.00077	<0.007	<0.0038	0.054 J	<0.0069	<0.0068	<0.0072	<0.0068	<0.0036	<0.0069	<0.00073	<0.00072	---	---
Endrin	72-20-8	mg/kg	<0.0036	<0.0007	0.038 J	<0.036	<0.0036	<0.00077	<0.007	<0.0038	<0.0097	<0.0069	<0.0068	<0.0072	<0.0068	<0.0036	<0.0069	<0.00073	<0.00072	---	---
Endrin aldehyde	7421-93-4	mg/kg	<0.0036	<0.0007	<0.0068	<0.036	<0.0036	<0.00077	<0.007	<0.0038	0.12	<0.0069	0.025 J	<0.0072	<0.0068	<0.0036	<0.0069	<0.00073	<0.00072	---	---
gamma-BHC	58-89-9	mg/kg	<0.0012	<0.00023	<0.0023	<0.012	<0.0012	<0.00026	<0.0023	<0.0013	<0.0032	<0.0023	<0.0023	<0.0024	<0.0023	<0.0012	<0.0023	<0.00024	<0.00024	---	---
gamma-Chlordane	5103-74-2	mg/kg	<0.0012	<0.00023	<0.0023	<0.012	<0.0012	<0.00026	<0.0023	<0.0013	<0.0032	0.018 J	0.011 J	0.01 J	0.31	<0.0012	<0.0023	<0.00024	0.0023	---	---
Heptachlor	76-44-8	mg/kg	<0.0018	<0.00035	<0.0034	<0.018	<0.0018	<0.00039	<0.0035	<0.0019	<0.0049	<0.0035	<0.0034	<0.0036	0.069	<0.0018	<0.0035	<0.00036	<0.00036	---	---
Heptachlor epoxide	1024-57-3	mg/kg	<0.0018	<0.00035	0.018 U	0.11 J	<0.0018	<0.00039	0.023 J	<0.0019	0.063 J	0.048	<0.0034	<0.0036	0.032 J	<0.0018	<0.0035	<0.00036	<0.00036	---	---
Methoxychlor	72-43-5	mg/kg	<0.02	<0.004	<0.039	<0.21	<0.02	<0.0044	<0.04	<0.021	0.26 J	<0.039	<0.038	<0.041	<0.038	<0.02	<0.039	<0.0041	<0.0041	---	---
Toxaphene	8001-35-2	mg/kg	<0.023	<0.0044	<0.043	<0.23	<0.023	<0.0049	<0.045	<0.024	<0.062	<0.044	<0.043	<0.046	<0.043	<0.023	<0.044	<0.0046	<0.0046	---	---
Aroclor 1016	12674-11-2	mg/kg	<0.0028	<0.0028	<0.014	<0.029	<0.0029	<0.0031	<0.0028	<0.003	<0.39	<0.0028	<0.0027	<0.0029	<0.027	<0.0029	<0.0028	<0.0029	<0.0029	---	---
Aroclor 1221	11104-28-2	mg/kg	<0.0028	<0.0028	<0.014	<0.029	<0.0029	<0.0031	<0.0028	<0.003	<0.39	<0.0028	<0.0027	<0.0029	<0.027	<0.0029	<0.0028	<0.0029	<0.0029	---	---
Aroclor 1232	11141-16-5	mg/kg	<0.0028	<0.0028	<0.014	<0.029	<0.0029	<0.0031	<0.0028	<0.003	<0.39	<0.0028	<0.0027	<0.0029	<0.027	<0.0029	<0.0028	<0.0029	<0.0029	---	---
Aroclor 1242	53469-21-9	mg/kg	<0.0028	<0.0028	<0.014	<0.029	<0.0029	<0.0031	<0.0028	<0.003	<0.39	<0.0028	<0.0027	<0.0029	<0.027	<0.0029	<0.0028	<0.0029	<0.0029	---	---
Aroclor 1248	12672-29-6	mg/kg	<0.0028	<0.0028	<0.014	<0.029	<0.0029	<0.0031	<0.0028	<0.003	<0.39	<0.0028	<0.0027	<0.0029	<0.027	<0.0029	<0.0028	<0.0029	<0.0029	---	---
Aroclor 1254	11097-69-1	mg/kg	<0.0028	<0.0028	<0.014	1.1	<0.0029	<0.0031	<0.0028	<0.003	<0.39	<0.0028	<0.0027	<0.0029	<0.027	<0.0029	<0.0028	<0.0029	<0.0029	---	---
Aroclor 1260	11096-82-5	mg/kg	<0.0021	<0.0021	<0.01	<0.022	0.016 J	<0.0023	0.22	<0.0023	<0.29	0.12 J	0.77 J	0.56	<0.02	0.014 J	<0.0021	<0.0022	<0.0022	---	---
Total PCBs	TPCB	mg/kg	<0.00945	<0.00945	<0.047	1.1835	0.0247	<0.01045	0.2284	<0.01015	<1.315	0.1284	0.7781	0.5687	<0.091	0.0227	<0.00945	<0.0098	<0.0098	---	---
VOLATILE ORGANIC COMPOUNDS																					
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1 1-Dichloroethane	75-34-3	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1,1-Dichloroethene	75-35-4	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.00054	<0.00056	<0.00062	<0.00062	<0.00055	<0.00061	<0.00054	<0.00059	<0.038	<0.00065	<0.00052	<0.00059	<0.00052	<0.00053	<0.00056	<0.00058	<0.00057	---	---
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	1	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1 2-Dibromoethane	106-93-4	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1 2-Dichloroethane	107-06-2	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1 2-Dichloropropane	78-87-5	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	0.003 J	0.013	<0.00045	<0.00049	0.13 J	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
2-Butanone	78-93-3	mg/kg	<0.0012	<0.0013	<0.0014	<0.0014	<0.0013	<0.0014	<0.0013	<0.0014	<0.089	<0.0015	<0.0012	<0.0014	<0.0012	<0.0012	<0.0013	<0.0014	<0.0013	---	---
2-Hexanone	591-78-6	mg/kg	<0.00089	<0.00093	<0.001	<0.001	<0.00091	<0.001	<0.0009	<0.00098	<0.063	<0.0011	<0.00086	<0.00098	<0.00087	<0.00089	<0.00093	<0.00097	<0.00096	---	---
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.00089	<0.00093	<0.001	<0.001	<0.00091	<0.001	<0.0009	<0.00098	<0.063	<0.0011	<0.00086	<0.00098	<0.00087	<0.00089	<0.00093	<0.00097	<0.00096	---	---
Acetone	67-64-1	mg/kg	<0.0018	<0.0019	<0.0021	<0.0021	<0.0018	0.015 J	<0.0018	0.067	<0.13	0.025 U	0.03 U	0.017 U	<0.0017	0.013 U	<0.0019	0.014 U	0.027 U	---	---
Benzene#	71-43-2	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	0.0052	0.86	0.0008 J	0.0006 J	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Bromodichloromethane	75-27-4	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Bromoform	75-25-2	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Bromomethane	74-83-9	mg/kg	<0.00089	<0.00093	<0.001	<0.001	<0.00091	<0.001	<0.0009	<0.00098	<0.063	<0.0011	<0.00086	<0.00098	<0.00087	<0.00089	<0.00093	<0.00097	<0.00096	---	---
Carbon disulfide	75-15-0	mg/kg	<0.00089	<0.00093	<0.001	<0.001	<0.00091	0.0018 J	<0.0009	<0.00098	<0.063	<0.0011	<0.00086	<0.00098	<0.00087	<0.00089	<0.00093	<0.00097	<0.00096	---	---
Carbon tetrachloride	56-23-5	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			SPSB05	SPSB05	SPSB06	SPSB06	SPSB07	SPSB07	SPSB08	SPSB08	SPSB08	SPSB09	SPSB09	SPSB09	SPSB10	SPSB10	SPSB11	SPSB11	SPSB11	SPSB12	SPSB13
Depth Interval			1-2 ft	2-3 ft	1-2 ft	2-3 ft	1-2 ft	3-4 ft	1-2 ft	3-4 ft	7-8 ft	1-2 ft	1-2 ft	2-3 ft	1-2 ft	3-4 ft	1-2 ft	3-4 ft	11-12 ft	2-3 ft	2-3 ft
Sample Date			12/3/2010	12/3/2010	12/3/2010	12/3/2010	12/1/2010	12/1/2010	12/1/2010	12/1/2010	12/1/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	1/3/2012	1/3/2012
Analyte	CAS No.	Units																			
Chlorobenzene	108-90-7	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Chloroethane	75-00-3	mg/kg	<0.00089	<0.00093	<0.001	<0.001	<0.00091	<0.001	<0.0009	<0.00098	<0.063	<0.0011	<0.00086	<0.00098	<0.00087	<0.00089	<0.00093	<0.00097	<0.00096	---	---
Chloroform	67-66-3	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Chloromethane	74-87-3	mg/kg	<0.00089	<0.00093	<0.001	<0.001	<0.00091	<0.001	<0.0009	<0.00098	<0.063	<0.0011	<0.00086	<0.00098	<0.00087	<0.00089	<0.00093	<0.00097	<0.00096	---	---
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Cyclohexane	110-82-7	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	0.65	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Dibromochloromethane	124-48-1	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Dichlorodifluoromethane	75-71-8	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Ethylbenzene	100-41-4	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	0.0022 J	0.0027 J	0.0013 J	<0.00049	3.3	0.0017 J	0.006	0.02	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Isopropylbenzene	98-82-8	mg/kg	0.0056	0.0055	0.0062	0.0066	<0.00046	0.0022 J	<0.00045	<0.00049	0.89	<0.00054	0.0032 J	0.011	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Methyl acetate	79-20-9	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Methylcyclohexane	108-87-2	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	3	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Methylene chloride	75-09-2	mg/kg	<0.00089	<0.00093	<0.001	<0.001	<0.00091	<0.001	<0.0009	<0.00098	<0.063	<0.0011	<0.00086	<0.00098	<0.00087	<0.00089	<0.00093	<0.00097	<0.00096	---	---
Naphthalene	91-20-3	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	0.0022 J	<0.00051	<0.00045	<0.00049	1.8	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
n-Butylbenzene	104-51-8	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
n-Propylbenzene	103-65-1	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	0.0013 J	0.0019 J	<0.00045	<0.00049	1.3	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
sec-Butylbenzene	135-98-8	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	0.65	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Styrene	100-42-5	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	0.0024 J	0.0019 J	0.0017 J	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
tert-Butylbenzene	98-06-6	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	0.11 J	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Tetrachloroethene	127-18-4	mg/kg	<0.00054	<0.00056	<0.00062	<0.00062	<0.00055	<0.00061	<0.00054	<0.00059	<0.038	<0.00065	<0.00052	<0.00059	<0.00052	<0.00053	<0.00056	<0.00058	<0.00057	---	---
Toluene	108-88-3	mg/kg	<0.00045	0.00088 J	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	0.7	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Trichloroethene	79-01-6	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Trichlorofluoromethane	75-69-4	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Vinyl chloride	75-01-4	mg/kg	<0.00045	<0.00046	<0.00052	<0.00052	<0.00046	<0.00051	<0.00045	<0.00049	<0.032	<0.00054	<0.00043	<0.00049	<0.00044	<0.00044	<0.00046	<0.00049	<0.00048	---	---
Xylenes, Total	1330-20-7	mg/kg	<0.0013	<0.0014	<0.0015	<0.0016	<0.0014	<0.0015	<0.0013	<0.0015	2.5	<0.0016	<0.0013	<0.0015	<0.0013	<0.0013	<0.0014	<0.0015	<0.0014	---	---
SEMIVOLATILE ORGANIC COMPOUNDS																					
1,1´-Biphenyl	92-52-4	mg/kg	<0.034	<0.034	0.16	<0.07	<0.0035	0.11	0.077 J	<0.0037	2	<0.033	<0.033	<0.035	<0.033	<0.035	<0.033	<0.035	<0.0035	---	---
1-Methylnaphthalene#	90-12-0	mg/kg	<0.027	<0.027	0.12 J	0.091 J	0.0051 J	0.35	0.19	<0.0029	24	<0.027	<0.026	<0.028	<0.026	<0.027	<0.027	<0.028	<0.0028	---	---
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.033	<0.033	<0.064 JL	<0.068	<0.0034	<0.0036	<0.033	<0.0035	<0.045	<0.032	<0.032	<0.034	<0.032	<0.032	<0.033	<0.032	<0.0034	---	---
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.039	<0.039	<0.075 JL	<0.08	<0.004	<0.0042	<0.039	<0.0042	<0.054	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
2,4-Dichlorophenol	120-83-2	mg/kg	<0.026	<0.026	<0.05 JL	<0.053	<0.0027	<0.0028	<0.026	<0.0028	<0.036	<0.025	<0.025	<0.027	<0.025	<0.026	<0.025	<0.027	<0.0026	---	---
2 4-Dimethylphenol	105-67-9	mg/kg	<0.039	<0.039	0.19 JL	0.15 J	<0.004	<0.0042	<0.039	<0.0042	<0.054	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
2 4-Dinitrophenol	51-28-5	mg/kg	<0.039	<0.039	<0.075 JL	<0.08	<0.004	<0.0042	<0.039	<0.0042	<0.054	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.039	<0.039	<0.075	<0.08	<0.004	<0.0042	<0.039	<0.0042	<0.054	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.038	<0.037	<0.073	<0.078	<0.0039	<0.0041	<0.037	<0.004	<0.052	<0.037	<0.036	<0.039	<0.036	<0.038	<0.037	<0.039	<0.0038	---	---
2-Chloronaphthalene	91-58-7	mg/kg	<0.049	<0.048	<0.093	<0.099	<0.0049	<0.0053	<0.048	<0.0052	<0.067	<0.047	<0.046	<0.049	<0.047	<0.049	<0.047	<0.05	<0.0049	---	---
2-Chlorophenol	95-57-8	mg/kg	<0.038	<0.037	<0.073 JL	<0.078	<0.0039	<0.0041	<0.037	<0.004	<0.052	<0.037	<0.036	<0.039	<0.036	<0.038	<0.037	<0.039	<0.0038	---	---
2-Methylnaphthalene	91-57-6	mg/kg	0.042 J	<0.032	0.3	0.53	0.019	0.4	0.74	0.004 J	37	0.048 J	<0.03	<0.033	<0.031	<0.032	<0.031	<0.033	<0.0032	---	---
2-Methylphenol	95-48-7	mg/kg	<0.034	<0.034	0.097 JL	0.11 J	0.0043 J	<0.0037	<0.034	<0.0037	<0.047	<0.033	<0.033	<0.035	<0.033	<0.035	<0.033	<0.035	<0.0035	---	---
2-Nitroaniline	88-74-4	mg/kg	<0.039	<0.039	<0.075	<0.08	<0.004	<0.0042	<0.039	<0.0042	<0.054	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
2-Nitrophenol	88-75-5	mg/kg	<0.055	<0.054	<0.1 JL	<0.11	<0.0055	<0.0059	<0.054	<0.0058	<0.075	<0.053	<0.052	<0.055	<0.052	<0.055	<0.053	<0.056	<0.0055	---	---
3&4-Methylphenol	106-44-5	mg/kg	<0.033	<0.033	0.27 JL	0.23	0.0062 J	<0.0036	0.038 J	<0.0035	<0.045	<0.032	<0.032	<0.034	<0.032	<0.033	<0.032	<0.034	<0.0034	---	---
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.037	<0.036	<0.071	<0.075	<0.0037	<0.004	<0.036	<0.0039	<0.05	<0.036	<0.035	<0.037	<0.035	<0.037	<0.036	<0.038	<0.0037	---	---
3-Nitroaniline	99-09-2	mg/kg	<0.031	<0.03	<0.059	<0.063	<0.0031	<0.0033	<0.03	<0.0033	<0.042	<0.03	<0.029	<0.031	<0.03	<0.031	<0.03	<0.032	<0.0031	---	---
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.039	<0.039	<0.075 JL	<0.08	<0.004	<0.0042	<0.039	<0.0042	<0.054	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.039	<0.039	<0.075	<0.08	<0.004	<0.0042	<0.039	<0.0042	<0.054	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.039	<0.039	<0.075 JL	<0.08	<0.004	<0.0042	<0.039	<0.0042	<0.054	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
4-Chloroaniline	106-47-8	mg/kg	<0.026	<0.026	<0.05	<0.053	<0.0027	<0.0028	<0.026	<0.0028	<0.036	<0.025	<0.025	<0.027	<0.025	<0.026	<0.025	<0.027	<0.0026 JL	---	---
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.026	<0.026	<0.05	<0.053	<0.0027	<0.0028	<0.026	<0.0028	<0.036	<0.025	<0.025	<0.027	<0.025	<0.026	<0.025	<0.027	<0.0026	---	---
4-Nitroaniline	100-01-6	mg/kg	<0.039	<0.039	<0.075	<0.08	<0.004	<0.0042	<0.039	<0.0042	<0.054	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
4-Nitrophenol	100-02-7	mg/kg	<0.045	<0.044	<0.087 JL	<0.092	<0.0046	<0.0049	<0.045	<0.0048	<0.062	<0.044	<0.043	<0.046	<0.043	<0.045	<0.044	<0.046	<0.0046	---	---
Acenaphthene	83-32-9	mg/kg	0.038 J	<0.026	0.5	0.32	<0.0027	0.017	<0.026	<0.0028	1.5	<0.025	<0.025	<0.027	<0.025	<0.026	<0.025	<0.027	<0.0026	---	---
Acenaphthylene	208-96-8	mg/kg	<0.026	<0.026	0.19	0.083 J	0.0032 J	0.05	0.073 J	<0.0028	<0.036	<0.025	<0.025	<0.027	<0.025	<0.026	<0.025	<0.027	<0.0026	---	---
Acetophenone	98-86-2	mg/kg	0.24	<0.028	3.3	1.6	0.026	<0.0031	0.38	<0.003	<0.039	0.1	0.029 J	<0.029	<0.027	<0.029	<0.028	<0.029	<0.0029	---	---
Anthracene	120-12-7	mg/kg	0.074 J	0.026 J	1.2	0.1 J	0.0067 J	0.02	0.043 J	<0.0028	1.5	0.11	0.035 J	<0.027	0.055 J	<0.026	<0.025	<0.027	<0.0026	---	---
Benz(a)anthracene	56-55-3	mg/kg	0.14	<0.033	4.3	<0.068	0.011	0.14	0.094	<0.0035	1.4	0.24	0.1	0.041 J	0.077	<0.033	<0.032	<0.034	<0.0034	---	---
Benzaldehyde	100-52-7	mg/kg	0.15 JL	<0.054 JL	1.3 JL	0.83 JL	<0.0055	<0.0059	<0.054	<0.0058	<0.075	<0.053 JL	<0.052 JL	<0.055 JL	<0.052 JL	<0.055 JL	<0.053 JL	<0.056 JL	<0.0055 JL	---	---
Benzo(a)pyrene	50-32-8	mg/kg	0.16	0.033 J	4.4	0.36	<0.0028	0.14	0.18	<0.0029	<0.037	0.36 J	<0.026 J	0.034 J	<0.026	<0.027	<0.027	<0.028	<0.0028	0.37	3
Benzo(b)fluoranthene	205-99-2	mg/kg	0.15	<0.039	5.6	0.094 J	<0.004	0.023	0.12	<0.0042	<0.054	0.21	0.092	<0.04	0.12	<0.039	<0.038	<0.04	<0.004	---	---
Benzo(g h i)perylene	191-24-2	mg/kg	0.36	<0.034	4.6	1.4	<0.0035	0.062	0.64	<0.0037	<0.047	0.25 J	<0.033 J	<0.035	<0.033	<0.035	<0.033	<0.035	<0.0035	---	---
Benzo(k)fluoranthene	207-08-9	mg/kg	0.083	<0.039	2.2	0.18	<0.004	0.052	0.054 J	<0.0042	<0.054	0.39 J	0.12 J	<0.04	0.13	<0.039	<0.038	<0.04	<0.004	---	---
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.029	<0.028	<0.055	<0.058	<0.0029	<0.0031	<0.028	<0.003	<0.039	<0.028	<0.027	<0.029	<0.027	<0.029	<0.028	<0.029	<0.0029	---	---
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.033	<0.033	<0.064	<0.068	<0.0034	<0.0036	<0.033	<0.0035	<0.045	<0.032	<0.032	<0.034	<0.032	<0.033	<0.032	<0.034	<0.0034	---	---
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.032	<0.032	<0.062	<0.065	<0.0033	<0.0035	<0.032	<0.0034	<0.044	<0.031	<0.03	<0.033	<0.031	<0.032	<0.031	<0.033	<0.0032	---	---
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	<0.078	<0.077	<0.15	<0.16	<0.008	<0.0085	<0.077	<0.0083	<0.11	<0.076	<0.074	<0.08	0.29	<0.079	<0.076	<0.08	<0.0079	---	---
Butyl benzyl phthalate	85-68-7	mg/kg	<0.03	<0.029	<0.057	<0.061	<0.003	<0.0032	<0.029	<0.0032	<0.041	<0.029	<0.028	<0.03	<0.028	<0.03	<0.029	<0.03	<0.003	---	---
Caprolactam	105-60-2	mg/kg	<0.029	<0.028	<0.055	<0.058	<0.0029	<0.0031	<0.028	<0.003	<0.039	<0.028	<0.027	<0.029	<0.027	<0.029	<0.028	<0.029	<0.0029	---	---
Carbazole	86-74-8	mg/kg	<0.026	<0.026	0.45	<0.053	<0.0027	<0.0028	<0.026	<0.0028	<0.036	<0.025	<0.025	<0.027	0.029 J	<0.026	<0.025	<0.027	<0.0026	---	---
Chrysene	218-01-9	mg/kg	0.12	<0.034	4.2	0.23	0.0083	0.08	0.14	<0.0037	1.8	0.31	0.1	0.04 J	0.25	<0.035	<0.033	<0.035	<0.0035	---	---
Dibenz(a h)anthracene	53-70-3	mg/kg	0.05 J	<0.026	1.5	0.3	<0.0027	0.018	0.11	<0.0028	<0.036	<0.025	<0.025	<0.027	<0.025	<0.026	<0.025	<0.027	<0.0026	---	---
Dibenzofuran	132-64-9	mg/kg	<0.026	<0.026	0.11 J	<0.053	<0.0027	0.043	0.038 J	<0.0028	<0.036	<0.025	<0.025	<0.027	<0.025	<0.026	<0.025	<0.027	<0.0026	---	---
Diethyl phthalate	84-66-2	mg/kg	<0.039	<0.039	<0.075	<0.08	<0.004	<0.0042	<0.039	<0.0042	<0.054	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
Dimethyl phthalate	131-11-3	mg/kg	<0.029	<0.028	<0.055	<0.058	<0.0029	<0.0031	<0.028	<0.003	<0.039	<0.028	<0.027	<0.029	<0.027	<0.029	<0.028	<0.029	<0.0029	---	---
Di-n-butyl phthalate	84-74-2	mg/kg	<0.03	<0.029	<0.057	<0.061	<0.003	0.046	<0.029	<0.0032	<0.041	<0.029	<0.028	<0.03	<0.028	<0.03	<0.029	<0.03	<0.003	---	---
Di-n-octyl phthalate	117-84-0	mg/kg	<0.034	<0.034	<0.066	<0.07	<0.0035	0.017	0.081	<0.0037	<0.047	<0.033	<0.033	<0.035	<0.033	<0.035	<0.033	<0.035	<0.0035	---	---
Fluoranthene	206-44-0	mg/kg	0.28	0.026 J	8.3	<0.053	0.014	0.092	0.074 J	<0.0028	1.1	0.59 J	0.22 J	0.064 J	0.36	<0.026	0.036 J	<0.027	<0.0026	---	---
Fluorene	86-73-7	mg/kg	<0.026	<0.026	0.47	<0.053	<0.0027	0.13	0.033 J	<0.0028	6.5	0.033 J	<0.025	<0.027	<0.025	<0.026	<0.025	<0.027	<0.0026	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			SPSB05	SPSB05	SPSB06	SPSB06	SPSB07	SPSB07	SPSB08	SPSB08	SPSB08	SPSB09	SPSB09	SPSB09	SPSB10	SPSB10	SPSB11	SPSB11	SPSB11	SPSB12	SPSB13
Depth Interval			1-2 ft	2-3 ft	1-2 ft	2-3 ft	1-2 ft	3-4 ft	1-2 ft	3-4 ft	7-8 ft	1-2 ft	1-2 ft	2-3 ft	1-2 ft	3-4 ft	1-2 ft	3-4 ft	11-12 ft	2-3 ft	2-3 ft
Sample Date			12/3/2010	12/3/2010	12/3/2010	12/3/2010	12/1/2010	12/1/2010	12/1/2010	12/1/2010	12/1/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	11/30/2010	1/3/2012	1/3/2012
Analyte	CAS No.	Units																			
Hexachlorobenzene	118-74-1	mg/kg	<0.031	<0.03	<0.059	<0.063	<0.0031	<0.0033	<0.03	<0.0033	<0.042	<0.03	<0.029	<0.031	<0.03	<0.031	<0.03	<0.032	<0.0031	---	---
Hexachlorobutadiene	87-68-3	mg/kg	<0.052	<0.051	<0.1	<0.11	<0.0053	<0.0057	<0.052	<0.0056	<0.071	<0.051	<0.05	<0.053	<0.05	<0.052	<0.051	<0.053	<0.0053	---	---
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.043	<0.042	<0.082	<0.087	<0.0043	<0.0046	<0.042	<0.0045	<0.058	<0.042	<0.041	<0.043	<0.041	<0.043	<0.042	<0.044	<0.0043	---	---
Hexachloroethane	67-72-1	mg/kg	<0.046	<0.046	<0.089	<0.095	<0.0047	<0.005	<0.046	<0.0049	<0.063	<0.045	<0.044	<0.047	<0.044	<0.046	<0.045	<0.047	<0.0047	---	---
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	0.12	<0.041	3.3	0.47	<0.0042	0.036	0.11	<0.0044	<0.057	<0.04	<0.039	<0.042	<0.04	<0.042	<0.04	<0.042	<0.0042	---	---
Isophorone	78-59-1	mg/kg	<0.036	<0.035	<0.068	<0.073	<0.0036	<0.0039	<0.035	<0.0038	<0.049	<0.035	<0.034	<0.036	<0.034	<0.036	<0.035	<0.036	<0.0036	---	---
Naphthalene	91-20-3	mg/kg	<0.039	<0.039	0.2	0.2	0.0096	0.34	0.33	<0.0042	3.5	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
Nitrobenzene	98-95-3	mg/kg	<0.039	<0.039	<0.075	<0.08	<0.004	<0.0042	<0.039	<0.0042	<0.054	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.048	<0.047	<0.091	<0.097	<0.0048	<0.0051	<0.047	<0.005	<0.065	<0.046	<0.045	<0.048	<0.045	<0.048	<0.046	<0.048	<0.0048	---	---
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.026	<0.026	<0.05	<0.053	<0.0027	<0.0028	<0.026	<0.0028	<0.036	<0.025	<0.025	<0.027	<0.025	<0.026	<0.025	<0.027	<0.0026	---	---
Pentachlorophenol	87-86-5	mg/kg	<0.033 JL	<0.033 JL	<0.064 JL	<0.068 JL	<0.0034	<0.0036	<0.033	<0.0035	<0.045	<0.032	<0.032	<0.034	<0.032	<0.033	<0.032	<0.034	<0.0034	---	---
Phenanthrene	85-01-8	mg/kg	0.25	<0.035	5.2	0.61	0.0074 J	0.2	0.17	<0.0038	25	0.26	0.071 J	<0.036	0.17	<0.036	<0.035	<0.036	<0.0036	---	---
Phenol	108-95-2	mg/kg	<0.039	<0.039	0.17 JL	0.12 J	0.0099	<0.0042	<0.039	<0.0042	<0.054	<0.038	<0.037	<0.04	<0.037	<0.039	<0.038	<0.04	<0.004	---	---
Pyrene	129-00-0	mg/kg	0.25	0.034 J	6.8	0.19	0.017	0.36	0.15	<0.0028	6.1	0.52 J	0.14 J	0.065 J	0.29	<0.026	<0.025	<0.027	<0.0026	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			SPSB14	SPSB15	SPSB15	SPSB16	SPSB17	SPSB18	SPSB19A	SPSB19A	SPSB19B	SPSB19B	SPSB19C	SPSB19C	SPSB19C	SPSB19C	SPSB20	SPSB20	SPSB20	SPSB21	SPSB21
Depth Interval			2-3 ft	2-3 ft	2-3 ft	2-3 ft	2-3 ft	2-3 ft	4-5 ft	9-10 ft	4-5 ft	9-10 ft	3-4 ft	9-10 ft	17-18 ft	19-20 ft	4-5 ft	9-10 ft	14-15 ft	4-5 ft	4-5 ft
Sample Date			1/3/2012	1/3/2012	1/3/2012	1/3/2012	1/3/2012	1/3/2012	1/9/2012	1/9/2012	1/9/2012	1/9/2012	1/11/2012	1/11/2012	1/11/2012	1/11/2012	1/27/2012	1/27/2012	1/27/2012	1/24/2012	1/24/2012
Analyte	CAS No.	Units																			
METALS																					
Aluminum	7429-90-5	mg/kg	---	---	---	---	---	---	14500	8950	17100	14100	12500	13400	3470	4580	7950	7960	650	10200	10300
Antimony	7440-36-0	mg/kg	---	---	---	---	---	---	<0.24	<0.22	<0.23	<0.24	<0.22	<0 23	<0.21	<0.22	<0.22	<0 25	<0.19	<0.24	<0.25
Arsenic	7440-38-2	mg/kg	10.9	67.9	88.9	4.24	4.02	6.75	6.94	8.92	3.41	5.53	3.97	5.1	10.8	5.71	3.51	3.73	0.829	3.72	3.87
Barium	7440-39-3	mg/kg	---	---	---	---	---	---	1960	166	288	176	306	165	768	325	259	170	2.53	259	252
Beryllium	7440-41-7	mg/kg	---	---	---	---	---	---	0.811	0.614	0.963	0.943	0.782	0.889	0.332 U	0.436 U	0.583	0.591 J	0.0562 J	0.631	0.62
Cadmium	7440-43-9	mg/kg	---	---	---	---	---	---	0.261 J	0.219 J	0.167 J	0.207 J	0.192 J	0.207 J	0.339 J	0.244 J	0.136 J	0.165 J	<0.049	0.14 J	0.146 J
Chromium	7440-47-3	mg/kg	---	---	---	---	---	---	25.9	5.77	9.11	7.63	7.18	7.53	2.42	3.47	5.11	4.97	0.928	6.14	6.01
Cobalt	7440-48-4	mg/kg	---	---	---	---	---	---	11.6	6.85	6.01	7.04	7.93 JL	6.48	15.4	4.97	4	8.55	0.521	3.95	3.77
Copper	7440-50-8	mg/kg	---	---	---	---	---	---	19.1	5.61	6.56	6.48	7.56	6.36	5.72	3.88	3.58	3.9	0.513	5.47	5.49
Lead#	7439-92-1	mg/kg	---	---	---	---	---	---	37.5	9.79	10.4	11.5	11.2	11.7	33.7	10.6	8.32	14.9	1.4	7.5	7.81
Manganese	7439-96-5	mg/kg	---	---	---	---	---	---	433	358	384	458	722	419	1110	251	211	600	27.6	190	182
Nickel	7440-02-0	mg/kg	---	---	---	---	---	---	13.8	7.97	8.54	9.07	9.7 JL	8.67	8.46	3.98	5.5	8.49	0.705	5.96	5.75
Selenium	7782-49-2	mg/kg	---	---	---	---	---	---	1.22	1.28	1.3	1.22	1.05	1.17	1.24	1.35	1.38	1.56	0.345 J	1.3	1.35
Silver	7440-22-4	mg/kg	---	---	---	---	---	---	<0.097	<0.089	<0.091	<0.096	<0.088	<0.09	<0.083	<0.088	<0.089	<0.098	<0.078	<0.094	<0.098
Thallium	7440-28-0	mg/kg	---	---	---	---	---	---	0.185 J	0.174 J	0.189 J	0.186 J	0.16 J	0.225 J	0.2 J	0.102 J	0.2 J	0.163 J	<0.068	0.164 U	0.139 U
Vanadium	7440-62-2	mg/kg	---	---	---	---	---	---	16	17.8	21.5	20.7	21.7	20.4	33.5	18.5	22.8	17.1	3.4	28.1	27.9
Zinc	7440-66-6	mg/kg	---	---	---	---	---	---	41.2	20.4	27	27.7	22.5	27.9	8.37	15.2	14	13.6	2.67	16.9	16.5
Mercury#	7439-97-6	mg/kg	---	---	---	---	---	---	0.141	0.000497 J	<0.00034	<0.00035	0.00522	<0.00037	<0.00033	<0.00036	0.000976 J	<0.00036	0.00117 J	0.00194 J	0.00199 J
Cyanide	57-12-5	mg/kg	---	---	---	---	---	---	<0.81	0.785 J	<0.72	<0.78	<0.7	<0.77	0.819 J	<0.75	2.4 J	<0.75	<0.65	0.866 J	0.938 J
PESTICIDES and PCBs																					
4,4´-DDD	72-54-8	mg/kg	---	---	---	---	---	---	0.044	0.0086	<0.00061	0.0037 J	<0.00059	<0.00064	<0.00059	<0.00062	<0.00062	<0.00063	<0.00054	<0.00062	<0.00063
4,4´-DDE	72-55-9	mg/kg	---	---	---	---	---	---	0.03	0.016 J	<0.00061	0.022 J	<0.00059	<0.00064	<0.00059	<0.00062	<0.00062	<0.00063	<0.00054	<0.00062	<0.00063
4,4´-DDT	50-29-3	mg/kg	---	---	---	---	---	---	0.08	0.0066 J	<0.00061	0.005 J	<0.00059	<0.00064	<0.00059	<0.00062	<0.00062	<0.00063	<0.00054	<0.00062	<0.00063
Aldrin	309-00-2	mg/kg	---	---	---	---	---	---	<0.00081	0.0048 J	<0.00037	0.0056 J	<0.00035	<0.00039	0.0012 J	<0.00037	<0.00037	<0.00038	<0.00032	<0.00037	<0.00038
alpha-BHC	319-84-6	mg/kg	---	---	---	---	---	---	0.0019 U	<0.00073	<0.00037	<0.00039	<0.00035	<0.00039	0.015 J	<0.00037	<0.00037	<0.00038	<0.00032	<0.00037	<0.00038
alpha-Chlordane	5103-71-9	mg/kg	---	---	---	---	---	---	<0.00054	<0.00048	<0.00024	<0.00026	<0.00024	<0.00026	<0.00023	<0.00025	<0.00025	<0.00025	<0.00022	<0.00025	<0.00025
beta-BHC	319-85-7	mg/kg	---	---	---	---	---	---	0.038 J	<0.00073	<0.00037	0.0027 U	<0.00035	<0.00039	<0.00035	<0.00037	<0.00037	<0.00038	<0.00032	<0.00037	<0.00038
delta-BHC	319-86-8	mg/kg	---	---	---	---	---	---	<0.00054	<0.00048	<0.00024	<0.00026	<0.00024	<0.00026	0.0033 U	<0.00025	<0.00025	<0.00025	<0.00022	<0.00025	<0.00025
Dieldrin	60-57-1	mg/kg	---	---	---	---	---	---	0.014 U	0.0047 U	<0.00061	<0.00065	<0.00059	<0.00064	<0.00059	<0.00062	<0.00062	<0.00063	<0.00054	<0.00062	<0.00063
Endosulfan I	959-98-8	mg/kg	---	---	---	---	---	---	<0.00081	0.03 J	<0.00037	0.028 J	<0.00035	<0.00039	<0.00035	<0.00037	<0.00037	<0.00038	<0.00032	<0.00037	<0.00038
Endosulfan II	33213-65-9	mg/kg	---	---	---	---	---	---	<0.0016	<0.0015	<0.00073	<0.00078	<0.00071	<0.00077	0.0068	0.0021 J	<0.00074	<0.00075	<0.00065	<0.00074	<0.00075
Endosulfan sulfate	1031-07-8	mg/kg	---	---	---	---	---	---	0.0054 U	<0.0015	<0.00073	<0.00078	<0.00071	<0.00077	0.0055 J	<0.00075	<0.00074	<0.00075	<0.00065	<0.00074	<0.00075
Endrin	72-20-8	mg/kg	---	---	---	---	---	---	<0.0016	0.0074 U	<0.00073	<0.00078	<0.00071	<0.00077	<0.0007	0.0023 U	<0.00074	<0.00075	<0.00065	<0.00074	<0.00075
Endrin aldehyde	7421-93-4	mg/kg	---	---	---	---	---	---	0.014 J	0.0047 J	<0.00073	0.0025 J	<0.00071	<0.00077	0.0052 J	<0.00075	<0.00074	<0.00075	<0.00065	<0.00074	<0.00075
gamma-BHC	58-89-9	mg/kg	---	---	---	---	---	---	<0.00054	<0.00048	<0.00024	<0.00026	<0.00024	<0.00026	<0.00023	<0.00025	<0.00025	<0.00025	<0.00022	<0.00025	<0.00025
gamma-Chlordane	5103-74-2	mg/kg	---	---	---	---	---	---	<0.00054	<0.00048	<0.00024	<0.00026	<0.00024	<0.00026	<0.00023	<0.00025	<0.00025	<0.00025	<0.00022	<0.00025	<0.00025
Heptachlor	76-44-8	mg/kg	---	---	---	---	---	---	<0.00081	<0.00073	<0.00037	<0.00039	<0.00035	<0.00039	<0.00035	<0.00037	<0.00037	<0.00038	<0.00032	<0.00037	<0.00038
Heptachlor epoxide	1024-57-3	mg/kg	---	---	---	---	---	---	<0.00081	<0.00073	<0.00037	0.0084 J	<0.00035	<0.00039	<0.00035	<0.00037	<0.00037	<0.00038	<0.00032	<0.00037	<0.00038
Methoxychlor	72-43-5	mg/kg	---	---	---	---	---	---	<0.0092	<0.0082	<0.0041	<0.0044	<0.004	<0.0044	<0.004	<0.0042	<0.0042	<0.0043	<0.0037	<0.0042	<0.0043
Toxaphene	8001-35-2	mg/kg	---	---	---	---	---	---	<0.013	<0.012	<0.0059	<0.0062	<0.0057	<0.0062	<0.0056	<0.006	<0.0059	<0.006	<0.0052	<0.0059	<0.006
Aroclor 1016	12674-11-2	mg/kg	---	---	---	---	---	---	<0.0032	<0.0029 JL	<0.0029	<0.0031	<0.0028	<0.0031	<0.0028	<0.003	<0.003	<0.003	<0.0026	<0.003	<0.003
Aroclor 1221	11104-28-2	mg/kg	---	---	---	---	---	---	<0.0032	<0.0029 JL	<0.0029	<0.0031	<0.0028	<0.0031	<0.0028	<0.003	<0.003	<0.003	<0.0026	<0.003	<0.003
Aroclor 1232	11141-16-5	mg/kg	---	---	---	---	---	---	<0.0032	<0.0029 JL	<0.0029	<0.0031	<0.0028	<0.0031	<0.0028	<0.003	<0.003	<0.003	<0.0026	<0.003	<0.003
Aroclor 1242	53469-21-9	mg/kg	---	---	---	---	---	---	<0.0032	<0.0029 JL	<0.0029	<0.0031	<0.0028	<0.0031	<0.0028	<0.003	<0.003	<0.003	<0.0026	<0.003	<0.003
Aroclor 1248	12672-29-6	mg/kg	---	---	---	---	---	---	<0.0032	<0.0029 JL	<0.0029	<0.0031	<0.0028	<0.0031	<0.0028	<0.003	<0.003	<0.003	<0.0026	<0.003	<0.003
Aroclor 1254	11097-69-1	mg/kg	---	---	---	---	---	---	0.44 J	<0.0029 JL	<0.0029	<0.0031	<0.0028	<0.0031	<0.0028	<0.003	<0.003	<0.003	<0.0026	<0.003	<0.003
Aroclor 1260	11096-82-5	mg/kg	---	---	---	---	---	---	<0.0024	<0.0022 JL	<0.0022	<0.0023	<0.0021	<0.0023	<0.0021	<0.0022	<0.0022	<0.0023	<0.0019	<0.0022	<0.0022
Total PCBs	TPCB	mg/kg	---	---	---	---	---	---	0.4492	<0.0098	<0.0098	<0.01045	<0.00945	<0.01045	<0.00945	<0.0101	<0.0101	<0.01015	<0.00875	<0.0101	<0.0101
VOLATILE ORGANIC COMPOUNDS																					
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	---	---	---	---	---	---	<0.047	<0.038	<0.00073	<0.0007	<0.00068	<0.00073	<0.0007	<0.0008	<0.00069	<0.00069	<0.0008	<0.00069	<0.00069
1,1,1-Trichloroethane	71-55-6	mg/kg	---	---	---	---	---	---	<0.11	<0.093	<0.0018	<0.0017	<0.0016	<0.0018	<0.0017	<0.0019	<0.0017	<0.0017	<0.0019	<0.0017	<0.0017
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	---	---	---	---	---	---	<0.033	<0.027	<0.00052	<0.0005	<0.00048	<0.00052	<0.0005	<0.00057	<0.00049	<0.00049	<0.00057	<0.0005	<0.0005
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	---	---	---	---	---	---	<0.086	<0.071	<0.0014	<0.0013	<0.0013	<0.0013	<0.0013	<0.0015	<0.0013	<0.0013	<0.0015	<0.0013	<0.0013
1,1,2-Trichloroethane	79-00-5	mg/kg	---	---	---	---	---	---	<0.13	<0.11	<0.0021	<0.002	<0.0019	<0.0021	<0.002	<0.0023	<0.002	<0.002	<0.0023	<0.002	<0.002
1 1-Dichloroethane	75-34-3	mg/kg	---	---	---	---	---	---	<0.033	<0.027	<0.00052	<0.0005	<0.00048	<0.00052	<0.0005	<0.00057	<0.00049	<0.00049	<0.00057	<0.0005	<0.0005
1,1-Dichloroethene	75-35-4	mg/kg	---	---	---	---	---	---	<0.1	<0.082	<0.0016	<0.0015	<0.0014	<0.0016	<0.0015	<0.0017	<0.0015	<0.0015	<0.0017	<0.0015	<0.0015
1,2,4-Trichlorobenzene	120-82-1	mg/kg	---	---	---	---	---	---	<0.06	<0.049	<0.00094	<0.0009	<0.00087	<0.00093	<0.0009	<0.001	<0.00088	<0.00089	<0.001	<0.00089	<0.00089
1 2 4-Trimethylbenzene	95-63-6	mg/kg	---	---	---	---	---	---	<0.053	6.5	<0.00083	<0.0008	<0.00077	<0.00083	0.012	0.003 J	<0.00079	<0.00079	<0.00091	<0.00079	<0.00079
1 2-Dibromoethane	106-93-4	mg/kg	---	---	---	---	---	---	<0.047	<0.038	<0.00073	<0.0007	<0.00068	<0.00073	<0.0007	<0.0008	<0.00069	<0.00069	<0.0008	<0.00069	<0.00069
1,2-Dichlorobenzene	95-50-1	mg/kg	---	---	---	---	---	---	<0.053	<0.044	<0.00083	<0.0008	<0.00077	<0.00083	<0.0008	<0.00091	<0.00079	<0.00079	<0.00091	<0.00079	<0.00079
1 2-Dichloroethane	107-06-2	mg/kg	---	---	---	---	---	---	<0.04	<0.033	<0.00062	<0.0006	<0.00058	<0.00062	<0.0006	<0.00068	<0.00059	<0.00059	<0.00069	<0.0006	<0.00059
1 2-Dichloropropane	78-87-5	mg/kg	---	---	---	---	---	---	<0.033	<0.027	<0.00052	<0.0005	<0.00048	<0.00052	<0.0005	<0.00057	<0.00049	<0.00049	<0.00057	<0.0005	<0.0005
1,3,5-Trimethylbenzene	108-67-8	mg/kg	---	---	---	---	---	---	<0.053	2.6	<0.00083	<0.0008	<0.00077	<0.00083	<0.0008	<0.00091	<0.00079	<0.00079	<0.00091	<0.00079	<0.00079
1 3-Dichlorobenzene	541-73-1	mg/kg	---	---	---	---	---	---	<0.06	<0.049	<0.00094	<0.0009	<0.00087	<0.00093	<0.0009	<0.001	<0.00088	<0.00089	<0.001	<0.00089	<0.00089
1 4-Dichlorobenzene	106-46-7	mg/kg	---	---	---	---	---	---	<0.047	<0.038	<0.00073	<0.0007	<0.00068	<0.00073	<0.0007	<0.0008	<0.00069	<0.00069	<0.0008	<0.00069	<0.00069
2-Butanone	78-93-3	mg/kg	---	---	---	---	---	---	<0.15	<0.12	<0.0023	<0.0022	<0.0021	<0.0023	0.014	0.036	<0.0022	<0.0022	<0.0025	<0.0022	<0.0022
2-Hexanone	591-78-6	mg/kg	---	---	---	---	---	---	<0.11	<0.093	<0.0018	<0.0017	<0.0016	<0.0018	<0.0017	<0.0019	<0.0017	<0.0017	<0.0019	<0.0017	<0.0017
4-Methyl-2-pentanone	108-10-1	mg/kg	---	---	---	---	---	---	<0.066	<0.055	<0.001	<0.001	<0.00096	<0.001	<0.001	<0.0011	<0.00098	<0.00098	<0.0011	<0.00099	<0.00099
Acetone	67-64-1	mg/kg	---	---	---	---	---	---	<0.31	<0.25	<0.0048	<0.0046	<0.0044	<0.0048	0.073	0.21	<0.0045	<0.0045	<0.0053	<0.0046	<0.0046
Benzene#	71-43-2	mg/kg	---	---	---	---	---	---	<0.04	6	<0.00062	<0.0006	<0.00058	<0.00062	0.077	0.053	<0.00059	<0.00059	<0.00069	<0.0006	<0.00059
Bromodichloromethane	75-27-4	mg/kg	---	---	---	---	---	---	<0.04	<0.033	<0.00062	<0.0006	<0.00058	<0.00062	<0.0006	<0.00068	<0.00059	<0.00059	<0.00069	<0.0006	<0.00059
Bromoform	75-25-2	mg/kg	---	---	---	---	---	---	<0.047	<0.038	<0.00073	<0.0007	<0.00068	<0.00073	<0.0007	<0.0008	<0.00069	<0.00069	<0.0008	<0.00069	<0.00069
Bromomethane	74-83-9	mg/kg	---	---	---	---	---	---	<0.066	<0.055	<0.001	<0.001	<0.00096	<0.001	<0.001	<0.0011	<0.00098	<0.00098	<0.0011	<0.00099	<0.00099
Carbon disulfide	75-15-0	mg/kg	---	---	---	---	---	---	<0.11	<0.087	<0.0017	<0.0016	<0.0015	<0.0017	<0.0016	0.0049 J	<0.0016	<0.0016	<0.0018	<0.0016	<0.0016
Carbon tetrachloride	56-23-5	mg/kg	---	---	---	---	---	---	<0.08	<0.066	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0014	<0.0012	<0.0012	<0.0014	<0.0012	<0.0012

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			SPSB14	SPSB15	SPSB15	SPSB16	SPSB17	SPSB18	SPSB19A	SPSB19A	SPSB19B	SPSB19B	SPSB19C	SPSB19C	SPSB19C	SPSB19C	SPSB20	SPSB20	SPSB20	SPSB21	SPSB21
Depth Interval			2-3 ft	2-3 ft	2-3 ft	2-3 ft	2-3 ft	2-3 ft	4-5 ft	9-10 ft	4-5 ft	9-10 ft	3-4 ft	9-10 ft	17-18 ft	19-20 ft	4-5 ft	9-10 ft	14-15 ft	4-5 ft	4-5 ft
Sample Date			1/3/2012	1/3/2012	1/3/2012	1/3/2012	1/3/2012	1/3/2012	1/9/2012	1/9/2012	1/9/2012	1/9/2012	1/11/2012	1/11/2012	1/11/2012	1/11/2012	1/27/2012	1/27/2012	1/27/2012	1/24/2012	1/24/2012
Analyte	CAS No.	Units																			
Chlorobenzene	108-90-7	mg/kg	---	---	---	---	---	---	<0.033	<0.027	<0.00052	<0.0005	<0.00048	<0.00052	<0.0005	<0.00057	<0.00049	<0.00049	<0.00057	<0.0005	<0.0005
Chloroethane	75-00-3	mg/kg	---	---	---	---	---	---	<0.066	<0.055	<0.001	<0.001	<0.00096	<0.001	<0.001	<0.0011	<0.00098	<0.00098	<0.0011	<0.00099	<0.00099
Chloroform	67-66-3	mg/kg	---	---	---	---	---	---	<0.12	<0.098	<0.0019	<0.0018	<0.0017	<0.0019	<0.0018	<0.002	<0.0018	<0.0018	<0.0021	<0.0018	<0.0018
Chloromethane	74-87-3	mg/kg	---	---	---	---	---	---	<0.06	<0.049	<0.00094	<0.0009	<0.00087	<0.00093	<0.0009	<0.001	<0.00088	<0.00089	<0.001	<0.00089	<0.00089
cis-1 2-Dichloroethene	156-59-2	mg/kg	---	---	---	---	---	---	<0.1	<0.082	<0.0016	<0.0015	<0.0014	<0.0016	<0.0015	<0.0017	<0.0015	<0.0015	<0.0017	<0.0015	<0.0015
cis-1,3-Dichloropropene	10061-01-5	mg/kg	---	---	---	---	---	---	<0.033	<0.027	<0.00052	<0.0005	<0.00048	<0.00052	<0.0005	<0.00057	<0.00049	<0.00049	<0.00057	<0.0005	<0.0005
Cyclohexane	110-82-7	mg/kg	---	---	---	---	---	---	<0.08	2.5	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0014	<0.0012	<0.0012	<0.0014	<0.0012	<0.0012
Dibromochloromethane	124-48-1	mg/kg	---	---	---	---	---	---	<0.033	<0.027	<0.00052	<0.0005	<0.00048	<0.00052	<0.0005	<0.00057	<0.00049	<0.00049	<0.00057	<0.0005	<0.0005
Dichlorodifluoromethane	75-71-8	mg/kg	---	---	---	---	---	---	<0.12	<0.098	<0.0019	<0.0018	<0.0017	<0.0019	<0.0018	<0.002	<0.0018	<0.0018	<0.0021	<0.0018	<0.0018
Ethylbenzene	100-41-4	mg/kg	---	---	---	---	---	---	0.15 J	2.7	<0.00094	<0.0009	<0.00087	<0.00093	0.0083	0.0024 J	<0.00088	<0.00089	<0.001	<0.00089	<0.00089
Isopropylbenzene	98-82-8	mg/kg	---	---	---	---	---	---	0.2 J	0.55	<0.001	<0.001	<0.00096	<0.001	<0.001	<0.0011	<0.00098	<0.00098	<0.0011	<0.00099	<0.00099
Methyl acetate	79-20-9	mg/kg	---	---	---	---	---	---	<0.066	<0.055	<0.001	<0.001	<0.00096 JL	<0.001	<0.001	<0.0011	<0.00098	<0.00098	<0.0011	<0.00099	<0.00099
Methyl tert-butyl ether	1634-04-4	mg/kg	---	---	---	---	---	---	<0.13	<0.1	<0.002	<0.0019	<0.0018	<0.002	<0.0019	<0.0022	<0.0019	<0.0019	<0.0022	<0.0019	<0.0019
Methylcyclohexane	108-87-2	mg/kg	---	---	---	---	---	---	0.42	7.4	<0.0016	<0.0015	<0.0014	<0.0016	<0.0015	<0.0017	<0.0015	<0.0015	<0.0017	<0.0015	<0.0015
Methylene chloride	75-09-2	mg/kg	---	---	---	---	---	---	<0.17	<0.14	<0.0026	<0.0025	<0.0024	<0.0026	0.0037 J	<0.0028	<0.0025	<0.0025	<0.0029	<0.0025	<0.0025
Naphthalene	91-20-3	mg/kg	---	---	---	---	---	---	<0.053	2.3	<0.00083	<0.0008	<0.00077	<0.00083	0.024	0.013	0.0011 U	<0.00079	<0.00091	<0.00079	<0.00079
n-Butylbenzene	104-51-8	mg/kg	---	---	---	---	---	---	0.67	0.77	<0.00062	<0.0006	<0.00058	<0.00062	<0.0006	<0.00068	<0.00059	<0.00059	<0.00069	<0.0006	<0.00059
n-Propylbenzene	103-65-1	mg/kg	---	---	---	---	---	---	0.57	0.99	<0.00094	<0.0009	<0.00087	<0.00093	0.0016 J	<0.001	<0.00088	<0.00089	<0.001	<0.00089	<0.00089
sec-Butylbenzene	135-98-8	mg/kg	---	---	---	---	---	---	0.33	0.53	<0.00062	<0.0006	<0.00058	<0.00062	<0.0006	<0.00068	<0.00059	<0.00059	<0.00069	<0.0006	<0.00059
Styrene	100-42-5	mg/kg	---	---	---	---	---	---	<0.04	<0.033	<0.00062	<0.0006	<0.00058	<0.00062	<0.0006	<0.00068	<0.00059	<0.00059	<0.00069	<0.0006	<0.00059
tert-Butylbenzene	98-06-6	mg/kg	---	---	---	---	---	---	<0.04	<0.033	<0.00062	<0.0006	<0.00058	<0.00062	<0.0006	<0.00068	<0.00059	<0.00059	<0.00069	<0.0006	<0.00059
Tetrachloroethene	127-18-4	mg/kg	---	---	---	---	---	---	<0.066	<0.055	<0.001	<0.001	<0.00096	<0.001	<0.001	<0.0011	<0.00098	<0.00098	<0.0011	<0.00099	<0.00099
Toluene	108-88-3	mg/kg	---	---	---	---	---	---	<0.047	2.4	<0.00073	<0.0007	<0.00068	<0.00073	0.042	0.021	<0.00069	<0.00069	<0.0008	<0.00069	<0.00069
trans-1 2-Dichloroethene	156-60-5	mg/kg	---	---	---	---	---	---	<0.06	<0.049	<0.00094	<0.0009	<0.00087	<0.00093	<0.0009	<0.001	<0.00088	<0.00089	<0.001	<0.00089	<0.00089
trans-1,3-Dichloropropene	10061-02-6	mg/kg	---	---	---	---	---	---	<0.033	<0.027	<0.00052	<0.0005	<0.00048	<0.00052	<0.0005	<0.00057	<0.00049	<0.00049	<0.00057	<0.0005	<0.0005
Trichloroethene	79-01-6	mg/kg	---	---	---	---	---	---	<0.11	<0.087	<0.0017	<0.0016	<0.0015	<0.0017	<0.0016	<0.0018	<0.0016	<0.0016	<0.0018	<0.0016	<0.0016
Trichlorofluoromethane	75-69-4	mg/kg	---	---	---	---	---	---	<0.053	<0.044	<0.00083	<0.0008	<0.00077	<0.00083	<0.0008	<0.00091	<0.00079	<0.00079	<0.00091	<0.00079	<0.00079
Vinyl chloride	75-01-4	mg/kg	---	---	---	---	---	---	<0.066	<0.055	<0.001	<0.001	<0.00096	<0.001	<0.001	<0.0011	<0.00098	<0.00098	<0.0011	<0.00099	<0.00099
Xylenes, Total	1330-20-7	mg/kg	---	---	---	---	---	---	<0.17	14	<0.0027	<0.0026	<0.0025	<0.0027	0.042	0.014 J	<0.0026	<0.0026	<0.003	<0.0026	<0.0026
SEMIVOLATILE ORGANIC COMPOUNDS																					
1,1´-Biphenyl	92-52-4	mg/kg	---	---	---	---	---	---	0.41 JL	0.19	<0.0019	0.0088	<0.0019	<0.0021	0.0066 J	0.0026 J	<0.002	<0.002	<0.0017	<0.002	<0.002
1-Methylnaphthalene#	90-12-0	mg/kg	---	---	---	---	---	---	12	1.2	<0.0019	0.064	<0.0019	<0.0021	0.046	0.015	<0.002	<0.002	<0.0017	<0.002	<0.002
2 4 5-Trichlorophenol	95-95-4	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
2 4 6-Trichlorophenol	88-06-2	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
2,4-Dichlorophenol	120-83-2	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
2 4-Dimethylphenol	105-67-9	mg/kg	---	---	---	---	---	---	0.12 JL	0.26	<0.0019	<0.0021	<0.0019	<0.0021	1.4	1.3	<0.002	<0.002	<0.0017	<0.002	<0.002
2 4-Dinitrophenol	51-28-5	mg/kg	---	---	---	---	---	---	<0.0045 JL	<0.004	<0.004	<0.0043	<0.0039 JL	<0.0043	<0.0039	<0.0041	<0.0041 JL	<0.0041 JL	<0.0036 JL	<0.0041 JL	<0.0041 JL
2,4-Dinitrotoluene	121-14-2	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
2 6-Dinitrotoluene	606-20-2	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
2-Chloronaphthalene	91-58-7	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
2-Chlorophenol	95-57-8	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
2-Methylnaphthalene	91-57-6	mg/kg	---	---	---	---	---	---	14	2.1	<0.0019	0.025	<0.0019	<0.0021	0.053	0.018	<0.002	<0.002	<0.0017	<0.002	<0.002
2-Methylphenol	95-48-7	mg/kg	---	---	---	---	---	---	<0.0022 JL	0.25	<0.0019	<0.0021	<0.0019	<0.0021	2.7	3.9	<0.002	<0.002	<0.0017	<0.002	<0.002
2-Nitroaniline	88-74-4	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
2-Nitrophenol	88-75-5	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
3&4-Methylphenol	106-44-5	mg/kg	---	---	---	---	---	---	<0.0022 JL	0.17	<0.0019	<0.0021	<0.0019	<0.0021	2.7	3.7	<0.002	<0.002	<0.0017	<0.002	<0.002
3,3´-Dichlorobenzidine	91-94-1	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
3-Nitroaniline	99-09-2	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019 JL	<0.0019 JL	<0.0021 JL	<0.0019 JL	<0.0021 JL	<0.0019 JL	<0.002 JL	<0.002	<0.002	<0.0017	<0.002	<0.002
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
4-Bromophenyl phenyl ether	101-55-3	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
4-Chloro-3-methylphenol	59-50-7	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
4-Chloroaniline	106-47-8	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019 JL	<0.0019 JL	<0.0021 JL	<0.0019 JL	<0.0021 JL	<0.0019 JL	<0.002 JL	<0.002	<0.002	<0.0017	<0.002	<0.002
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
4-Nitroaniline	100-01-6	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019 JL	<0.0019 JL	<0.0021 JL	<0.0019 JL	<0.0021 JL	<0.0019 JL	<0.002 JL	<0.002	<0.002	<0.0017	<0.002	<0.002
4-Nitrophenol	100-02-7	mg/kg	---	---	---	---	---	---	<0.0045 JL	<0.004	<0.004	<0.0043	<0.0039	<0.0043	<0.0039	<0.0041	<0.0041 JL	<0.0041 JL	<0.0036 JL	<0.0041	<0.0041
Acenaphthene	83-32-9	mg/kg	---	---	---	---	---	---	0.44 JL	0.066	<0.0019	0.029	<0.0019	<0.0021	0.014	0.0076 J	<0.002	<0.002	<0.0017	<0.002	<0.002
Acenaphthylene	208-96-8	mg/kg	---	---	---	---	---	---	0.21 JL	0.035	<0.0019	0.013	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Acetophenone	98-86-2	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Anthracene	120-12-7	mg/kg	---	---	---	---	---	---	0.24 JL	0.064	<0.0019	0.017	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Benz(a)anthracene	56-55-3	mg/kg	---	---	---	---	---	---	0.23 JL	0.098	<0.0019	0.042	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Benzaldehyde	100-52-7	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019 JL	<0.0019 JL	<0.0021 JL	<0.0019 JL	<0.0021 JL	<0.0019 JL	0.0029 UJL	0.0055 JL	<0.002 JL	0.0034 JL	<0.002 JL	<0.002 JL
Benzo(a)pyrene	50-32-8	mg/kg	0.024 JL	7.1	4.4	0.054 JL	0.32	0.38 JL	0.19 JL	0.083	<0.0019	0.042	<0.0019	<0.0021	<0.0019	0.0036 J	<0.002	<0.002	<0.0017	<0.002	<0.002
Benzo(b)fluoranthene	205-99-2	mg/kg	---	---	---	---	---	---	0.077 JL	0.051	<0.0019	0.029	<0.0019	<0.0021	<0.0019	0.0047 J	<0.002	<0.002	<0.0017	<0.002	<0.002
Benzo(g h i)perylene	191-24-2	mg/kg	---	---	---	---	---	---	0.15 JL	0.057	<0.0021	0.038	<0.002	<0.0022	<0.002	0.0057 J	0.0033 J	<0.0021	<0.0018	<0.0021	<0.0021
Benzo(k)fluoranthene	207-08-9	mg/kg	---	---	---	---	---	---	0.086 JL	0.0075 J	<0.0019	0.014	<0.0019	<0.0021	<0.0019	0.0028 J	<0.002	<0.002	<0.0017	<0.002	<0.002
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Bis(2-chloroethyl)ether	111-44-4	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	---	---	---	---	---	---	<0.0022 JL	0.01 U	0.0052 U	0.0046 U	0.0049 U	0.017 U	0.0076 U	0.0097 U	0.01 U	0.056 U	0.2	0.011 U	0.0073 U
Butyl benzyl phthalate	85-68-7	mg/kg	---	---	---	---	---	---	<0.0038 JL	<0.0034	<0.0034	<0.0036	<0.0033	<0.0036	<0.0033	<0.0035	<0.0034	<0.0035	<0.003	<0.0035	<0.0035
Caprolactam	105-60-2	mg/kg	---	---	---	---	---	---	<0.0027 JL	<0.0024	<0.0024	<0.0026	<0.0024	<0.0026	<0.0023	<0.0025	<0.0025	<0.0025	<0.0022	<0.0025	<0.0025
Carbazole	86-74-8	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019 JL	<0.0019 JL	<0.0021 JL	<0.0019 JL	<0.0021 JL	0.0032 JL	<0.002 JL	<0.002	<0.002	<0.0017	<0.002	<0.002
Chrysene	218-01-9	mg/kg	---	---	---	---	---	---	0.42 JL	0.14	<0.0019	0.08	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Dibenz(a h)anthracene	53-70-3	mg/kg	---	---	---	---	---	---	0.065 JL	0.013	<0.0024	0.0083 J	<0.0024	<0.0026	<0.0023	<0.0025	0.0031 J	<0.0025	<0.0022	<0.0025	<0.0025
Dibenzofuran	132-64-9	mg/kg	---	---	---	---	---	---	1	0.099	<0.0019	0.018	<0.0019	<0.0021	0.011	0.0032 J	<0.002	<0.002	<0.0017	<0.002	<0.002
Diethyl phthalate	84-66-2	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	0.0023 U	<0.0021	<0.0019	<0.0021	<0.0019	0.0025 U	<0.002	<0.002	<0.0017	<0.002	0.0026 U
Dimethyl phthalate	131-11-3	mg/kg	---	---	---	---	---	---	<0.0027 JL	<0.0024	<0.0024	<0.0026	<0.0024	<0.0026	<0.0023	<0.0025	<0.0025	<0.0025	<0.0022	<0.0025	<0.0025
Di-n-butyl phthalate	84-74-2	mg/kg	---	---	---	---	---	---	0.26 JL	0.029 U	0.0041 U	0.034 U	<0.0024	<0.0026	0.0029 U	0.0047 U	0.0035 U	0.0045 U	0.0036 U	<0.0025	<0.0025
Di-n-octyl phthalate	117-84-0	mg/kg	---	---	---	---	---	---	<0.0027 JL	<0.0024	<0.0024	<0.0026	<0.0024	<0.0026	<0.0023	<0.0025	0.0047 J	<0.0025	<0.0022	<0.0025	<0.0025
Fluoranthene	206-44-0	mg/kg	---	---	---	---	---	---	0.23 JL	0.11	0.0023 J	0.078	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Fluorene	86-73-7	mg/kg	---	---	---	---	---	---	1.4	0.16	<0.0019	0.033	<0.0019	<0.0021	0.0089	0.0042 J	<0.002	<0.002	<0.0017	<0.002	<0.002

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			SPSB14	SPSB15	SPSB15	SPSB16	SPSB17	SPSB18	SPSB19A	SPSB19A	SPSB19B	SPSB19B	SPSB19C	SPSB19C	SPSB19C	SPSB19C	SPSB20	SPSB20	SPSB20	SPSB21	SPSB21
Depth Interval			2-3 ft	2-3 ft	2-3 ft	2-3 ft	2-3 ft	2-3 ft	4-5 ft	9-10 ft	4-5 ft	9-10 ft	3-4 ft	9-10 ft	17-18 ft	19-20 ft	4-5 ft	9-10 ft	14-15 ft	4-5 ft	4-5 ft
Sample Date			1/3/2012	1/3/2012	1/3/2012	1/3/2012	1/3/2012	1/3/2012	1/9/2012	1/9/2012	1/9/2012	1/9/2012	1/11/2012	1/11/2012	1/11/2012	1/11/2012	1/27/2012	1/27/2012	1/27/2012	1/24/2012	1/24/2012
Analyte	CAS No.	Units																			
Hexachlorobenzene	118-74-1	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Hexachlorobutadiene	87-68-3	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Hexachlorocyclopentadiene	77-47-4	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Hexachloroethane	67-72-1	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	---	---	---	---	---	---	<0.0022 JL	0.02	<0.0019	0.013	<0.0019	<0.0021	<0.0019	0.007 J	0.0023 J	<0.002	<0.0017	<0.002	<0.002
Isophorone	78-59-1	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
Naphthalene	91-20-3	mg/kg	---	---	---	---	---	---	1.5	0.36	<0.0019	<0.0021	<0.0019	<0.0021	0.015	0.006 J	<0.002	<0.002	<0.0017	<0.002	<0.002
Nitrobenzene	98-95-3	mg/kg	---	---	---	---	---	---	<0.0022 JL	<0.0019	<0.0019	<0.0021	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	<0.0017	<0.002	<0.002
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	---	---	---	---	---	---	<0.0027 JL	<0.0024	<0.0024	<0.0026	<0.0024	<0.0026	<0.0023	<0.0025	<0.0025	<0.0025	<0.0022	<0.0025	<0.0025
N-Nitrosodiphenylamine	86-30-6	mg/kg	---	---	---	---	---	---	<0.0027 JL	<0.0024	<0.0024	<0.0026	<0.0024	<0.0026	<0.0023	<0.0025	<0.0025	<0.0025	<0.0022	<0.0025	<0.0025
Pentachlorophenol	87-86-5	mg/kg	---	---	---	---	---	---	<0.0024 JL	<0.0022	<0.0022	<0.0023	<0.0021	<0.0023	<0.0021	0.0038 J	<0.0022 JL	<0.0023 JL	<0.0019 JL	<0.0022	<0.0022
Phenanthrene	85-01-8	mg/kg	---	---	---	---	---	---	5.1	0.95	<0.003	0.15	<0.0029	<0.0032	0.0072 J	0.011	<0.0031	<0.0031	0.004 U	<0.0031	<0.0031
Phenol	108-95-2	mg/kg	---	---	---	---	---	---	<0.0027 JL	0.1	0.0079 U	0.0043 U	0.003 U	<0.0026	0.33	3.5	<0.0025	<0.0025	<0.0022	<0.0025	<0.0025
Pyrene	129-00-0	mg/kg	---	---	---	---	---	---	1.7	0.18	<0.0019	0.12	<0.0019	<0.0021	<0.0019	<0.002	<0.002	<0.002	0.0024 J	<0.002	<0.002

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U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			SPSB21	SPSB21	SPSS01	SPSS02	SPSS03	SPSS03	SPSS04	SPSS05	SPSS06	SPSS07	SPSS08	WSB01	WSB01	WSB01	WSB01	WSB02	WSB02	WSB02	WSB02
Depth Interval			9-10 ft	16-17 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	4-5 ft	4-5 ft	15-16 ft	0-1 ft	1-2 ft	3-4 ft	6-7 ft
Sample Date			1/24/2012	1/24/2012	10/14/2010	10/13/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/13/2010	10/13/2010	10/14/2010	11/1/2010	11/1/2010	11/1/2010	11/1/2010	11/3/2010	11/3/2010	12/2/2010	11/3/2010
Analyte	CAS No.	Units																			
METALS																					
Aluminum	7429-90-5	mg/kg	7810	474	5700	5660	5780	6400	5010	1410	6340	5620	6510	7210	8480	9090	943	9030	9130	14800	12900
Antimony	7440-36-0	mg/kg	<0.22	<0.21	<2.6	<2.4	<2.5	<2.4	<2.4	<2.5	<2.7	<2.3	<2.8	<0 26	<0.26	<0.3	<0.27	<0 31	<0.26	<0.26	<0.28
Arsenic	7440-38-2	mg/kg	3.05	1.47	2.44 J	13.6	2.25 J	2.2 J	2.14 J	0.766 J	11.2	2.13 J	1.81 J	2.39	2.87	3.57	0.665	3.38	3.03	2.18	2.91
Barium	7440-39-3	mg/kg	143	11.8	279	290	280	305	298	119	544	280	263	141	165 J	574 J	26.5	442	1010	106	174
Beryllium	7440-41-7	mg/kg	0.474 J	0.0526 J	0.632 J	0.609 J	0.596 J	0.647 J	0.531 J	<0.49	0.775 J	0.663 J	0.807 J	0.48 J	0.524 J	0.568 J	0.0681 J	0.672	0.517 J	0.681	0.7 J
Cadmium	7440-43-9	mg/kg	0.11 J	<0.051	<0.41	<0.39	0.757 J	0.739 J	0.668 J	0.419 J	6.99	1.28 J	<0.44	0.551	0.323 J	0.313 J	<0.043	0.362 J	0.215 J	0.175 J	0.158 J
Chromium	7440-47-3	mg/kg	4.35	0.857	7.45	6.06	17.6	20.5	88.1	65.3	22.8	26.3	7.07	4.78	5.22	5.68	1.74	7.91	6.95	7.84 JH	7.52
Cobalt	7440-48-4	mg/kg	2.89	0.572	2.42 J	2.18 J	2.46 J	2.74 J	2.21 J	0.434 J	6.93	2.39 J	3.16 J	3.19	3.58	5.62	0.671	3.88	3.4	4.35 JH	4.58
Copper	7440-50-8	mg/kg	3.31	0.446 J	8.56	10.2	10.6	10.9	15.9	6.56	105	14.9	5.55	7.62	4.37	4.76	0.771	8.08	6	7.98 JH	6.79
Lead#	7439-92-1	mg/kg	5.74	1.22	19.1	13.9	65.1	61.1	253	277	137	61.4	11 JL	34.1	6.01	7.49	1.36	31.2	25.7	9.82 JH	9.36
Manganese	7439-96-5	mg/kg	149	21.6	193	177	177	180	120	55.4	490	157	153	173	143 J	263 J	26.8	233	171	259	210
Nickel	7440-02-0	mg/kg	4.33	0.745	4.92 J	6.34	7.09	7.9	4.18 J	2.71 J	12.2	13.6	4.79 J	4.65	4.97	5.83	0.886	6.43	5.92	6.81	6.61
Selenium	7782-49-2	mg/kg	0.767	<0.19	<2.6	<2.4	<2.5	<2.4	<2.4	<2.5	<2.7	<2.3	<2.8	0.578	0.459 J	0.528 J	<0.27	0.798	0.806	0.937	1.07
Silver	7440-22-4	mg/kg	<0.088	<0.082	<0.41	<0.39	<0.4	<0.39	<0.39	<0.39	<0.44	<0.36	<0.44	0.0495 J	<0.042	<0.048	<0.043	0.0539 J	<0.21	0.102 J	<0.23
Thallium	7440-28-0	mg/kg	0.151 U	<0.072	<0.73	<0.68	<0.69	<0.68	<0.68	<0.69	<0.77	<0.63	<0.77 JL	0.176 J	0.694	0.324 J	<0.076	0.146 J	0.123 J	0.167 J	0.271 J
Vanadium	7440-62-2	mg/kg	11.7	3.44	11.8	14.8	10.5	11.9	7.44	4.74 J	14.2	13.5	13.9	10.8	14.6	22.5	3.94	13.5	12.3	10.8 JH	14.8
Zinc	7440-66-6	mg/kg	14.2	1.8	88.1	44.7	423	426	772	2700	1950	796	51.8	114	14.7	19	3.78 U	76.5	101	22.9 JH	23.4
Mercury#	7439-97-6	mg/kg	0.000936 J	0.0111	0.0453	0.0344	0.257	0.398	0.09	0.106	1.73	0.488	0.0422	0.00917	0.00627	0.00257 J	0.0108	0.0233	0.0123	0.00734	0.00305 J
Cyanide	57-12-5	mg/kg	1.12 J	0.647 J	<0.63	<0.62	<0.66	<0.6	<0.57	<0.58	6.95	1.97 J	<0.67	<0.68	<0.72	3.99	<0.71	<0 81	<0.71	<0.71	<0.73
PESTICIDES and PCBs																					
4,4´-DDD	72-54-8	mg/kg	<0.00059	0.076 JH	<0.0055	<0.0054	<0.0055	<0.0055	<0.0026	<0.0026	<0.0028	<0.0026	<0.00057	<0.0029	<0.00061	<0.0006	<0.0006	<0.0034	<0.003	<0.0006	<0.00061
4,4´-DDE	72-55-9	mg/kg	<0.00059	<0.0027	<0.0055	<0.0054	<0.0055	<0.0055	<0.0026	<0.0026	<0.0028	<0.0026	0.0021 J	<0.0029	<0.00061	<0.0006	<0.0006	<0.0034	<0.003	<0.0006	<0.00061
4,4´-DDT	50-29-3	mg/kg	<0.00059	0.15 JH	<0.0055	<0.0054	<0.0055	<0.0055	<0.0026	<0.0026	<0.0028	<0.0026	0.0034 J	<0.0029	<0.00061	<0.0006	<0.0006	<0.0034	<0.003	<0.0006	<0.00061
Aldrin	309-00-2	mg/kg	<0.00035	<0.0016	<0.0033	<0.0032	<0.0033	<0.0033	<0.0016	<0.0015	<0.0017	<0.0015	<0.00034	<0.0018	<0.00036	<0.00036	<0.00036	<0.002	<0.0018	<0.00036	<0.00037
alpha-BHC	319-84-6	mg/kg	<0.00035	<0.0016	<0.0033	<0.0032	<0.0033	<0.0033	<0.0016	<0.0015	<0.0017	<0.0015	<0.00034	<0.0018	<0.00036	<0.00036	<0.00036	<0.002	<0.0018	<0.00036	<0.00037
alpha-Chlordane	5103-71-9	mg/kg	<0.00024	<0.0011	<0.0022	0.014 J	<0.0022	<0.0022	<0.001	<0.001	<0.0011	<0.001	0.0011 J	<0.0012	<0.00024	<0.00024	<0.00024	<0.0014	<0.0012	<0.00024	<0.00024
beta-BHC	319-85-7	mg/kg	<0.00035	0.13 JH	<0.0033	<0.0032	<0.0033	<0.0033	<0.0016	<0.0015	<0.0017	<0.0015	<0.00034	<0.0018	<0.00036	<0.00036	<0.00036	<0.002	<0.0018	<0.00036	<0.00037
delta-BHC	319-86-8	mg/kg	<0.00024	0.019 JH	<0.0022	<0.0022	<0.0022	<0.0022	<0.001	<0.001	<0.0011	<0.001	<0.00023	<0.0012	<0.00024	<0.00024	<0.00024	<0.0014	<0.0012	<0.00024	<0.00024
Dieldrin	60-57-1	mg/kg	<0.00059	0.07 JH	<0.0055	<0.0054	<0.0055	<0.0055	<0.0026	<0.0026	<0.0028	<0.0026	<0.00057	<0.0029	<0.00061	<0.0006	<0.0006	<0.0034	<0.003	<0.0006	<0.00061
Endosulfan I	959-98-8	mg/kg	<0.00035	0.1 JH	<0.0033	<0.0032	<0.0033	<0.0033	<0.0016	<0.0015	<0.0017	<0.0015	<0.00034	<0.0018	<0.00036	<0.00036	<0.00036	<0.002	<0.0018	<0.00036	<0.00037
Endosulfan II	33213-65-9	mg/kg	<0.00071	<0.0032	<0.0066	<0.0065	<0.0066	<0.0066	<0.0031	<0.0031	<0.0034	<0.0031	<0.00069	<0.0035	<0.00073	<0.00073	<0.00072	<0.0041	<0.0036	<0.00072	<0.00073
Endosulfan sulfate	1031-07-8	mg/kg	<0.00071	<0.0032	<0.0066	<0.0065	<0.0066	<0.0066	<0.0031	<0.0031	<0.0034	<0.0031	<0.00069	<0.0035	<0.00073	<0.00073	<0.00072	<0.0041	<0.0036	<0.00072	<0.00073
Endrin	72-20-8	mg/kg	<0.00071	0.12 JH	<0.0066	<0.0065	<0.0066	<0.0066	<0.0031	<0.0031	<0.0034	<0.0031	<0.00069	<0.0035	<0.00073	<0.00073	<0.00072	<0.0041	<0.0036	<0.00072	<0.00073
Endrin aldehyde	7421-93-4	mg/kg	<0.00071	<0.0032	<0.0066	<0.0065	<0.0066	<0.0066	<0.0031	<0.0031	<0.0034	<0.0031	<0.00069	<0.0035	<0.00073	<0.00073	<0.00072	<0.0041	<0.0036	<0.00072	<0.00073
gamma-BHC	58-89-9	mg/kg	<0.00024	<0.0011	<0.0022	<0.0022	<0.0022	<0.0022	<0.001	<0.001	<0.0011	<0.001	<0.00023	<0.0012	<0.00024	<0.00024	<0.00024	<0.0014	<0.0012	<0.00024	<0.00024
gamma-Chlordane	5103-74-2	mg/kg	<0.00024	<0.0011	<0.0022	0.016 J	<0.0022	<0.0022	<0.001	<0.001	<0.0011	<0.001	0.0012 J	<0.0012	<0.00024	<0.00024	<0.00024	<0.0014	<0.0012	<0.00024	<0.00024
Heptachlor	76-44-8	mg/kg	<0.00035	<0.0016	<0.0033	<0.0032	<0.0033	<0.0033	<0.0016	<0.0015	<0.0017	<0.0015	<0.00034	<0.0018	<0.00036	<0.00036	<0.00036	<0.002	<0.0018	<0.00036	<0.00037
Heptachlor epoxide	1024-57-3	mg/kg	<0.00035	<0.0016	<0.0033	<0.0032	<0.0033	<0.0033	<0.0016	<0.0015	<0.0017	<0.0015	<0.00034	<0.0018	<0.00036	<0.00036	<0.00036	<0.002	<0.0018	<0.00036	<0.00037
Methoxychlor	72-43-5	mg/kg	<0.004	<0.018	<0.038	<0.037	<0.037	<0.037	<0.018	<0.018	<0.019	<0.017	<0.0039	<0.02	<0.0041	<0.0041	<0.0041	<0.023	<0.02	<0.0041	<0.0042
Toxaphene	8001-35-2	mg/kg	<0.0057	<0.026	<0.042	<0.041	<0.042	<0.042	<0.02	<0.02	<0.021	<0.02	<0.0043	<0.022	<0.0046	<0.0046	<0.0046	<0.026	<0.023	<0.0045	<0.0047
Aroclor 1016	12674-11-2	mg/kg	<0.0028 JL	<0.026	<0.0027	<0.0026	<0.0026	<0.0026	<0.0025	<0.0025	<0.0027	<0.0025	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0029	<0.0029	<0.0029
Aroclor 1221	11104-28-2	mg/kg	<0.0028 JL	<0.026	<0.0027	<0.0026	<0.0026	<0.0026	<0.0025	<0.0025	<0.0027	<0.0025	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0029	<0.0029	<0.0029
Aroclor 1232	11141-16-5	mg/kg	<0.0028 JL	<0.026	<0.0027	<0.0026	<0.0026	<0.0026	<0.0025	<0.0025	<0.0027	<0.0025	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0029	<0.0029	<0.0029
Aroclor 1242	53469-21-9	mg/kg	<0.0028 JL	<0.026	<0.0027	<0.0026	<0.0026	<0.0026	<0.0025	<0.0025	<0.0027	<0.0025	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0029	<0.0029	<0.0029
Aroclor 1248	12672-29-6	mg/kg	<0.0028 JL	<0.026	<0.0027	<0.0026	<0.0026	<0.0026	<0.0025	<0.0025	<0.0027	<0.0025	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0029	<0.0029	<0.0029
Aroclor 1254	11097-69-1	mg/kg	<0.0028 JL	<0.026	<0.0027	<0.0026	<0.0026	<0.0026	<0.0025	<0.0025	<0.0027	<0.0025	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0029	<0.0029	<0.0029
Aroclor 1260	11096-82-5	mg/kg	<0.0021 JL	<0.019	<0.002	<0.0019	0.01 J	0.015 J	0.012 J	0.025	<0.002	0.014 J	0.012 J	<0.0021	<0.0022	<0.0022	<0.0022	<0.0025	0.026	<0.0022	<0.0022
Total PCBs	TPCB	mg/kg	<0.00945	<0.0875	<0.0091	<0.00875	0.0178	0.0228	0.0195	0.0325	<0.0091	0.0215	0.0201	<0.00945	<0.0098	<0.0098	<0.0098	<0.01115	0.0347	<0.0098	<0.0098
VOLATILE ORGANIC COMPOUNDS																					
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.00063	<0.068	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.0015	<0.16	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.00045	<0.048	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.0012	<0.13	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.0018	<0.19	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1 1-Dichloroethane	75-34-3	mg/kg	<0.00045	<0.048	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1,1-Dichloroethene	75-35-4	mg/kg	<0.0014	<0.15	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.00082	<0.087	<0.00064	<0.00055	<0.00073	<0.00083	<0.00068	<0.00064	<0.00077	<0.00059	<0.00071 JL	<0.00056	<0.00054	<0.00053	<0.00063	<0.00062	<0.00054	<0.00058	<0.00059
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.00072	17	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059 JL	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1 2-Dibromoethane	106-93-4	mg/kg	<0.00063	<0.068	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.00072	<0.077	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059 JL	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1 2-Dichloroethane	107-06-2	mg/kg	<0.00054	<0.058	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1 2-Dichloropropane	78-87-5	mg/kg	<0.00045	<0.048	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.00072	6	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	0.0016 J	<0.00052	<0.00045	<0.00048	<0.00049
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.00082	<0.087	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059 JL	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.00063	<0.068	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059 JL	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
2-Butanone	78-93-3	mg/kg	<0.002	<0.21	<0.0015	<0.0013	<0.0017	<0.0019	<0.0016	<0.0015	<0.0018	<0.0014	<0.0017 JL	<0.0013	<0.0013	<0.0012	0.0094 J	<0.0014	<0.0013	<0.0014	<0.0014
2-Hexanone	591-78-6	mg/kg	<0.0015	<0.16	<0.0011	<0.00092	<0.0012	<0.0014	<0.0011	<0.0011	<0.0013	<0.00099	<0.0012 JL	<0.00093	<0.00091	<0.00089	<0.0011	<0.001	<0.0009	<0.00097	<0.00098
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.00091	0.56 J	<0.0011	<0.00092	<0.0012	<0.0014	<0.0011	<0.0011	<0.0013	<0.00099	<0.0012	<0.00093	<0.00091	<0.00089	<0.0011	<0.001	<0.0009	<0.00097	<0.00098
Acetone	67-64-1	mg/kg	<0.0042	<0.44	<0.0021	<0.0018	<0.0024	<0.0028	<0.0023	<0.0021	<0.0026	<0.002	<0.0024	<0.0019	<0.0018	<0.0018	0.063 U	<0.0021	<0.0018	<0.0019	<0.002
Benzene#	71-43-2	mg/kg	<0.00054	0.3 J	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	0.018	<0.00052	<0.00045	<0.00048	<0.00049
Bromodichloromethane	75-27-4	mg/kg	<0.00054	<0.058	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Bromoform	75-25-2	mg/kg	<0.00063	<0.068	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Bromomethane	74-83-9	mg/kg	<0.00091	<0.097	<0.0011	<0.00092	<0.0012	<0.0014	<0.0011	<0.0011	<0.0013	<0.00099	<0.0012	<0.00093	<0.00091	<0.00089	<0.0011	<0.001	<0.0009	<0.00097	<0.00098
Carbon disulfide	75-15-0	mg/kg	<0.0014	<0.15	<0.0011	<0.00092	<0.0012	<0.0014	<0.0011	<0.0011	<0.0013	<0.00099	<0.0012	<0.00093	<0.00091	<0.00089	<0.0011	<0.001	<0.0009	<0.00097	<0.00098
Carbon tetrachloride	56-23-5	mg/kg	<0.0011	<0.12	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			SPSB21	SPSB21	SPSS01	SPSS02	SPSS03	SPSS03	SPSS04	SPSS05	SPSS06	SPSS07	SPSS08	WSB01	WSB01	WSB01	WSB01	WSB02	WSB02	WSB02	WSB02
Depth Interval			9-10 ft	16-17 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	4-5 ft	4-5 ft	15-16 ft	0-1 ft	1-2 ft	3-4 ft	6-7 ft
Sample Date			1/24/2012	1/24/2012	10/14/2010	10/13/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/13/2010	10/13/2010	10/14/2010	11/1/2010	11/1/2010	11/1/2010	11/1/2010	11/3/2010	11/3/2010	12/2/2010	11/3/2010
Analyte	CAS No.	Units																			
Chlorobenzene	108-90-7	mg/kg	<0.00045	<0.048	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Chloroethane	75-00-3	mg/kg	<0.00091	<0.097	<0.0011	<0.00092	<0.0012	<0.0014	<0.0011	<0.0011	<0.0013	<0.00099	<0.0012	<0.00093	<0.00091	<0.00089	<0.0011	<0.001	<0.0009	<0.00097	<0.00098
Chloroform	67-66-3	mg/kg	<0.0016	<0.17	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Chloromethane	74-87-3	mg/kg	<0.00082	<0.087	<0.0011	<0.00092	<0.0012	<0.0014	<0.0011	<0.0011	<0.0013	<0.00099	<0.0012	<0.00093	<0.00091	<0.00089	<0.0011	<0.001	<0.0009	<0.00097	<0.00098
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.0014	<0.15	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.00045	<0.048	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059 JL	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Cyclohexane	110-82-7	mg/kg	<0.0011	<0.12	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Dibromochloromethane	124-48-1	mg/kg	<0.00045	<0.048	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Dichlorodifluoromethane	75-71-8	mg/kg	<0.0016	<0.17	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Ethylbenzene	100-41-4	mg/kg	<0.00082	12	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	0.0032 J	<0.00052	<0.00045	<0.00048	<0.00049
Isopropylbenzene	98-82-8	mg/kg	<0.00091	6.1	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	0.001 J	<0.00052	<0.00045	<0.00048	<0.00049
Methyl acetate	79-20-9	mg/kg	<0.00091	<0.097	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059 JL	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.0017	<0.18	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Methylcyclohexane	108-87-2	mg/kg	<0.0014	1.1	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059 JL	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Methylene chloride	75-09-2	mg/kg	<0.0023	<0.24	<0.0011	<0.00092	<0.0012	<0.0014	<0.0011	<0.0011	<0.0013	<0.00099	<0.0012	<0.00093	<0.00091	<0.00089	<0.0011	0.0032 J	0.00098 J	<0.00097	0.0017 J
Naphthalene	91-20-3	mg/kg	<0.00072	18	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	0.00074 U	0.0005 U	0.00079 U	<0.00046	<0.00045	<0.00045	0.01	<0.00052	<0.00045	<0.00048	<0.00049
n-Butylbenzene	104-51-8	mg/kg	<0.00054	<0.058	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
n-Propylbenzene	103-65-1	mg/kg	<0.00082	4.1	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059 JL	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	0.00063 J	<0.00048	<0.00049
sec-Butylbenzene	135-98-8	mg/kg	<0.00054	7.6	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059 JL	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Styrene	100-42-5	mg/kg	<0.00054	<0.058	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
tert-Butylbenzene	98-06-6	mg/kg	<0.00054	0.89	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059 JL	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Tetrachloroethene	127-18-4	mg/kg	<0.00091	<0.097	<0.00064	<0.00055	<0.00073	<0.00083	<0.00068	<0.00064	<0.00077	<0.00059	<0.00071	<0.00056	<0.00054	<0.00053	<0.00063	<0.00062	<0.00054	<0.00058	<0.00059
Toluene	108-88-3	mg/kg	<0.00063	<0.068	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	0.0091	<0.00052	<0.00045	<0.00048	<0.00049
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.00082	<0.087	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00045	<0.048	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Trichloroethene	79-01-6	mg/kg	<0.0014	<0.15	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Trichlorofluoromethane	75-69-4	mg/kg	<0.00072	<0.077	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Vinyl chloride	75-01-4	mg/kg	<0.00091	<0.097	<0.00053	<0.00046	<0.00061	<0.00069	<0.00056	<0.00053	<0.00064	<0.00049	<0.00059	<0.00046	<0.00045	<0.00045	<0.00053	<0.00052	<0.00045	<0.00048	<0.00049
Xylenes, Total	1330-20-7	mg/kg	<0.0024	2.2	<0.0016	<0.0014	<0.0018	<0.0021	<0.0017	<0.0016	<0.0019	<0.0015	<0.0018	<0.0014	<0.0014	<0.0013	0.0098 J	<0.0016	<0.0013	<0.0015	<0.0015
SEMIVOLATILE ORGANIC COMPOUNDS																					
1,1´-Biphenyl	92-52-4	mg/kg	<0.0019	19	<0.016	<0.031	<0.016	<0.0032	0.008 JL	<0.003	<0.0033	<0.003	<0.0033	<0.0034	<0.0035	<0.0035	<0.0035	<0.0039	<0.0035	<0.0035 JL	<0.0036
1-Methylnaphthalene#	90-12-0	mg/kg	<0.0019	33	<0.013	<0.025	<0.013	0.0033 J	0.011 JL	0.0059 J	<0.0026	0.0035 J	<0.0026	<0.0027	<0.0028	<0.0028	<0.0028	<0.0031	<0.0027	<0.0028 JL	<0.0028
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0019	<0.0086 JL	<0.016	<0.03 JL	<0.015	<0.0031 JL	<0.0029 JL	<0.0029 JL	<0.0032 JL	<0.0029	<0.0032 JL	<0.0033	<0.0034	<0.0034	<0.0034	<0.0038	<0.0033	<0.0034	<0.0034 JL
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.0019	<0.0086 JL	<0.018	<0.036 JL	<0.018	<0.0036 JL	<0.0034 JL	<0.0034 JL	<0.0037 JL	<0.0034	<0.0038 JL	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0039	<0.0039	<0.004 JL
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0019	<0.0086 JL	<0.012	<0.024 JL	<0.012	<0.0024 JL	<0.0023 JL	<0.0023 JL	<0.0025 JL	<0.0023	<0.0025 JL	<0.0026	<0.0027	<0.0027	<0.0026	<0.003	<0.0026	<0.0026 JL	<0.0027 JL
2 4-Dimethylphenol	105-67-9	mg/kg	<0.0019	<0.0086 JL	<0.018 JL	<0.036 JL	<0.018 JL	<0.0036 JL	<0.0034 JL	<0.0034 JL	<0.0037 JL	<0.0034 JL	<0.0038 JL	<0.0039	<0.004	<0.004	0.2	<0.0045	<0.0039	<0.0039 JL	<0.004 JL
2 4-Dinitrophenol	51-28-5	mg/kg	<0.0039	<0.018 JL	<0.018	<0.036 JL	<0.018	<0.0036 JL	<0.0034 JL	<0.0034 JL	<0.0037 JL	<0.0034	<0.0038 JL	<0.0039	<0.004	<0.004	<0.004 JL	<0.0045	<0.0039	<0.0039	<0.004 JL
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.0019	<0.0086	<0.018	<0.036	<0.018	<0.0036	<0.0034 JL	<0.0034	<0.0037	<0.0034	<0.0038	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0039	<0.0039	<0.004
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.0019	<0.0086	<0.018	<0.035	<0.018	<0.0035	<0.0033 JL	<0.0033	<0.0036	<0.0033	<0.0037	<0.0038	<0.0039	<0.0039	<0.0039	<0.0043	<0.0038	<0.0038	<0.0039
2-Chloronaphthalene	91-58-7	mg/kg	<0.0019	<0.0086	<0.023	<0.044	<0.022	<0.0045	<0.0043 JL	<0.0042	<0.0046	<0.0042	<0.0047 JL	<0.0048	<0.005	<0.0049	<0.0049	<0.0056	<0.0049	<0.0049	<0.005
2-Chlorophenol	95-57-8	mg/kg	<0.0019	<0.0086 JL	<0.018	<0.035 JL	<0.018	<0.0035 JL	<0.0033 JL	<0.0033 JL	<0.0036 JL	<0.0033	<0.0037 JL	<0.0038	<0.0039	<0.0039	<0.0039	<0.0043	<0.0038	<0.0038 JL	<0.0039 JL
2-Methylnaphthalene	91-57-6	mg/kg	<0.0019	50	<0.015	<0.029	<0.015	0.0049 J	0.033 JL	0.0034 J	0.0037 J	0.0036 J	<0.0031 JL	<0.0032	<0.0033	<0.0033	<0.0033	<0.0037	<0.0032	<0.0032 JL	<0.0033
2-Methylphenol	95-48-7	mg/kg	<0.0019	<0.0086 JL	<0.016	<0.031 JL	<0.016	<0.0032 JL	<0.003 JL	<0.003 JL	<0.0033 JL	<0.003	<0.0033 JL	<0.0034	<0.0035	<0.0035	0.14	<0.0039	<0.0035	<0.0035 JL	<0.0036 JL
2-Nitroaniline	88-74-4	mg/kg	<0.0019	<0.0086	<0.018	<0.036	<0.018	<0.0036	<0.0034 JL	<0.0034	<0.0037	<0.0034	<0.0038	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0039	<0.0039	<0.004
2-Nitrophenol	88-75-5	mg/kg	<0.0019	<0.0086 JL	<0.025	<0.05 JL	<0.025	<0.005 JL	<0.0048 JL	<0.0047 JL	<0.0052 JL	<0.0047	<0.0053 JL	<0.0054	<0.0056	<0.0056	<0.0055	<0.0062	<0.0055	<0.0055 JL	<0.0056 JL
3&4-Methylphenol	106-44-5	mg/kg	<0.0019	<0.0086 JL	<0.016	<0.03 JL	<0.015	<0.0031 JL	<0.0029 JL	<0.0029 JL	<0.0032 JL	<0.0029	<0.0032 JL	<0.0033	<0.0034	<0.0034	0.12	<0.0038	<0.0033	<0.0034 JL	<0.0034 JL
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0019	<0.0086	<0.017	<0.033	<0.017	<0.0034	<0.0032 JL	<0.0032	<0.0035	<0.0032	<0.0036 JL	<0.0037	<0.0038	<0.0037	<0.0037	<0.0042	<0.0037	<0.0037 JL	<0.0038
3-Nitroaniline	99-09-2	mg/kg	<0.0019	<0.0086	<0.014	<0.028	<0.014	<0.0028	<0.0027 JL	<0.0027	<0.0029	<0.0027	<0.003	<0.0031	<0.0032	<0.0031	<0.0031	<0.0035	<0.0031	<0.0031	<0.0032
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.0019	<0.0086 JL	<0.018	<0.036 JL	<0.018	<0.0036 JL	<0.0034 JL	<0.0034 JL	<0.0037 JL	<0.0034	<0.0038 JL	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0039	<0.0039	<0.004 JL
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.0019	<0.0086	<0.018	<0.036	<0.018	<0.0036	<0.0034 JL	<0.0034	<0.0037	<0.0034	<0.0038	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0039	<0.0039	<0.004
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.0019	<0.0086 JL	<0.018	<0.036 JL	<0.018	<0.0036 JL	<0.0034 JL	<0.0034 JL	<0.0037 JL	<0.0034	<0.0038 JL	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0039	<0.0039	<0.004 JL
4-Chloroaniline	106-47-8	mg/kg	<0.0019	<0.0086	<0.012	<0.024	<0.012	<0.0024	<0.0023 JL	<0.0023	<0.0025	<0.0023	<0.0025 JL	<0.0026	<0.0027	<0.0027	<0.0026	<0.003	<0.0026	<0.0026 JL	<0.0027
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0019	<0.0086	<0.012	<0.024	<0.012	<0.0024	<0.0023 JL	<0.0023	<0.0025	<0.0023	<0.0025	<0.0026	<0.0027	<0.0027	<0.0026	<0.003	<0.0026	<0.0026	<0.0027
4-Nitroaniline	100-01-6	mg/kg	<0.0019	<0.0086	<0.018	<0.036	<0.018	<0.0036	<0.0034 JL	<0.0034	<0.0037	<0.0034	<0.0038	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0039	<0.0039	<0.004
4-Nitrophenol	100-02-7	mg/kg	<0.0039	<0.018 JL	<0.021	<0.041 JL	<0.021	<0.0042 JL	<0.004 JL	<0.0039 JL	<0.0043 JL	<0.0039	<0.0044 JL	<0.0045	<0.0046	<0.0046	<0.0046	<0.0052	<0.0045	<0.0045	<0.0047 JL
Acenaphthene	83-32-9	mg/kg	<0.0019	1.6	<0.012	<0.024	<0.012	0.0072 J	<0.0023 JL	0.0088	<0.0025	0.0033 J	<0.0025	<0.0026	<0.0027	<0.0027	<0.0026	<0.003	<0.0026	<0.0026 JL	<0.0027
Acenaphthylene	208-96-8	mg/kg	<0.0019	1.3	<0.012	<0.024	<0.012	<0.0024	<0.0023 JL	<0.0023	0.0028 J	0.0036 J	<0.0025	<0.0026	<0.0027	<0.0027	<0.0026	<0.003	<0.0026	<0.0026 JL	<0.0027
Acetophenone	98-86-2	mg/kg	<0.0019	<0.0086	<0.013	<0.026	<0.013	0.011	0.072 JL	<0.0025	0.0073 J	0.0054 J	<0.0028	<0.0028	<0.0029	<0.0029	<0.0029	0.0052 J	<0.0029	<0.0029 JL	<0.0029
Anthracene	120-12-7	mg/kg	<0.0019	2.2	<0.012	<0.024	0.015 J	0.014	0.0075 JL	0.013	0.008	0.0078	0.007 J	<0.0026	<0.0027	<0.0027	<0.0026	0.011	0.0057 J	<0.0026	<0.0027
Benz(a)anthracene	56-55-3	mg/kg	<0.0019	1.2	0.11	<0.03	0.07	0.061	0.025 JL	0.032	0.026	0.034	0.016	0.039	<0.0034	<0.0034	<0.0034	0.042	0.053	<0.0034	0.0034 J
Benzaldehyde	100-52-7	mg/kg	<0.0019 JL	<0.0086 JL	<0.025 JL	<0.05 JL	<0.025 JL	<0.005 JL	<0.0048 JL	<0.0047 JL	<0.0052 JL	<0.0047 JL	<0.0053 JL	<0.0054 JL	<0.0056 JL	<0.0056 JL	<0.0055 JL	<0.0062 JL	<0.0055 JL	<0.0055 JL	<0.0056 JL
Benzo(a)pyrene	50-32-8	mg/kg	<0.0019	0.69	0.23	0.047 J	0.15	0.1	0.063 JL	0.042	0.046	0.041	0.017	0.2	0.003 J	<0.0028	<0.0028	0.085	0.39	<0.0028	<0.0028
Benzo(b)fluoranthene	205-99-2	mg/kg	<0.0019	0.45	0.1	0.039 J	0.075	0.066	0.03 JL	0.034	0.018	0.077	0.019 JL	0.011	0.0044 J	<0.004	<0.004	0.064	0.024	<0.0039	<0.004
Benzo(g h i)perylene	191-24-2	mg/kg	<0.002	0.47	0.076	0.054 J	0.05	0.064	0.072	0.017	<0.0033	0.038	0.015	0.083	<0.0035	<0.0035	<0.0035	<0.0039	0.2	<0.0035	<0.0036
Benzo(k)fluoranthene	207-08-9	mg/kg	<0.0019	0.43	0.15	0.04 J	0.092	0.11	0.052 JL	0.037	0.052	0.024	0.01	0.015	<0.004	<0.004	<0.004	0.064	0.032	<0.0039	<0.004
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.0019	<0.0086	<0.013	<0.026	<0.013	<0.0026	<0.0025 JL	<0.0025	<0.0027	<0.0025	<0.0028 JL	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0029	<0.0029 JL	<0.0029
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0019	<0.0086	<0.016	<0.03	<0.015	<0.0031	<0.0029 JL	<0.0029	<0.0032	<0.0029	<0.0032	<0.0033	<0.0034	<0.0034	<0.0034	<0.0038	<0.0033	<0.0034 JL	<0.0034
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0019	<0.0086	<0.015	<0.029	<0.015	<0.003	<0.0028 JL	<0.0028	<0.003	<0.0028	<0.0031	<0.0032	<0.0033	<0.0033	<0.0033	<0.0037	<0.0032	<0.0032 JL	<0.0033
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	0.0057 U	<0.0086	<0.037	<0.071	0.052 U	0.037 U	0.03 UJL	0.01 U	0.0097	0.0092	0.008 U	0.0091	<0.008	<0.008	0.031	0.012 U	<0.0079	<0.0079	<0.0081
Butyl benzyl phthalate	85-68-7	mg/kg	<0.0033	<0.015	0.023 J	0.05 J	<0.014	0.041	<0.0026 JL	<0.0026	<0.0028	<0.0026	<0.0029	<0.0029	<0.003	<0.003	<0.003	<0.0034	<0.003	<0.003	<0.0031
Caprolactam	105-60-2	mg/kg	<0.0024	<0.011	<0.013	<0.026	<0.013	<0.0026	<0.0025 JL	<0.0025	<0.0027	<0.0025	<0.0028 JL	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0029	<0.0029	<0.0029
Carbazole	86-74-8	mg/kg	<0.0019	<0.0086	0.019 J	<0.024	0.016 J	0.011	0.0032 JL	0.0097	0.0066 J	0.0089	0.0052 J	<0.0026	<0.0027	<0.0027	<0.0026	0.0057 U	<0.0026	<0.0026	<0.0027
Chrysene	218-01-9	mg/kg	<0.0019	1.8	0.15	0.047 J	0.12	0.12	0.061 JL	0.051	0.052	0.05	0.02	0.029	<0.0035	<0.0035	<0.0035	0.054	0.12	<0.0035	0.0055 J
Dibenz(a h)anthracene	53-70-3	mg/kg	<0.0024	0.37	<0.012	<0.024	<0.012	<0.0024	<0.0023 JL	<0.0023	<0.0025	0.0093	<0.0025	<0.0026	<0.0027	<0.0027	<0.0026	<0.003	<0.0026	<0.0026	<0.0027
Dibenzofuran	132-64-9	mg/kg	<0.0019	4	<0.012	<0.024	<0.012	0.0026 J	<0.0023 JL	0.0066 J	<0.0025	0.0038 J	<0.0025	<0.0026	<0.0027	<0.0027	<0.0026	<0.003	<0.0026	<0.0026	<0.0027
Diethyl phthalate	84-66-2	mg/kg	0.0032 U	<0.0086	<0.018	<0.036	<0.018	<0.0036	<0.0034 JL	<0.0034	<0.0037	<0.0034	<0.0038	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0039	<0.0039	<0.004
Dimethyl phthalate	131-11-3	mg/kg	<0.0024	<0.011	<0.013	<0.026	<0.013	<0.0026	<0.0025 JL	<0.0025	<0.0027	<0.0025	<0.0028	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0029	<0.0029	<0.0029
Di-n-butyl phthalate	84-74-2	mg/kg	<0.0024	<0.011	<0.014	<0.027	0.018 U	0.0047 U	0.0036 UJL	<0.0026	<0.0028	<0.0026	<0.0029	<0.0029	<0.003	<0.003	<0.003	<0.0034	<0.003	<0.003	<0.0031
Di-n-octyl phthalate	117-84-0	mg/kg	<0.0024	<0.011	<0.016	<0.031	<0.016	<0.0032	<0.003 JL	<0.003	<0.0033	<0.003	<0.0033	<0.0034	<0.0035	<0.0035	<0.0035	<0.0039	<0.0035	<0.0035	<0.0036
Fluoranthene	206-44-0	mg/kg	<0.0019	0.94	0.26	0.056 J	0.18	0.19	0.074 JL	0.13	0.076	0.11	0.043	0.0051 J	0.0058 J	<0.0027	<0.0026	0.053	0.03	<0.0026	0.0078 J
Fluorene	86-73-7	mg/kg	<0.0019	7.5	<0.012	<0.024	<0.012	0.0049 J	<0.0023 JL	0.007	<0.0025	0.0031 J	<0.0025	<0.0026	<0.0027	<0.0027	<0.0026	<0.003	<0.0026	<0.0026	<0.0027

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			SPSB21	SPSB21	SPSS01	SPSS02	SPSS03	SPSS03	SPSS04	SPSS05	SPSS06	SPSS07	SPSS08	WSB01	WSB01	WSB01	WSB01	WSB02	WSB02	WSB02	WSB02
Depth Interval			9-10 ft	16-17 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	4-5 ft	4-5 ft	15-16 ft	0-1 ft	1-2 ft	3-4 ft	6-7 ft
Sample Date			1/24/2012	1/24/2012	10/14/2010	10/13/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/13/2010	10/13/2010	10/14/2010	11/1/2010	11/1/2010	11/1/2010	11/1/2010	11/3/2010	11/3/2010	12/2/2010	11/3/2010
Analyte	CAS No.	Units																			
Hexachlorobenzene	118-74-1	mg/kg	<0.0019	<0.0086	<0.014	<0.028	<0.014	<0.0028	<0.0027 JL	<0.0027	<0.0029	<0.0027	<0.003	<0.0031	<0.0032	<0.0031	<0.0031	<0.0035	<0.0031	<0.0031	<0.0032
Hexachlorobutadiene	87-68-3	mg/kg	<0.0019	<0.0086	<0.024	<0.047	<0.024	<0.0048	<0.0046 JL	<0.0045	<0.005	<0.0045	<0.005	<0.0052	<0.0053	<0.0053	<0.0053	<0.006	<0.0052	<0.0053 JL	<0.0054
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0019	<0.0086	<0.02	<0.039	<0.02	<0.0039	<0.0037 JL	<0.0037	<0.0041	<0.0037	<0.0041 JL	<0.0042	<0.0044	<0.0043	<0.0043 JL	<0.0049	<0.0043	<0.0043 JL	<0.0044
Hexachloroethane	67-72-1	mg/kg	<0.0019	<0.0086	<0.022	<0.042	<0.021	<0.0043	<0.0041 JL	<0.004	<0.0044	<0.004	<0.0045	<0.0046	<0.0047	<0.0047	<0.0047	<0.0053	<0.0047	<0.0047 JL	<0.0048
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	<0.0019	0.25	0.091	<0.038	0.059	0.056	<0.0036 JL	0.02	<0.0039	0.041	0.012	0.023	<0.0043	<0.0042	<0.0042	0.074	<0.0042	<0.0042	<0.0043
Isophorone	78-59-1	mg/kg	<0.0019	<0.0086	<0.017	<0.032	<0.016	<0.0033	<0.0031 JL	<0.0031	<0.0034	<0.0031	<0.0034 JL	<0.0035	<0.0036	<0.0036	<0.0036	<0.0041	<0.0036	<0.0036 JL	<0.0037
Naphthalene	91-20-3	mg/kg	<0.0019	14	<0.018	<0.036	<0.018	0.0038 J	0.018 JL	<0.0034	<0.0037	<0.0034	<0.0038	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0039	<0.0039 JL	<0.004
Nitrobenzene	98-95-3	mg/kg	<0.0019	<0.0086	<0.018	<0.036	<0.018	<0.0036	<0.0034 JL	<0.0034	<0.0037	<0.0034	<0.0038	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0039	<0.0039 JL	<0.004
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0024	<0.011	<0.022	<0.043	<0.022	<0.0044	<0.0042 JL	<0.0041	<0.0045	<0.0041	<0.0046 JL	<0.0047	<0.0049	<0.0048	<0.0048	<0.0054	<0.0048	<0.0048 JL	<0.0049
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0024	<0.011	<0.012	<0.024	<0.012	<0.0024	<0.0023 JL	<0.0023	<0.0025	<0.0023	<0.0025	<0.0026	<0.0027	<0.0027	<0.0026	<0.003	<0.0026	<0.0026	<0.0027
Pentachlorophenol	87-86-5	mg/kg	<0.0021	<0.0097 JL	<0.016	<0.03 JL	<0.015	<0.0031 JL	<0.0029 JL	<0.0029 JL	<0.0032 JL	<0.0029	<0.0032 JL	<0.0033	<0.0034	<0.0034	<0.0034	<0.0038	<0.0033	<0.0034 JL	<0.0034 JL
Phenanthrene	85-01-8	mg/kg	<0.003	44	0.088	<0.032	0.063	0.074	0.032 JL	0.097	0.028	0.046	0.024	<0.0035	<0.0036	<0.0036	<0.0036	0.019	0.011	<0.0036	0.005 J
Phenol	108-95-2	mg/kg	<0.0024	<0.011 JL	<0.018	<0.036 JL	<0.018	<0.0036 JL	<0.0034 JL	<0.0034 JL	<0.0037 JL	<0.0034	<0.0038 JL	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0039	<0.0039 JL	<0.004 JL
Pyrene	129-00-0	mg/kg	<0.0019	2.7	0.21	0.049 J	0.14	0.14	0.061 JL	0.095	0.058	0.078	0.033	0.13	0.0044 J	<0.0027	<0.0026	0.042	0.35	<0.0026	0.0056 J

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			WSB03	WSB03	WSB03	WSB04	WSB04	WSB04	WSB04	WSB09	WSB09	WSB09	WSS01	WSS02	WSS03	WSS04	WSS09
Depth Interval			1-2 ft	2-3 ft	9-10 ft	1-2 ft	4-5 ft	14-15 ft	14-15 ft	1-2 ft	3-4 ft	11-12 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
Sample Date			12/6/2010	12/6/2010	12/6/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	12/7/2010	12/7/2010	12/7/2010	10/8/2010	10/7/2010	10/8/2010	10/7/2010	12/14/2011
Analyte	CAS No.	Units															
METALS																	
Aluminum	7429-90-5	mg/kg	14100	7910	19100	17800	17900	12400	10800	5930	7660	5590	10500	11400	3540	11400	---
Antimony	7440-36-0	mg/kg	<0.27	<0.27	<0.31	<0.31	<0.3	<0.31	<0.29	<0.26	<0.23	<0 31	<0.27	<0.28	<0.27	<0 25	---
Arsenic	7440-38-2	mg/kg	2.67	2.98	4.67	4.56	2.95	4.77	4.76	2.7	2.52	3.61	3.59	4.6	2.59	2.58	1.53
Barium	7440-39-3	mg/kg	220	241	199	396	227	85.2 J	216 J	90.9	268	91.6	1000	551	133	335	---
Beryllium	7440-41-7	mg/kg	0.684	0.497 J	0.84	0.992	1.08	0.923	0.767	0.382 J	0.442 J	0.335 J	0.554	0.476 J	0.182 J	0.506	---
Cadmium	7440-43-9	mg/kg	0.267 J	0.151 J	0.161 J	0.218 J	0.191 J	0.161 J	0.322 J	0.135 J	0.17 J	0.0805 J	0.343 J	0.397 J	0.589	0.982	---
Chromium	7440-47-3	mg/kg	8.14	5.52	9.9	10.2	10.9	7.7	8.22	4.36	4.85	4.58	10.2	12.8	11.6	21	---
Cobalt	7440-48-4	mg/kg	3.62	4.33	3.94	6.03	5.95	5.51	4.71	2.34	2.87	2.39	3.86	3.76	1.84	3.19	---
Copper	7440-50-8	mg/kg	7.44	5.24	5.7	8.78	8.28	7.23	6.98	11.6 JL	5.74	3.15	13.1	10.9	14.3	11.3	---
Lead#	7439-92-1	mg/kg	21.7	8.5	7.94	12	11.7	10.5	13.5	7.95	9.58	4.29	58.4	39.9	202	52.3	---
Manganese	7439-96-5	mg/kg	183	228	156	375	274	150 J	367 J	109	159	103	229	238	129	188	---
Nickel	7440-02-0	mg/kg	6.48	5.64	7.32	9.93	10.1	8.12	8.39	3.85	5.02	3.96	7.2	7.56	7.13	10.1	---
Selenium	7782-49-2	mg/kg	0.538	0.501 J	0.824	0.966	0.76	0.817	0.861	0.427 J	0.554	<0 31	0.466 J	0.394 J	<0.27	0.395 J	---
Silver	7440-22-4	mg/kg	0.0777 J	<0.043	<0.05	<0.05	<0.049	<0.049	<0.046	<0.042	0.0456 J	<0.049	<0.043	<0.045	<0.043	0.097 J	---
Thallium	7440-28-0	mg/kg	0.16 J	0.127 J	0.201 J	0.37 J	0.26 J	0.207 J	0.178 J	0.168 U	0.195 U	0.0962 U	0.214 U	0.232 U	0.111 U	0.161 U	---
Vanadium	7440-62-2	mg/kg	19.2	13	26.8	25.4	22	19.9	17.6	8.88	7.51	11.4	16.8	17	8.81	16.2	---
Zinc	7440-66-6	mg/kg	93.3	26.9	27.6	33	32.2	29.1 J	55.2 J	20.8 JH	18	12.9	91.2	185	1630	644	---
Mercury#	7439-97-6	mg/kg	0.103	0.011	0.00218 J	0.00905	0.00364 J	0.00155 J	0.3 J	0.00619	0.0144	0.00529	0.0272	0.0429	0.0409	0.263	0.459
Cyanide	57-12-5	mg/kg	<0.67	<0.69	<0.77	<0.76	<0.78	<0.78	<730	<0.62	<0.63	<0.72	<0.64	1.57 J	<0.65	<0.61	---
PESTICIDES and PCBs																	
4,4´-DDD	72-54-8	mg/kg	<0.0028	<0.00059	<0.00065	<0.0065	<0.00066	0.015 J	<0.0031	0.0052	<0.00053	<0.066	<0.0057	<0.0059	<0.0056	<0.0027	---
4,4´-DDE	72-55-9	mg/kg	<0.0028	<0.00059	<0.00065	<0.0065	<0.00066	<0.0065	<0.0031	<0.00055	<0.00053	<0.066	<0.0057	<0.0059	<0.0056	<0.0027	---
4,4´-DDT	50-29-3	mg/kg	<0.0028	<0.00059	<0.00065	<0.0065	<0.00066	<0.0065	<0.0031	0.011	<0.00053	<0.066	<0.0057	<0.0059	<0.0056	<0.0027	---
Aldrin	309-00-2	mg/kg	<0.0017	<0.00035	<0.00039	<0.0039	<0.00039	0.051 U	0.012 U	<0.00033	<0.00032	<0.039	<0.0034	<0.0036	<0.0034	<0.0016	---
alpha-BHC	319-84-6	mg/kg	<0.0017	<0.00035	<0.00039	<0.0039	<0.00039	0.07 J	<0.0018 J	<0.00033	<0.00032	<0.039	<0.0034	<0.0036	<0.0034	<0.0016	---
alpha-Chlordane	5103-71-9	mg/kg	0.011 J	<0.00023	<0.00026	<0.0026	<0.00026	0.025	<0.0012	<0.00022	<0.00021	<0.026	<0.0023	<0.0024	<0.0023	<0.0011	---
beta-BHC	319-85-7	mg/kg	<0.0017	<0.00035	<0.00039	<0.0039	<0.00039	0.07 U	<0.0018 J	<0.00033	<0.00032	<0.039	<0.0034	<0.0036	<0.0034	<0.0016	---
delta-BHC	319-86-8	mg/kg	<0.0011	<0.00023	<0.00026	<0.0026	<0.00026	<0.0026	<0.0012	<0.00022	<0.00021	<0.026	<0.0023	<0.0024	<0.0023	<0.0011	---
Dieldrin	60-57-1	mg/kg	<0.0028	<0.00059	<0.00065	<0.0065	<0.00066	0.032 J	<0.0031 J	0.0026 J	<0.00053	<0.066	<0.0057	<0.0059	<0.0056	<0.0027	---
Endosulfan I	959-98-8	mg/kg	<0.0017	<0.00035	<0.00039	<0.0039	<0.00039	<0.0039	<0.0018	<0.00033	<0.00032	<0.039	<0.0034	<0.0036	<0.0034	<0.0016	---
Endosulfan II	33213-65-9	mg/kg	<0.0034	<0.0007	<0.00078	<0.0078	<0.00079	<0.0078	<0.0037	<0.00066	<0.00063	<0.079	<0.0068	<0.0071	<0.0068	<0.0033	---
Endosulfan sulfate	1031-07-8	mg/kg	<0.0034	<0.0007	<0.00078	<0.0078	<0.00079	<0.0078	<0.0037	<0.00066	<0.00063	<0.079	<0.0068	<0.0071	<0.0068	<0.0033	---
Endrin	72-20-8	mg/kg	<0.0034	<0.0007	<0.00078	<0.0078	<0.00079	<0.0078	<0.0037	<0.00066	<0.00063	<0.079	<0.0068	<0.0071	<0.0068	<0.0033	---
Endrin aldehyde	7421-93-4	mg/kg	<0.0034	<0.0007	<0.00078	<0.0078	<0.00079	<0.0078	<0.0037	<0.00066	<0.00063	<0.079	<0.0068	<0.0071	<0.0068	<0.0033	---
gamma-BHC	58-89-9	mg/kg	<0.0011	<0.00023	<0.00026	<0.0026	<0.00026	<0.0026	<0.0012	<0.00022	<0.00021	<0.026	<0.0023	<0.0024	<0.0023	<0.0011	---
gamma-Chlordane	5103-74-2	mg/kg	0.0094	<0.00023	<0.00026	<0.0026	<0.00026	<0.0026	<0.0012	<0.00022	<0.00021	<0.026	<0.0023	<0.0024	<0.0023	<0.0011	---
Heptachlor	76-44-8	mg/kg	<0.0017	<0.00035	<0.00039	<0.0039	<0.00039	0.052 U	<0.0018 J	<0.00033	<0.00032	<0.039	<0.0034	<0.0036	<0.0034	<0.0016	---
Heptachlor epoxide	1024-57-3	mg/kg	<0.0017	<0.00035	<0.00039	<0.0039	<0.00039	<0.0039	<0.0018	<0.00033	<0.00032	0.28 J	<0.0034	<0.0036	<0.0034	<0.0016	---
Methoxychlor	72-43-5	mg/kg	<0.019	<0.004	<0.0044	<0.044	<0.0045	<0.044	<0.021	<0.0037	<0.0036	<0.45	<0.038	<0.04	<0.038	<0.018	---
Toxaphene	8001-35-2	mg/kg	<0.021	<0.0045	<0.0049	<0.049	<0.005	<0.049	<0.023	<0.0042	<0.004	<0.5	<0.043	<0.045	<0.043	<0.021	---
Aroclor 1016	12674-11-2	mg/kg	<0.0027	<0.0028	<0.0031	<0.0031	<0.0031	<0.0031	<0.003	<0.0026	<0.0025	<0.031	<0.0027	<0.0028	<0.0027	<0.0026	---
Aroclor 1221	11104-28-2	mg/kg	<0.0027	<0.0028	<0.0031	<0.0031	<0.0031	<0.0031	<0.003	<0.0026	<0.0025	<0.031	<0.0027	<0.0028	<0.0027	<0.0026	---
Aroclor 1232	11141-16-5	mg/kg	<0.0027	<0.0028	<0.0031	<0.0031	<0.0031	<0.0031	<0.003	<0.0026	<0.0025	<0.031	<0.0027	<0.0028	<0.0027	<0.0026	---
Aroclor 1242	53469-21-9	mg/kg	<0.0027	<0.0028	<0.0031	<0.0031	<0.0031	<0.0031	<0.003	<0.0026	<0.0025	<0.031	<0.0027	<0.0028	<0.0027	<0.0026	---
Aroclor 1248	12672-29-6	mg/kg	<0.0027	<0.0028	<0.0031	<0.0031	<0.0031	<0.0031	<0.003	<0.0026	<0.0025	<0.031	<0.0027	<0.0028	<0.0027	<0.0026	---
Aroclor 1254	11097-69-1	mg/kg	<0.0027	<0.0028	<0.0031	<0.0031	<0.0031	<0.0031	<0.003	<0.0026	<0.0025	<0.031	<0.0027	<0.0028	<0.0027	<0.0026	---
Aroclor 1260	11096-82-5	mg/kg	<0.002	<0.0021	<0.0023	<0.0023	<0.0024	<0.0023	<0.0022	0.031	<0.0019	<0.024	<0.002	<0.0021	0.031	<0.002	---
Total PCBs	TPCB	mg/kg	<0.0091	<0.00945	<0.01045	<0.01045	<0.0105	<0.01045	<0.0101	0.0388	<0.00845	<0.105	<0.0091	<0.00945	0.0391	<0.0088	---
VOLATILE ORGANIC COMPOUNDS																	
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1 1-Dichloroethane	75-34-3	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1,1-Dichloroethene	75-35-4	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.00055	<0.00054	<0.00061	<0.00063	<0.00064	<0.0006	<0.00058	<0.00061	<0.00052	<0.00063	<0.00066	<0.0008	<0.00061	<0.00054	---
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	2	1.7	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1 2-Dibromoethane	106-93-4	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1 2-Dichloroethane	107-06-2	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1 2-Dichloropropane	78-87-5	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	0.12	0.13	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
2-Butanone	78-93-3	mg/kg	<0.0013	<0.0013	<0.0014	<0.0015	<0.0015	0.011	0.0099	<0.0014	<0.0012	<0.0015	<0.0015	<0.0019	<0.0014	<0.0013	---
2-Hexanone	591-78-6	mg/kg	<0.00092	<0.0009	<0.001	<0.001	<0.0011	<0.001	<0.00097	<0.001	<0.00086	<0.001	<0.0011	<0.0013	<0.001	<0.0009	---
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.00092	<0.0009	<0.001	<0.001	<0.0011	<0.001	<0.00097	<0.001	<0.00086	<0.001	<0.0011	<0.0013	<0.001	<0.0009	---
Acetone	67-64-1	mg/kg	<0.0018	<0.0018	<0.002	<0.0021	<0.0021	0.056 U	0.047 U	<0.002	<0.0017	0.032	<0.0022	<0.0027	<0.002	<0.0018	---
Benzene#	71-43-2	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	0.69	0.6	<0.00051	<0.00043	0.012	<0.00055	<0.00067	<0.00051	<0.00045	---
Bromodichloromethane	75-27-4	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Bromoform	75-25-2	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Bromomethane	74-83-9	mg/kg	<0.00092	<0.0009	<0.001	<0.001	<0.0011	<0.001	<0.00097	<0.001	<0.00086	<0.001	<0.0011	<0.0013	<0.001	<0.0009	---
Carbon disulfide	75-15-0	mg/kg	<0.00092	<0.0009	<0.001	<0.001	<0.0011	0.0042 J	0.0019 J	<0.001	<0.00086	<0.001	<0.0011	<0.0013	<0.001	<0.0009	---
Carbon tetrachloride	56-23-5	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location			WSB03	WSB03	WSB03	WSB04	WSB04	WSB04	WSB04	WSB09	WSB09	WSB09	WSS01	WSS02	WSS03	WSS04	WSS09
Depth Interval			1-2 ft	2-3 ft	9-10 ft	1-2 ft	4-5 ft	14-15 ft	14-15 ft	1-2 ft	3-4 ft	11-12 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
Sample Date			12/6/2010	12/6/2010	12/6/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	12/7/2010	12/7/2010	12/7/2010	10/8/2010	10/7/2010	10/8/2010	10/7/2010	12/14/2011
Analyte	CAS No.	Units															
Chlorobenzene	108-90-7	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Chloroethane	75-00-3	mg/kg	<0.00092	<0.0009	<0.001	<0.001	<0.0011	<0.001	<0.00097	<0.001	<0.00086	<0.001	<0.0011	<0.0013	<0.001	<0.0009	---
Chloroform	67-66-3	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Chloromethane	74-87-3	mg/kg	<0.00092	<0.0009	<0.001	<0.001	<0.0011	<0.001	<0.00097	<0.001	<0.00086	<0.001	<0.0011	<0.0013	<0.001	<0.0009	---
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Cyclohexane	110-82-7	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	2.2	1.6	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Dibromochloromethane	124-48-1	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Dichlorodifluoromethane	75-71-8	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Ethylbenzene	100-41-4	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	0.15	0.16	<0.00051	<0.00043	0.012	<0.00055	<0.00067	<0.00051	<0.00045	---
Isopropylbenzene	98-82-8	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	0.032	0.034	<0.00051	<0.00043	0.0058	<0.00055	<0.00067	<0.00051	<0.00045	---
Methyl acetate	79-20-9	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Methylcyclohexane	108-87-2	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	5.7	4.1	<0.00051	<0.00043	0.0077	<0.00055	<0.00067	<0.00051	<0.00045	---
Methylene chloride	75-09-2	mg/kg	<0.00092	<0.0009	<0.001	<0.001	<0.0011	<0.001	<0.00097	<0.001	<0.00086	<0.001	0.0019 J	0.0036 U	0.003 J	0.0025 U	---
Naphthalene	91-20-3	mg/kg	0.012	<0.00045	<0.00051	<0.00052	<0.00053	0.15	0.16	<0.00051	<0.00043	0.011	<0.00055	<0.00067	<0.00051	<0.00045	---
n-Butylbenzene	104-51-8	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	0.024	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
n-Propylbenzene	103-65-1	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	0.041	0.043	<0.00051	<0.00043	0.0018 J	<0.00055	<0.00067	<0.00051	<0.00045	---
sec-Butylbenzene	135-98-8	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	0.014	0.014	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Styrene	100-42-5	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
tert-Butylbenzene	98-06-6	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Tetrachloroethene	127-18-4	mg/kg	<0.00055	<0.00054	<0.00061	<0.00063	<0.00064	<0.0006	<0.00058	<0.00061	<0.00052	<0.00063	<0.00066	<0.0008	<0.00061	<0.00054	---
Toluene	108-88-3	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	0.2 J	0.62 J	<0.00051	<0.00043	0.00088 J	<0.00055	<0.00067	<0.00051	<0.00045	---
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Trichloroethene	79-01-6	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Trichlorofluoromethane	75-69-4	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Vinyl chloride	75-01-4	mg/kg	<0.00046	<0.00045	<0.00051	<0.00052	<0.00053	<0.0005	<0.00048	<0.00051	<0.00043	<0.00052	<0.00055	<0.00067	<0.00051	<0.00045	---
Xylenes, Total	1330-20-7	mg/kg	<0.0014	<0.0014	<0.0015	<0.0016	<0.0016	3.5	3.1	<0.0015	<0.0013	0.0038 J	<0.0017	<0.002	<0.0015	<0.0014	---
SEMIVOLATILE ORGANIC COMPOUNDS																	
1,1´-Biphenyl	92-52-4	mg/kg	<0.016	<0.034	<0.0038	<0.0038	<0.0038	0.43	0.3	<0.0032	<0.0031	31	<0.033	<0.034	<0.033	<0.0031	---
1-Methylnaphthalene#	90-12-0	mg/kg	<0.013	<0.027	<0.003	<0.003	<0.003	3	2	<0.0025	<0.0024	53	<0.026	<0.027	<0.026	<0.0025	---
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.016	<0.033	<0.0036	<0.0036	<0.0037	<0.0036	<0.0035	<0.0031 JL	<0.003 JL	<0.018 JL	<0.032	<0.033	<0.032 JL	<0.003	---
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	<0.0043	<0.0041	<0.0036 JL	<0.0035 JL	<0.022 JL	<0.037	<0.039	<0.037 JL	<0.0036	---
2,4-Dichlorophenol	120-83-2	mg/kg	<0.012	<0.026	<0.0029	<0.0029	<0.0029	<0.0028	<0.0027	<0.0024 JL	<0.0023 JL	<0.014 JL	<0.025	<0.026	<0.025 JL	<0.0024	---
2 4-Dimethylphenol	105-67-9	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	<0.0043 J	0.18 J	<0.0036 JL	<0.0035 JL	2.6	<0.037	<0.039	<0.037 JL	<0.0036	---
2 4-Dinitrophenol	51-28-5	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	<0.0043	<0.0041	<0.0036 JL	<0.0035 JL	<0.022 JL	<0.037	<0.039	<0.037 JL	<0.0036	---
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	<0.0043	<0.0041	<0.0036	<0.0035	<0.022	<0.037	<0.039	<0.037	<0.0036	---
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.018	<0.037	<0.0042	<0.0042	<0.0042	<0.0041	<0.0039	<0.0035	<0.0034	<0.021	<0.036	<0.038	<0.036	<0.0035	---
2-Chloronaphthalene	91-58-7	mg/kg	<0.023	<0.048	<0.0053	<0.0053	<0.0054	<0.0053	<0.0051	<0.0045	<0.0043	<0.027	<0.046	<0.049	<0.046	<0.0045	---
2-Chlorophenol	95-57-8	mg/kg	<0.018	<0.037	<0.0042	<0.0042	<0.0042	<0.0041	<0.0039	<0.0035 JL	<0.0034 JL	<0.021 JL	<0.036	<0.038	<0.036 JL	<0.0035	---
2-Methylnaphthalene	91-57-6	mg/kg	<0.015	<0.032	<0.0035	<0.0035	<0.0035	4.6	3	<0.003	<0.0029	96	<0.031	<0.032	<0.03	<0.0029	---
2-Methylphenol	95-48-7	mg/kg	<0.016	<0.034	<0.0038	<0.0038	<0.0038	0.31	0.48	<0.0032 JL	<0.0031 JL	<0.019 JL	<0.033	<0.034	<0.033 JL	<0.0031	---
2-Nitroaniline	88-74-4	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	<0.0043	<0.0041	<0.0036	<0.0035	<0.022	<0.037	<0.039	<0.037	<0.0036	---
2-Nitrophenol	88-75-5	mg/kg	<0.026	<0.054	<0.006	<0.006	<0.006	<0.0059	<0.0057	<0.005 JL	<0.0049 JL	<0.03 JL	<0.052	<0.054	<0.052 JL	<0.005	---
3&4-Methylphenol	106-44-5	mg/kg	<0.016	<0.033	<0.0036	<0.0036	<0.0037	0.22	0.22	<0.0031 JL	<0.003 JL	<0.018 JL	<0.032	<0.033	<0.032 JL	<0.003	---
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.017	<0.036	<0.004	<0.004	<0.0041	<0.004	<0.0038	<0.0034	<0.0033	<0.02	<0.035	<0.037	<0.035	<0.0034	---
3-Nitroaniline	99-09-2	mg/kg	<0.015	<0.03	<0.0034	<0.0034	<0.0034	<0.0034	<0.0032	<0.0028	<0.0028	<0.017	<0.029	<0.031	<0.029	<0.0028	---
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	<0.0043	<0.0041	<0.0036 JL	<0.0035 JL	<0.022 JL	<0.037	<0.039	<0.037 JL	<0.0036	---
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	<0.0043	<0.0041	<0.0036	<0.0035	<0.022	<0.037	<0.039	<0.037	<0.0036	---
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	<0.0043	<0.0041	<0.0036 JL	<0.0035 JL	<0.022 JL	<0.037	<0.039	<0.037 JL	<0.0036	---
4-Chloroaniline	106-47-8	mg/kg	<0.012	<0.026	<0.0029	<0.0029	<0.0029	<0.0028	<0.0027	<0.0024	<0.0023	<0.014	<0.025	<0.026	<0.025	<0.0024	---
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.012	<0.026	<0.0029	<0.0029	<0.0029	<0.0028	<0.0027	<0.0024	<0.0023	<0.014	<0.025	<0.026	<0.025	<0.0024	---
4-Nitroaniline	100-01-6	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	<0.0043	<0.0041	<0.0036	<0.0035	<0.022	<0.037	<0.039	<0.037	<0.0036	---
4-Nitrophenol	100-02-7	mg/kg	<0.021	<0.044	<0.005	<0.005	<0.005	<0.0049	<0.0047	<0.0042 JL	<0.004 JL	<0.025 JL	<0.043	<0.045	<0.043 JL	<0.0041	---
Acenaphthene	83-32-9	mg/kg	0.015 J	<0.026	<0.0029	<0.0029	<0.0029	0.095	0.062	<0.0024	<0.0023	0.31	<0.025	<0.026	<0.025	<0.0024	---
Acenaphthylene	208-96-8	mg/kg	<0.012	<0.026	<0.0029	<0.0029	<0.0029	<0.0028	<0.0027	<0.0024	<0.0023	0.8	<0.025	<0.026	<0.025	<0.0024	---
Acetophenone	98-86-2	mg/kg	<0.014	<0.028	<0.0031	0.0094	<0.0031	<0.0031	<0.003	<0.0026	<0.0025	4.7	<0.027	<0.028	<0.027	<0.0026	---
Anthracene	120-12-7	mg/kg	0.053	<0.026	<0.0029	<0.0029	<0.0029	0.16	0.16	<0.0024	<0.0023	3.4	<0.025	<0.026	0.037 J	0.0033 J	---
Benz(a)anthracene	56-55-3	mg/kg	0.31	<0.033	<0.0036	0.0089	<0.0037	0.19	0.22	<0.0031	<0.003	3.2	0.092	0.083	0.057 J	0.018	---
Benzaldehyde	100-52-7	mg/kg	<0.026	<0.054	<0.006	<0.006 JL	<0.006 JL	<0.0059 JL	<0.0057 JL	<0.005 JL	<0.0049 JL	<0.03 JL	<0.052 JL	<0.054 JL	<0.052 JL	<0.005 JL	---
Benzo(a)pyrene	50-32-8	mg/kg	0.31	<0.027	<0.003	0.0095	<0.003	0.14	0.1	<0.0025	<0.0024	2.5	0.098	0.095	0.063 J	0.018	---
Benzo(b)fluoranthene	205-99-2	mg/kg	0.24	<0.039	<0.0043	0.012	<0.0043	0.048	0.042	<0.0036	<0.0035	1.2	0.12	0.14	0.099	0.026	---
Benzo(g h i)perylene	191-24-2	mg/kg	0.19	<0.034	<0.0038	0.016	<0.0038	0.087	0.063	<0.0032	<0.0031	1.6	0.073 J	0.085	0.08	0.013	---
Benzo(k)fluoranthene	207-08-9	mg/kg	0.3	<0.039	<0.0043	<0.0043	<0.0043	0.039	0.015	<0.0036	<0.0035	0.76	0.048 J	0.047 J	0.061 J	0.011	---
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.014	<0.028	<0.0031	<0.0031	<0.0031	<0.0031	<0.003	<0.0026	<0.0025	<0.016	<0.027	<0.028	<0.027	<0.0026	---
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.016	<0.033	<0.0036	<0.0036	<0.0037	<0.0036	<0.0035	<0.0031	<0.003	<0.018	<0.032	<0.033	<0.032	<0.003	---
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.015	<0.032	<0.0035	<0.0035	<0.0035	<0.0035	<0.0033	<0.003	<0.0029	<0.018	<0.031	<0.032	<0.03	<0.0029	---
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	<0.037	<0.077	<0.0086	0.011	<0.0087	<0.0085	<0.0081	<0.0072	<0.007	<0.043	0.091 U	<0.078	<0.074	<0.0072	---
Butyl benzyl phthalate	85-68-7	mg/kg	<0.014	<0.029	<0.0033	<0.0033	<0.0033	<0.0032	<0.0031	<0.0027	<0.0026	<0.016	<0.028	<0.03	<0.028	<0.0027	---
Caprolactam	105-60-2	mg/kg	<0.014	<0.028	<0.0031	<0.0031	<0.0031	<0.0031	<0.003	<0.0026	<0.0025	<0.016	<0.027	<0.028	<0.027	<0.0026	---
Carbazole	86-74-8	mg/kg	0.024 J	<0.026	<0.0029	<0.0029	<0.0029	<0.0028	<0.0027	<0.0024	<0.0023	<0.014	<0.025	<0.026	<0.025	0.0034 J	---
Chrysene	218-01-9	mg/kg	0.39	<0.034	<0.0038	0.0097	<0.0038	0.26	0.22	<0.0032	<0.0031	5.3	0.11	0.11	0.13	0.021	---
Dibenz(a h)anthracene	53-70-3	mg/kg	0.07	<0.026	<0.0029	0.0044 J	<0.0029	0.023	0.015	<0.0024	<0.0023	1.5	<0.025	<0.026	<0.025	<0.0024	---
Dibenzofuran	132-64-9	mg/kg	<0.012	<0.026	<0.0029	<0.0029	<0.0029	<0.0028 J	0.25 J	<0.0024	<0.0023	1.8	<0.025	<0.026	<0.025	<0.0024	---
Diethyl phthalate	84-66-2	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	<0.0043	<0.0041	<0.0036	<0.0035	<0.022	<0.037	<0.039	<0.037	<0.0036	---
Dimethyl phthalate	131-11-3	mg/kg	<0.014	<0.028	<0.0031	<0.0031	<0.0031	<0.0031	<0.003	<0.0026	<0.0025	<0.016	<0.027	<0.028	<0.027	<0.0026	---
Di-n-butyl phthalate	84-74-2	mg/kg	<0.014	<0.029	<0.0033	<0.0033	<0.0033	0.062 U	<0.0031 J	<0.0027	0.0028 J	<0.016	<0.028	<0.03	<0.028	<0.0027	---
Di-n-octyl phthalate	117-84-0	mg/kg	<0.016	<0.034	<0.0038	<0.0038	<0.0038	<0.0037	<0.0036	<0.0032	<0.0031	<0.019	<0.033	<0.034	<0.033	<0.0031	---
Fluoranthene	206-44-0	mg/kg	0.62	<0.026	<0.0029	0.014	<0.0029	0.13	0.14	<0.0024	<0.0023	1.2	0.16	0.19	0.22	0.042	---
Fluorene	86-73-7	mg/kg	<0.012	<0.026	<0.0029	<0.0029	<0.0029	0.51	0.39	<0.0024	<0.0023	8.8	<0.025	<0.026	<0.025	<0.0024	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
South Pit Area
Brine Service Company Superfund Site

Sample Location Depth Interval Sample Date			WSB03 1-2 ft 12/6/2010	WSB03 2-3 ft 12/6/2010	WSB03 9-10 ft 12/6/2010	WSB04 1-2 ft 11/2/2010	WSB04 4-5 ft 11/2/2010	WSB04 14-15 ft 11/2/2010	WSB04 14-15 ft 11/2/2010	WSB09 1-2 ft 12/7/2010	WSB09 3-4 ft 12/7/2010	WSB09 11-12 ft 12/7/2010	WSS01 0-0.5 ft 10/8/2010	WSS02 0-0.5 ft 10/7/2010	WSS03 0-0.5 ft 10/8/2010	WSS04 0-0.5 ft 10/7/2010	WSS09 0-0.5 ft 12/14/2011
Analyte	CAS No.	Units															
Hexachlorobenzene	118-74-1	mg/kg	<0.015	<0.03	<0.0034	<0.0034	<0.0034	<0.0034	<0.0032	<0.0028	<0.0028	<0.017	<0.029	<0.031	<0.029	<0.0028	---
Hexachlorobutadiene	87-68-3	mg/kg	<0.025	<0.051	<0.0057	<0.0057	<0.0058	<0.0057	<0.0054	<0.0048	<0.0047	<0.029	<0.05	<0.052	<0.05	<0.0048	---
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.02	<0.042	<0.0047	<0.0047	<0.0047	<0.0047	<0.0044	<0.0039	<0.0038	<0.024	<0.041	<0.043	<0.041	<0.0039	---
Hexachloroethane	67-72-1	mg/kg	<0.022	<0.046	<0.0051	<0.0051	<0.0051	<0.005	<0.0048	<0.0043	<0.0041	<0.026	<0.044	<0.046	<0.044	<0.0042	---
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	0.19	<0.041	<0.0046	0.0097	<0.0046	0.024	0.024	<0.0038	<0.0037	<0.023	0.063 J	0.069 J	0.07 J	0.013	---
Isophorone	78-59-1	mg/kg	<0.017	<0.035	<0.0039	<0.0039	<0.0039	<0.0039	<0.0037	<0.0033	<0.0032	<0.02	<0.034	<0.036	<0.034	<0.0033	---
Naphthalene	91-20-3	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	1.3	0.87	<0.0036	<0.0035	25	<0.037	<0.039	<0.037	<0.0036	---
Nitrobenzene	98-95-3	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	<0.0043	<0.0041	<0.0036	<0.0035	<0.022	<0.037	<0.039	<0.037	<0.0036	---
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.023	<0.047	<0.0052	<0.0052	<0.0052	<0.0052	<0.0049	<0.0044	<0.0042	<0.026	<0.045	<0.047	<0.045	<0.0043	---
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.012	<0.026	<0.0029	<0.0029	<0.0029	<0.0028	<0.0027	<0.0024	<0.0023	<0.014	<0.025	<0.026	<0.025	<0.0024	---
Pentachlorophenol	87-86-5	mg/kg	<0.016	<0.033	<0.0036	<0.0036	0.0059 J	<0.0036	<0.0035	<0.0031 JL	<0.003 JL	<0.018 JL	<0.032	<0.033	<0.032 JL	<0.003	---
Phenanthrene	85-01-8	mg/kg	0.19	<0.035	<0.0039	0.0091	<0.0039	2.2	1.6	<0.0033	<0.0032	62	0.078	0.066 J	0.049 J	0.02	---
Phenol	108-95-2	mg/kg	<0.019	<0.039	<0.0043	<0.0043	<0.0043	0.088	0.081	<0.0036 JL	<0.0035 JL	<0.022 JL	<0.037	<0.039	<0.037 JL	<0.0036	---
Pyrene	129-00-0	mg/kg	0.51	<0.026	<0.0029	0.011	<0.0029	0.64	0.51	<0.0024	<0.0023	6.2	0.13	0.17	0.14	0.034	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Waste Soil and Sludge Data Summary
South Pit
Brine Service Company Superfund Site

Analyte	CAS No.	Units	Sample Location	ESSB02	ESSB03	ESSB04	ESSB06	ESSB06	ESSB07	MWGW09	SPSL01	SPSB02	SPSB02	SPSB03	SPSB04	SPSB05	SPSB05	SPSB06	SPSL06	SPSB07	SPSB09	SPSB10	SPSB10
			Depth Interval	6-7 ft	7-8 ft	7-8 ft	7-8 ft	14-15 ft	9-10 ft	7-8 ft	7-13.5 ft	5-6 ft	10-11 ft	13-14 ft	15-16 ft	13-14 ft	13-14 ft	13-14 ft	16-19.5 ft	12-13 ft	13-14 ft	5-6 ft	13-14 ft
			Sample Date	11/5/2010	12/9/2010	11/5/2010	11/3/2010	11/3/2010	12/8/2010	1/26/2012	12/2/2010	12/2/2010	12/2/2010	12/1/2010	12/2/2010	12/3/2010	12/3/2010	12/3/2010	12/3/2010	12/1/2010	11/30/2010	11/30/2010	11/30/2010
			Sample ID	SB02-060-1105	SB03-070-120	SB04-070-110	SB06-070-110	SL06-140-110	SB07-090-1208	W09-070-01	SL01-070-1203	SB02-050-1203	SB02-100-1203	SB03-130-1203	SB04-150-1203	SB05-130-120	05-130-FD-12	SB06-130-1203	SL06-160-1203	SB07-120-120	SB09-130-1136	SB10-050-1136	SB10-130-113010
METALS																							
Aluminum	7429-90-5	mg/kg		10300	16400	5870	6770	5010	11500	13500	5870	7480	5740	5050	21600	18400	25700	15900	8800	4900	3510	11900	10300
Antimony	7440-36-0	mg/kg		<0.3	<1.6	<0 27	<0 29	<0 29	<0.3	0.646 J	<0.31	<0.29	<0.28	<0.28	<0.39	<0.33	<0.37	<0.32	<0.31	<0.27	<0.26	<0 3	<0 27
Arsenic#	7440-38-2	mg/kg		6.24	3.38	2.07	1.35	1.67	5.79	12.7	3.72	4.32	3.47	3.12	4.33	2.66	2.44	4.6	4.23	1.5	1.23	3.71	4.09
Barium	7440-39-3	mg/kg		138	382	156	172	125	174	2910	134	685	509	1360	1280	1730 J	798 J	2440	4120	131	68.3	378	89.8
Beryllium	7440-41-7	mg/kg		0.583 J	0.759 J	0.361 J	0.413 J	0.309 J	0.631	0.253 J	0.33 J	0.255 J	0.201 J	0.26 J	0.946	0.849	0.866	0.533 J	0.312 J	0.312 J	0.264 J	0.69	0.627
Cadmium	7440-43-9	mg/kg		0.144 J	<0 26	0.104 J	0.118 J	0.148 J	0.119 J	0.548 J	0.295 J	0.28 J	0.267 J	0.111 J	0.532 J	0.33 J	0.211 J	0.334 J	0.278 J	0.0788 J	0.053 J	0.165 J	0.0957 J
Chromium	7440-47-3	mg/kg		7.16	27.6	5.81	4.38	3.56	6.01	501	6.87	63.5	48.2	17.7	209	25.5	16.4	40.4	58.5	3.47	4.41	10.1	7.4
Cobalt	7440-48-4	mg/kg		5.49	4.85	2.44	2.78	2.2	4.51	10.4	3.47	2.91	2.38	2.25	8.18	5.81	4.57	4.83	6.04	1.94	1.59	3.5	4.06
Copper	7440-50-8	mg/kg		5.27	10.3	3.35	3.89	3.16	5.65	169	6.43	28.2	28.4	4.75	108	23 J	10 J	25.1	124	2.92	2.22	5.35	5.63
Lead	7439-92-1	mg/kg		8.92	19.8	5.89	9.31	8.88	12.1	215	16.3	65.8	41.5	9.04	48.5	34.3 J	16.8 J	94.1	144	6.17	3.4	8.69	7.75
Manganese	7439-96-5	mg/kg		338	299	179	327	318	183	130	172	156	303	107	514	383	215	203	123	188	65.1	195	190
Nickel	7440-02-0	mg/kg		7.66	8.64	3.45	3.84	3.27	6.8	17.3	4.67	5.01	4.19	3.6	8.34	8.21	8.6	10.4	6.69	2.99	2.43	6.29	5.88
Selenium	7782-49-2	mg/kg		0.81	<1.6	0.652	0.696	0.856	0.476 J	1.18	0.322 J	0.438 J	0.377 J	0.286 J	1.09	0.676	0.753	0.488 J	0.627	<0.27	0.306 J	0.599	0.511 J
Silver	7440-22-4	mg/kg		<0.048	<0 26	<0.043	<0.047	<0.047	<0.048	0.351 J	0.0787 J	0.143 J	0.0559 J	<0.044	0.429 J	0.193 J	<0.058	0.162 J	0.282 J	<0.043	<0.042	<0.048	<0.043
Thallium	7440-28-0	mg/kg		0.206 J	<0.46	0.16 J	0.127 J	0.106 J	0.135 U	0.161 J	<0.087	0.0902 J	<0.078	<0.077	0.246 J	0.194 J	0.185 J	0.15 J	<0.088	0.124 J	<0.074	0.153 J	0.145 J
Vanadium	7440-62-2	mg/kg		21.5	26.7	16.1 JL	13.4	10.1	16.4	20.5	10.7	13.6	10.4	10.2	14.6	20.2	19.3	18.5	11.1	8.17	9.42	19.9	17.4
Zinc	7440-66-6	mg/kg		21.7	45.3	13.1 JL	15.7	15.3	18.2	226	37.6	65.2	57.3	21.6	151	57.3	40.5	67.1	102	11.7	10.2	27.2	22
Mercury#	7439-97-6	mg/kg		0.00215 J	0.183	0.0503	0.0507	0.0754	<0.00027	5.27	0.0728	0.245	0.481	0.287	0.159	0.237	0.281	0.294	0.383	0.239	0.00743	0.00793	0.0012 J
Cyanide	57-12-5	mg/kg		<0.75	<0 85	4.02	1.75 J	<0.77	<0.75	3.64	<0.86	<0.7	1.61 J	<0.73	10.8	1.57 J	2 J	10.6	18.2	<0.73	0.737 U	<0.72	<0.66
PESTICIDES AND PCBS																							
4,4´-DDD	72-54-8	mg/kg		0.015 J	<0.072	<0.029	<0.0032	<0.00065	<0.00065	0.16 JH	0.078 J	<0.059	0.57 J	0.07 J	<0.004	0.16 J	<0.0038 J	0.23 J	1 J	<0.0062	<0.06	<0.0063	<0.0029
4,4´-DDE	72-55-9	mg/kg		0.072	<0.072	<0.029	<0.0032	<0.00065	<0.00065	1.1 JH	<0.014	<0.059	1.1	0.11 J	<0.004	<0.036	<0.0038	0.24 J	<0.066	0.05 J	<0.06	<0.0063	<0.0029
4 4´-DDT	50-29-3	mg/kg		0.074	<0.072	<0.029	<0.0032	0.0047	<0.00065	0.11 JH	<0.014	<0.059	0.45	0.028 J	0.02 U	0.22 J	<0.0038 J	0.26 J	<0.066	<0.0062	<0.06	<0.0063	<0.0029
Aldrin#	309-00-2	mg/kg		0.0086 J	<0.043	<0.018	<0.0019	<0.00039	0.0028 J	<0.024	<0.0086	<0.035	<0.036	<0.0037	<0.0024	0.22 J	0.012 J	<0.041	<0.04	0.048 J	<0.036	<0.0038	<0.0018
alpha-BHC#	319-84-6	mg/kg		<0.0019	0.55	<0.018	<0.0019	<0.00039	<0.00039	<0.024	<0.0086	<0.035	<0.036	<0.0037	<0.0024	<0.022	<0.0023	<0.041	0.2 J	<0.0037	<0.036	<0.0038	<0.0018
alpha-Chlordane	5103-71-9	mg/kg		<0.0013	<0.029	<0.012	<0.0013	<0.00026	<0.00026	<0.016	<0.0057	<0.024	<0.024	<0.0025	<0.0016	<0.014	<0.0015	<0.027	0.68	0.18	<0.024	<0.0025	<0.0012
beta-BHC#	319-85-7	mg/kg		0.0088 U	0.23 J	<0.018	<0.0019	<0.00039	<0.00039	0.83 JH	0.12	0.17 J	<0.036	0.061 J	<0.0024	0.06 J	0.024	<0.041	0.49	<0.0037	0.15 J	<0.0038	0.054
delta-BHC	319-86-8	mg/kg		<0.0013	<0.029	<0.012	<0.0013	<0.00026	<0.00026	<0.016	<0.0057	<0.024	<0.024	<0.0025	<0.0016	<0.014	<0.0015	<0.027	<0.027	<0.0025	<0.024	<0.0025	<0.0012
Dieldrin#	60-57-1	mg/kg		0.025 U	<0.072	<0.029	<0.0032	<0.00065	<0.00065	<0.04	<0.014	<0.059	<0.06	<0.0062	<0.004	<0.036	<0.0038	<0.068	<0.066	0.11	<0.06	<0.0063	0.03
Endosulfan I	959-98-8	mg/kg		<0.0019	<0.043	<0.018	<0.0019	<0.00039	<0.00039	<0.024	<0.0086	<0.035	<0.036	<0.0037	<0.0024	<0.022	<0.0023	<0.041	<0.04	<0.0037	<0.036	<0.0038	<0.0018
Endosulfan II	33213-65-9	mg/kg		0.027 J	<0.087	<0.035	<0.0038	<0.00078	<0.00078	0.19 JH	<0.017	<0.071	<0.073	<0.0074	<0.0049	0.13 J	<0.0045 J	<0.082	0.56 J	0.033 J	<0.072	<0.0076	<0.0035
Endosulfan sulfate	1031-07-8	mg/kg		0.037 U	0.52	0.17 J	<0.0038	<0.00078	0.0037 J	2 JH	0.074 J	0.85	1.5 J	0.14 J	<0.0049	<0.043	<0.0045	<0.082	0.8 J	<0.0074	0.56	<0.0076	0.051
Endrin	72-20-8	mg/kg		0.021 J	<0.087	<0.035	<0.0038	<0.00078	<0.00078	0.52 JH	<0.017	<0.071	0.77 J	0.048 J	<0.0049	0.18 J	<0.0045 J	<0.082	1.3	0.024 J	<0.072	<0.0076	<0.0035
Endrin aldehyde	7421-93-4	mg/kg		0.24	0.32 J	0.14 J	<0.0038	<0.00078	<0.00078	0.58 JH	<0.017	<0.071	0.55	0.04 J	<0.0049	<0.043	<0.0045	0.86 J	1.7	<0.0074	<0.072	<0.0076	0.032
gamma-BHC	58-89-9	mg/kg		<0.0013	<0.029	0.12 J	<0.0013	<0.00026	<0.00026	<0.016	<0.0057	<0.024	0.1 J	0.014 J	<0.0016	0.063 J	0.0086 J	<0.027	<0.027	<0.0025	<0.024	<0.0025	<0.0012
gamma-Chlordane	5103-74-2	mg/kg		<0.0013	0.13 J	<0.012	0.011 J	0.0046 J	<0.00026	0.098 JH	<0.0057	<0.024	<0.024	<0.0025	0.0088 J	0.091 J	<0.0015	<0.027	0.51 J	0.088	<0.024	<0.0025	<0.0012
Heptachlor	76-44-8	mg/kg		<0.0019	<0.043	<0.018	<0.0019	<0.00039	0.0027	<0.024	<0.0086	<0.035	<0.036	<0.0037	<0.0024	<0.022	<0.0023	<0.041	<0.04	<0.0037	<0.036	<0.0038	<0.0018
Heptachlor epoxide#	1024-57-3	mg/kg		0.046 U	1.3 J	<0.018	<0.0019	<0.00039	0.021 U	3.8 J	0.31 J	0.73 J	2.6 J	0.31 J	0.052 U	<0.022	<0.0023	<0.041	1.3 J	0.09 J	2.8 J	0.016 JH	0.14 J
Methoxychlor	72-43-5	mg/kg		<0.021	<0.49	<0.2	<0.021	<0.0044	<0.0044	0.5 JH	0.35 J	<0.4	1.6 J	0.53	<0.028	<0.25	<0.026	2.4	<0.45	<0.042	<0.41	<0.043	<0.02
Toxaphene	8001-35-2	mg/kg		<0.024	<0 55	<0 22	<0.024	<0.0049	<0.0049	<0.39	<0.11	<0.45	<0.46	<0.047	<0.031	<0.27	<0.029	<0.52	<0.5	<0.047	<0.46	<0.048	<0.022
Aroclor 1016	12674-11-2	mg/kg		<0.003	<0 35	<0.14	<0.15	<0.031	<0.0031	<0.039	<0.034	<0.28	<0.29	<0 3	<0.039	<0.035	<0.036	<0.33	<0.32	<0.3	<0.14	<0.03	<0.0028
Aroclor 1221	11104-28-2	mg/kg		<0.003	<0 35	<0.14	<0.15	<0.031	<0.0031	<0.039	<0.034	<0.28	<0.29	<0 3	<0.039	<0.035	<0.036	<0.33	<0.32	<0.3	<0.14	<0.03	<0.0028
Aroclor 1232	11141-16-5	mg/kg		<0.003	<0 35	<0.14	<0.15	<0.031	<0.0031	<0.039	<0.034	<0.28	<0.29	<0 3	<0.039	<0.035	<0.036	<0.33	<0.32	<0.3	<0.14	<0.03	<0.0028
Aroclor 1242	53469-21-9	mg/kg		<0.003	<0 35	<0.14	<0.15	<0.031	<0.0031	<0.039	<0.034	<0.28	<0.29	<0 3	<0.039	<0.035	<0.036	<0.33	<0.32	<0.3	<0.14	<0.03	<0.0028
Aroclor 1248	12672-29-6	mg/kg		<0.003	<0 35	<0.14	<0.15	<0.031	<0.0031	<0.039	<0.034	<0.28	<0.29	<0 3	<0.039	<0.035	<0.036	<0.33	<0.32	<0.3	<0.14	<0.03	<0.0028
Aroclor 1254	11097-69-1	mg/kg		<0.003	<0 35	<0.14	<0.15	<0.031	<0.0031	<0.039	<0.034	<0.28	<0.29	<0 3	0.22 J	<0.035	<0.036	<0.33	<0.32	<0.3	<0.14	<0.03	<0.0028
Aroclor 1260	11096-82-5	mg/kg		<0.0023	<0 26	<0.11	<0.11	<0.023	<0.0023	<0.029	<0.026	<0.21	<0.22	<0.22	<0.029	<0.026	<0.027	<0.25	<0.24	<0.22	<0.11	<0.023	<0.0021
Total PCBs	N/A	mg/kg		All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	<0.1015	All ND
VOCS																							
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<2.3	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
1,1,1-Trichloroethane	71-55-6	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<5.5	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<1.6	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
1 1 2-Trichlor-1 2 2-trifluoroethane	76-13-1	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<4.2	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
1 1 2-Trichloroethane	79-00-5	mg/kg		<0.13	<0.029	0.15 J	<0.14	<0.16	<0.055	<6.5	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
1 1-Dichloroethane	75-34-3	mg/kg		<0.13	<0.029	<0.11	<0.14	0.35 J	<0.055	<1.6	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
1 1-Dichloroethene	75-35-4	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<4.9	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
1 2 4-Trichlorobenzene	120-82-1	mg/kg		<0.15	<0.035	<0.14	<0.17	<0.19	<0.066	<2.9	<0.11	<0.058	<0.066	<0.034	<0.04	<0.043	<0.044	<0.037	<0.1	<0.04	<0.00058	<0.00057	<0.00055
1 2 4-Trimethylbenzene	95-63-6	mg/kg		0.32 J	20	6.6	94	47	100	77	5.5	15	26	14	24	9.4	6	6	50	18	36	<0.00048	2
1 2-Dibromoethane	106-93-4	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<2.3	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
1 2-Dichlorobenzene	95-50-1	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<2.6	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
1,2-Dichloroethane	107-06-2	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<1.9	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
1,2-Dichloropropane	78-87-5	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<1.6	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
1,3,5-Trimethylbenzene#	108-67-8	mg/kg		0.27 J	7.6	7.6	140	39	47	25	2	8.2	12	6.4	10	4.1	2.6	3	23	22	39	0.014	0.071
1,3-Dichlorobenzene	541-73-1	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<2.9	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
1 4-Dichlorobenzene	106-46-7	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<2.3	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
2-Butanone	78-93-3	mg/kg		<0.36	<0.082	<0 32	<0 39	<0.45	<0.15	<7.1	<0.25	<0.14	<0.15	<0.079	<0.093	<0.1	<0.1	<0.087	<0.23	<0.094	<0.0014	0.0076 J	0.0065 J
2-Hexanone	591-78-6	mg/kg		<0.26	<0.059	0.77 J	<0 28	<0 32	<0.11	<5.5	<0.18	<0.097	<0.11	<0.056	<0.066	<0.071	<0.073	<0.062	<0.17	<0.067	<0.00096	<0.00096	<0.00092
4-Methyl-2-pentanone	108-10-1	mg/kg		<0.26	<0.059	<0 23	<0 28	<0 32	<0.11	<3.2	<0.18	<0.097	<0.11	<0.056	<0.066	<0.071	<0.073	<0.062	<0.17	<0.067	<0.00096	<0.00096	<0.00092
Acetone	67-64-1	mg/kg		<0.51	<0.12	<0.46	<0 56	<0.65	<0 22	<15	<0.36	<0.19	1.7 J	<0.11	<0.13	<0.14	0.33 J	0.61 J	1.6 J	<0.13	<0.0019	0.084 U	0.065 U
Benzene#	71-43-2	mg/kg		3.2	15	10	57	36	14	240	4.3	12	69	20	25	21 J	12 J	3.3	29	36	58	0.073	1.5
Bromodichloromethane	75-27-4	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<1.9	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Bromoform	75-25-2	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<2.3	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Bromomethane	74-83-9	mg/kg		<0.26	<0.059	<0 23	<0 28	<0 32	<0.11	<3.2	<0.18	<0.097	<0.11	<0.056	<0.066	<0.071	<0.073 JL	<0.062	<0.17	<0.067	<0.00096	<0.00096	<0.00092
Carbon disulfide	75-15-0	mg/kg		<0.26	0.4 J	<0 23	<0 28	<0 32	<0.11	<5.2	<0.18	<0.097	<0.11	<0.056	<0.066	<0.071	<0.073	<0.062	<0.17	<0.067	0.034 JH	0.016	0.036
Carbon tetrachloride	56-23-5	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<3.9	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Chlorobenzene	108-90-7	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<1.6	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Chloroethane	75-00-3	mg/kg		<0.26	<0.059	<0 23	<0 28	<0 32	<0.11	<3.2	<0.18	<0.097	<0.11	<0.056	<0.066	<0.071	<0.073	<0.062	<0.17	<0.067	<0.00096	<0.00096	<0.00092
Chloroform	67-66-3	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<5.8	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Chloromethane	74-87-3	mg/kg		<0.26	<0.059	<0 23	<0 28	<0 32	<0.11	<2.9	<0.18	<0.097	<0.11	<0.056	<0.066	<0.071	<0.073	<0.062	<0.17	<0.067	<0.00096	<0.00096	<0.00092
cis-1 2-Dichloroethene	156-59-2	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<4.9	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
cis-1 3-Dichloropropene	10061-01-5	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<1.6	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Cyclohexane	110-82-7	mg/kg		1.6	4.5	9.6	45	91	48	34	5.6	4.6	10	8.1	6	4.6	3.1	2.1	26	36	45	0.029	0.14
Dibromochloromethane	124-48-1	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<1.6	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Dichlorodifluoromethane	75-71-8	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<5.8	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Ethylbenzene#	100-41-4	mg/kg		1.9	23	30	170	85	46	110	86	250	72	29	13	6.3	4.1	2.8	19	28	170	2.1	5
Isopropylbenzene	98-82-8	mg/kg		0.15 J	4.4	2	16	11	8.4	20	46	95	22	11	2.5	0.88	0.56	0.67	5.2	5.9	68	0.04	0.086
Methyl acetate	79-20-9	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<3.2	0.4 J	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Methyl tert-butyl ether	1634-04-4	mg/kg		<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<6.1	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Methylcyclohexane	108-87-2	mg/kg		2.5	10	18	130	240	120	69	18	11	19	21	17	5.8	4.3	5.1	66	66	120	0.035	1.9
Methylene chloride#	75-09-2	mg/kg		<0.26	<0.059	<0 23	0.53 J	0.74 J	<0.11	<8.1	<0.18	<0.097	<0.11	<0.056	<0.066	<0.071	<0.073	<0.062	<0.17	<0.067	0.0011 U	<0.00096	<0.00092

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Waste Soil and Sludge Data Summary
South Pit
Brine Service Company Superfund Site

	Sample Location		ESSB02	ESSB03	ESSB04	ESSB06	ESSB06	ESSB07	MWGW09	SPSL01	SPSB02	SPSB02	SPSB03	SPSB04	SPSB05	SPSB05	SPSB06	SPSL06	SPSB07	SPSB09	SPSB10	SPSB10
	Depth Interval		6-7 ft	7-8 ft	7-8 ft	7-8 ft	14-15 ft	9-10 ft	7-8 ft	7-13.5 ft	5-6 ft	10-11 ft	13-14 ft	15-16 ft	13-14 ft	13-14 ft	13-14 ft	16-19.5 ft	12-13 ft	13-14 ft	5-6 ft	13-14 ft
	Sample Date		11/5/2010	12/9/2010	11/5/2010	11/3/2010	11/3/2010	12/8/2010	1/26/2012	12/2/2010	12/2/2010	12/2/2010	12/1/2010	12/2/2010	12/3/2010	12/3/2010	12/3/2010	12/3/2010	12/1/2010	11/30/2010	11/30/2010	11/30/2010
	Sample ID		SB02-060-110	SB03-070-120	SB04-070-110	SB06-070-110	SL06-140-110	SB07-090-120	SW09-070-01	SL01-070-120	SB02-050-120	SB02-100-120	SB03-130-120	SB04-150-120	SB05-130-120	SB05-130-FD-12	SB06-130-120	SL06-160-120	SB07-120-120	SB09-130-113	SB10-050-113	SB10-130-113010
Analyte	CAS No.	Units																				
Naphthalene#	91-20-3	mg/kg	1.1 J	10	9.5	42	21	13	91	15	17	37	16	7.2	4.8	3.1	4.5	30	11	0.19 JH	4.2	5.3
n-Butylbenzene	104-51-8	mg/kg	0.15 J	<0.029	2.3	26	12	<0.055	<1.9	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	0.031
n-Propylbenzene	103-65-1	mg/kg	0.16 J	2.8	2.9	77	34	18	17	5.3	6.7	9.3	3.5	4.3	1.5	0.91	0.95	7.5	11	23	0.021	0.042
sec-Butylbenzene	135-98-8	mg/kg	0.24 J	2.2	1.7	6.7	5	3.2	28	9.5	14	17	5.7	2.1	0.45	0.39	1.1	6.5	2.4	31	<0.00048	0.057
Styrene	100-42-5	mg/kg	<0.13	<0.029	1.1 J	<0.14	<0.16	<0.055	<1.9	1.7	<0.048	<0.055	2.8	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	0.019	<0.00046
tert-Butylbenzene	98-06-6	mg/kg	<0.13	<0.029	<0.11	1.4 J	2.2	1.1	9.3 J	0.22 J	0.36 J	0.41 J	0.21 J	<0.033	<0.036	<0.036	0.043 J	0.31 J	0.53	<0.00048	<0.00048	<0.00046
Tetrachloroethene	127-18-4	mg/kg	<0.15	<0.035	<0.14	<0.17	<0.19	<0.066	<3.2	<0.11	<0.058	<0.066	<0.034	<0.04	<0.043	<0.044	<0.037	<0.1	<0.04	<0.00058	<0.00057	<0.00055
Toluene	108-88-3	mg/kg	2.8	22	20	1.4	3.7	0.23 J	250	0.93	5.9	62	6.3	36	31	20	7.1	64	110	78	0.0056	1.9
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<2.9	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
trans-1 3-Dichloropropene	10061-02-6	mg/kg	<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<1.6	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Trichloroethene	79-01-6	mg/kg	<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<5.2	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Trichlorofluoromethane	75-69-4	mg/kg	<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<2.6	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Vinyl chloride	75-01-4	mg/kg	<0.13	<0.029	<0.11	<0.14	<0.16	<0.055	<3.2	<0.089	<0.048	<0.055	<0.028	<0.033	<0.036	<0.036	<0.031	<0.083	<0.034	<0.00048	<0.00048	<0.00046
Xylenes Total	1330-20-7	mg/kg	2.7 J	73	80	550	200	220	350	8.6	37	95	35	69	39	24	14	99	150	260	0.061	10
SVOCS																						
1 1´-Biphenyl	92-52-4	mg/kg	2.3	59	7.4	4	0.42	2.8	100	1.2	60	29	21	0.43	1.1	0.72	4.8	8.2	4.4	59	<0.037	1.4
1-Methylnaphthalene#	90-12-0	mg/kg	4.4	250	32	20	5.7	3.1	130	2.1	46	34 JL	32	3.1	9.2	6.2	33	33	19	110	8.7	1.7
2,4,5-Trichlorophenol	95-95-4	mg/kg	<0.035	<1.2	<0.033 JL	<0.0035	<0.0036 JL	<0.0036 JL	<0.15 JL	<0.04	<0.17	<0.068 JL	<0.069	<0.0045	<0.081	<0.084	<0.057	<0.037	<0.1	<0.051	<0.035	<0.033
2,4,6-Trichlorophenol	88-06-2	mg/kg	<0.042	<1.4	<0.039 JL	<0.0042	<0.0043 JL	<0.0043 JL	<0.15 JL	<0.047	<0.19	<0.08 JL	<0.082	<0.0053	<0.095	<0.099	<0.067	<0.044	<0.12	<0.06	<0.042	<0.039
2 4-Dichlorophenol	120-83-2	mg/kg	<0.028	<0.96	<0.026 JL	<0.0028	<0.0028 JL	<0.0028 JL	<0.15 JL	<0.031	<0.13	<0.053 JL	<0.054	<0.0036	<0.063	<0.066	<0.045	<0.029	<0.082	<0.04	<0.028	<0.026
2 4-Dimethylphenol	105-67-9	mg/kg	1.6	31	6.9	<0.0042	0.087 JL	0.12 JL	72	<0.047 JL	10	6.1 JL	4.6	1.4	11	11	52 JL	94	10	10	<0.042	0.61
2 4-Dinitrophenol	51-28-5	mg/kg	<0.042 JL	<1.4	<0.039 JL	<0.0042	<0.0043 JL	<0.0043 JL	<0.3 JL	<0.047	<0.19	<0.08 JL	<0.082	<0.0053	<0.095	<0.099	<0.067	<0.044	<0.12	<0.06	<0.042	<0.039
2 4-Dinitrotoluene	121-14-2	mg/kg	<0.042	<1.4	<0.039	<0.0042	<0.0043	<0.0043 JL	<0.15	<0.047	<0.19	<0.08	<0.082	<0.0053	<0.095	<0.099	<0.067	<0.044	<0.12	<0.06	<0.042	<0.039
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.04	<1.4	<0.037	<0.004	<0.0041	<0.0041 JL	<0.15	<0.046	<0.19	<0.077	<0.079	<0.0052	<0.092	<0.096	<0.065	<0.042	<0.12	<0.058	<0.04	<0.038
2-Chloronaphthalene	91-58-7	mg/kg	<0.052	<1.8	<0.048	<0.0052	<0.0053	<0.0053 JL	<0.15	<0.059	<0.24	<0.099	<0.1	<0.0066	<0.12	<0.12	<0.084	<0.054	<0.15	<0.074	<0.052	<0.048
2-Chlorophenol	95-57-8	mg/kg	<0.04	<1.4	<0.037 JL	<0.004	<0.0041 JL	<0.0041 JL	<0.15 JL	<0.046	<0.19	<0.077 JL	<0.079	<0.0052	<0.092	<0.096	<0.065	<0.042	<0.12	<0.058	<0.04	<0.038
2-Methylnaphthalene	91-57-6	mg/kg	7.4	470	54	38	8.4	4.7	220	3.5	76	45 JL	55	5.3	13	12	43	45	31	200	13	2.6
2-Methylphenol	95-48-7	mg/kg	0.33	22	3.6 JL	<0.0037	0.029 JL	<0.0038 JL	55	<0.041	2.1	5.6 JL	0.31	1.5	8.2 J	8.3 J	52	39	12	1.8	<0.037	0.32
2-Nitroaniline	88-74-4	mg/kg	<0.042	<1.4	<0.039	<0.0042	<0.0043	<0.0043 JL	<0.15	<0.047	<0.19	<0.08	<0.082	<0.0053	<0.095	<0.099	<0.067	<0.044	<0.12	<0.06	<0.042	<0.039
2-Nitrophenol	88-75-5	mg/kg	<0.058	<2	<0.054 JL	<0.0058	<0.0059 JL	<0.006 JL	<0.15 JL	<0.066	<0.27	<0.11 JL	<0.11	<0.0075	<0.13	<0.14	<0.094	<0.061	<0.17	<0.083	<0.058	<0.054
3&4-Methylphenol#	106-44-5	mg/kg	0.17	17	9.4	<0.0035	<0.0036 JL	<0.0036 JL	60	<0.04	<0.17	4.4 JL	<0.069	1.1	9.6	8.3	73	110	17	<0.051	<0.035	<0.033
3 3´-Dichlorobenzidine	91-94-1	mg/kg	<0.039	<1.3	<0.036	<0.0039	<0.004	<0.004 JL	<0.15 JL	<0.044	<0.18	<0.075	<0.077	<0.005	<0.089	<0.093	<0.063	<0.041	<0.12	<0.056	<0.039	<0.036
3-Nitroaniline	99-09-2	mg/kg	<0.033	<1.1 JL	<0.03	<0.0033	<0.0034	<0.0034 JL	<0.15 JL	<0.037	<0.15	<0.063	<0.064	<0.0042	<0.075	<0.078	<0.053	<0.034	<0.097	<0.047	<0.033	<0.03
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.042	<1.4	<0.039 JL	<0.0042	<0.0043 JL	<0.0043 JL	<0.15 JL	<0.047	<0.19	<0.08 JL	<0.082	<0.0053	<0.095	<0.099	<0.067	<0.044	<0.12	<0.06	<0.042	<0.039
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.042	<1.4	<0.039	<0.0042	<0.0043	<0.0043 JL	<0.15	<0.047	<0.19	<0.08	<0.082	<0.0053	<0.095	<0.099	<0.067	<0.044	<0.12	<0.06	<0.042	<0.039
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.042	<1.4	<0.039 JL	<0.0042	<0.0043 JL	<0.0043 JL	<0.15 JL	<0.047	<0.19	<0.08 JL	<0.082	<0.0053	<0.095	<0.099	<0.067	<0.044	<0.12	<0.06	<0.042	<0.039
4-Chloroaniline	106-47-8	mg/kg	<0.028	<0.96	<0.026	<0.0028	<0.0028	<0.0028 JL	<0.15 JL	<0.031	<0.13	<0.053 JL	<0.054	<0.0036	<0.063	<0.066	<0.045	<0.029	<0.082	<0.04	<0.028	<0.026
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.028	<0.96	<0.026	<0.0028	<0.0028	<0.0028 JL	<0.15	<0.031	<0.13	<0.053	<0.054	<0.0036	<0.063	<0.066	<0.045	<0.029	<0.082	<0.04	<0.028	<0.026
4-Nitroaniline	100-01-6	mg/kg	<0.042	<1.4	<0.039	<0.0042	<0.0043	<0.0043 JL	<0.15 JL	<0.047	<0.19	<0.08	<0.082	<0.0053	<0.095	<0.099	<0.067	<0.044	<0.12	<0.06	<0.042	<0.039
4-Nitrophenol	100-02-7	mg/kg	<0.048	<1.7	<0.044 JL	<0.0048	<0.0049 JL	<0.0049 JL	<0.3 JL	<0.054	<0.22	<0.092 JL	<0.094	<0.0062	<0.11	<0.11	<0.078	<0.05	<0.14	<0.069	<0.048	<0.045
Acenaphthene	83-32-9	mg/kg	0.83	17	1.3	0.15	0.051	0.068 JL	5.9	0.42	2.9	1.9	2.5	0.27	0.64	0.53	2.5	3	0.99	3.6	0.21	0.19
Acenaphthylene	208-96-8	mg/kg	0.25	6.6	0.4	<0.0028	<0.0028	0.067 JL	3.4	0.13	<0.13	0.83	1.1	0.25	0.52	0.33	0.82	0.78	0.72	1.2	0.36	0.1
Acetophenone	98-86-2	mg/kg	0.93	61	21	<0.003	<0.0031	<0.0031 JL	63	0.07 J	4.9	6.1 JL	<0.059	<0.0039	1.9	1.3	40	82	<0.089	<0.043	<0.03	0.2
Anthracene	120-12-7	mg/kg	0.63	9.5	2	1.1	0.14	0.092 JL	12	0.28	3.9	3.2	2.6	0.34	0.6	0.89	2	11	0.97	6.7	2.7	0.19
Benz(a)anthracene#	56-55-3	mg/kg	0.62	5.6	0.71	0.12	0.11	0.055 JL	9.8	0.42	5	1.6	2.4	0.26	1.4	1.4	1.1	0.71	1.9	2.6	2.3	0.36
Benzaldehyde	100-52-7	mg/kg	<0.058 JL	<2 JL	<0.054 JL	<0.0058 JL	<0.0059 JL	<0.006 JL	<0.15 JL	<0.066 JL	<0.27 JL	<0.11 JL	<0.11	<0.0075 JL	<0.13 JL	<0.14 JL	<0.094 JL	<0.061 JL	<0.17	<0.083 JL	<0.058 JL	0.31 JL
Benzo(a)pyrene#	50-32-8	mg/kg	0.3	4.2	0.76	0.074	0.17	0.037 JL	11	0.45	4.5	1.9	2.1	0.22	1.1	1.5	1.2	1.6	1.5	4.4	1.4	0.23
Benzo(b)fluoranthene#	205-99-2	mg/kg	0.089	2.3 J	0.26	0.04	0.03	0.012 JL	4.6	0.12	<0.19	0.7	1.1	0.068 J	0.28	0.52	0.28	<0.044	0.54	0.46	0.37	0.1
Benzo(g,h,i)perylene	191-24-2	mg/kg	<0.037	3.5	0.3	<0.0037	<0.0037	0.023 JL	10	0.26	<0.17	1.5	1.4	0.21	0.96	1.1	0.98	0.61	1.2	2.5	1	0.22
Benzo(k)fluoranthene	207-08-9	mg/kg	0.12	1.5 J	0.29	0.056	0.044	0.02 JL	2.7	0.12	<0.19	0.51	0.27	0.09 J	0.45	0.2	0.63	<0.044	0.18 J	0.64	0.3	0.044 J
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.03	<1	<0.028	<0.003	<0.0031	<0.0031 JL	<0.15	<0.034	<0.14	<0.058 JL	<0.059	<0.0039	<0.069	<0.072	<0.049	<0.032	<0.089	<0.043	<0.03	<0.028
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.035	<1.2	<0.033	<0.0035	<0.0036	<0.0036 JL	<0.15	<0.04	<0.17	<0.068 JL	<0.069	<0.0045	<0.081	<0.084	<0.057	<0.037	<0.1	<0.051	<0.035	<0.033
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.034	<1.2	<0.032	<0.0034	<0.0035	<0.0035 JL	<0.15	<0.039	<0.16	<0.065 JL	<0.067	<0.0044	<0.078	<0.081	<0.055	<0.036	<0.1	<0.049	<0.034	<0.032
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	<0.083	<2.9	<0.077	<0.0083	<0.0085	<0.0085 JL	<0.15	<0.094	0.97	<0.16	<0.16	<0.011	<0.19	<0 2	<0.13	<0.088	<0.25	<0.12	<0.083	<0.077
Butyl benzyl phthalate	85-68-7	mg/kg	<0.032	<1.1	<0.029	<0.0031	<0.0032	<0.0032 JL	<0.26	<0.036	<0.15	0.68	<0.062	<0.0041	<0.072	<0.075	<0.051	<0.033	<0.093	<0.045	<0.032	<0.029
Caprolactam	105-60-2	mg/kg	<0.03	<1	<0.028	<0.003	<0.0031	<0.0031 JL	36	<0.034	<0.14	<0.058 JL	<0.059	<0.0039	<0.069	<0.072	<0.049	<0.032	<0.089	<0.043	<0.03	<0.028
Carbazole	86-74-8	mg/kg	<0.028	<0.96 JL	<0.026	<0.0028	<0.0028	<0.0028 JL	<0.15	<0.031	<0.13	<0.053	<0.054	<0.0036	<0.063	<0.066	<0.045	<0.029	<0.082	<0.04	<0.028	<0.026
Chrysene	218-01-9	mg/kg	0.88	10	1.4	0.23	0.15	0.12 JL	18	0.6	12	4.2	3.9	0.3	2	1.9	1.7	1.1	2.9	4.9	2.5	0.65
Dibenz(a,h)anthracene#	53-70-3	mg/kg	<0.028	1.3 J	0.15	<0.0028	<0.0028	0.0088 JL	3.7	0.12	<0.13	0.54	0.57	0.082 J	0.17 J	<0.066	0.37	<0.029	<0.082	1.6	<0.028	<0.026
Dibenzofuran	132-64-9	mg/kg	1.1	18	1.5	0.82	0.15	0.15 JL	7.3	0.31	<0.13	2	2.3	0.31	0.95	0.6	2.1	2.3	1.7	4.9	0.53	<0.026
Diethyl phthalate	84-66-2	mg/kg	<0.042	<1.4	<0.039	<0.0042	<0.0043	<0.0043 JL	<0.15	<0.047	<0.19	<0.08	<0.082	<0.0053	<0.095	<0.099	<0.067	<0.044	<0.12	<0.06	<0.042	<0.039
Dimethyl phthalate	131-11-3	mg/kg	<0.03	<1	<0.028	<0.003	<0.0031	<0.0031 JL	<0.18	<0.034	<0.14	<0.058	<0.059	<0.0039	<0.069	<0.072	<0.049	<0.032	<0.089	<0.043	<0.03	<0.028
Di-n-butyl phthalate	84-74-2	mg/kg	<0.032	<1.1	<0.029	<0.0031	0.1 U	<0.0032 JL	<0.18	0.037 J	<0.15	<0.06	0.52	<0.0041	0.38	<0.075	<0.051	<0.033	0.7	<0.045	<0.032	<0.029
Di-n-octyl phthalate	117-84-0	mg/kg	<0.037	<1.3	<0.034	<0.0037	<0.0037	<0.0038 JL	<0.18	<0.041	<0.17	<0.07	<0.072	<0.0047	<0.084	<0.087	<0.059	<0.038	<0.11	<0.052	<0.037	<0.034
Fluoranthene	206-44-0	mg/kg	0.99	6.9	0.8	0.19	0.14	0.085 JL	9.7	0.45	4.2	2.2	2	0.18	1.5	1.2	1.1	4	1.3	3.6	1.3	0.3
Fluorene	86-73-7	mg/kg	2.3	32	2.4	1.8	0.78	0.34 JL	20	0.89	15	5.7	5.1	0.57	1.1	0.83	4.2	6	2	18	1.3	0.5
Hexachlorobenzene	118-74-1	mg/kg	<0.033	<1.1	<0.03	<0.0033	<0.0034	<0.0034 JL	<0.15	<0.037	<0.15	<0.063	<0.064	<0.0042	<0.075	<0.078	<0.053	<0.034	<0.097	<0.047	<0.033	<0.03
Hexachlorobutadiene	87-68-3	mg/kg	<0.056	<1.9	<0.051	<0.0055	<0.0057	<0.0057 JL	<0.15	<0.063	<0.26	<0.11 JL	<0.11	<0.0071	<0.13	<0.13	<0.09	<0.058	<0.16	<0.079	<0.055	<0.052
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.045	<1.6	<0.042	<0.0045	<0.0047	<0.0047 JL	<0.15	<0.051	<0.21	<0.087	<0.089	<0.0058	<0.1	<0.11	<0.073	<0.048	<0.13	<0.065	<0.045	<0.042
Hexachloroethane	67-72-1	mg/kg	<0.049	<1.7	<0.046	<0.0049	<0.005	<0.005 JL	<0.15	<0.056	<0.23	<0.094 JL	<0.096	<0.0063	<0.11	<0.12	<0.08	<0.052	<0.14	<0.07	<0.049	<0.046
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	<0.044	1.9 J	0.11	<0.0044	<0.0045	0.01 JL	2	<0.05	<0.21	0.38	0.56	<0.0057	0.3	0.66	0.35	<0.046	<0.13	1.1 J	<0.044	<0.041
Isophorone	78-59-1	mg/kg	<0.038	<1.3	<0.035	<0.0038	<0.0039	<0.0039 JL	<0.15	<0.043	<0.18	<0.072 JL	<0.074	<0.0049	<0.086	<0.09	<0.061	<0.04	<0.11	<0.054	<0.038	<0.035
Naphthalene#	91-20-3	mg/kg	1.2	97	15	25	2.2	0.68	79	0.43	19	10 JL	13	1.4	4.4	3.7	6.5	6.7	12	55	4.9	0.67
Nitrobenzene	98-95-3	mg/kg	<0.042	<1.4	<0.039	<0.0042	<0.0043	<0.0043 JL	<0.15	<0.047	<0.19	<0.08 JL	<0.082	<0.0053	<0.095	<0.099	<0.067	<0.044	<0.12	<0.06	<0.042	<0.039
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.05	<1.7	<0.047	<0.005	<0.0052	<0.0052 JL	<0.18	<0.057	<0.24	<0.097 JL	<0.099	<0.0065	<0.12	<0.12	<0.082	<0.053	<0.15	<0.072	<0.05	<0.047
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.028	<0.96	<0.026	<0.0028	<0.0028	<0.0028 JL	<0.18	<0.031	<0.13	<0.053	<0.054	<0.0036	<0.063	<0.066	<0.045	<0.029	<0.082	<0.04	<0.028	<0.026
Pentachlorophenol	87-86-5	mg/kg	<0.035 JL	<1.2	<0.033 JL	<0.0035	<0.0036 JL	<0.0036 JL	<0.17 JL	<0.04	<0.17 JL	<0.068 JL	<0.069	<0.0045 JL	<0.081 JL	<0.084 JL	<0.057 JL	<0.037	<0.1	<0.051	<0.035	<0.033
Phenanthrene	85-01-8	mg/kg	12	100	19	5	2.3	1.3	230	6.9	160	73	44	3.1	7.6	6.2	26	28	11	120	11	5.1
Phenol	108-95-2	mg/kg	<0.042	3.1	8.5	<0.0042	0.068 JL	0.046 JL	20 JL	<0.047	<0.19	0.9 JL	0.09 J	0.98	7.4 J	3.8 J	80	77	15	<0.06	<0.042	<0.039
Pyrene	129-00-0	mg/kg	1.8	12	2.2	0.85	0.32	0.14 JL	22	0.79	14	4.6	4.8	0.98	4.7	4.3	2.6	4.4	3.5	9.8	4.9	0.73

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
Second Transmissive Unit
Brine Service Company Superfund Site

Sample Location Depth Interval Sample Date			ESSB13 26-27 ft 3/6/2012	ESSB15 22-23 ft 3/7/2012	SPSB19C 36-37 ft 1/16/2012
Analyte	CAS No.	Units			
METALS					
Aluminum	7429-90-5	mg/kg	2780	8810	3260
Antimony	7440-36-0	mg/kg	<0.23	<0.24	<0.23
Arsenic	7440-38-2	mg/kg	1.11	2.93	2.81
Barium	7440-39-3	mg/kg	10.7	53.1	14.9
Beryllium	7440-41-7	mg/kg	0.207 J	0.823	0.215 J
Cadmium	7440-43-9	mg/kg	0.0663 J	0.325 J	<0.058
Chromium	7440-47-3	mg/kg	3.12	7.36	2.25
Cobalt	7440-48-4	mg/kg	1.85	6.17	2.51
Copper	7440-50-8	mg/kg	0.932	6.96	1.14
Lead#	7439-92-1	mg/kg	2.27	8.33	6.65
Manganese	7439-96-5	mg/kg	66.4	721	72.7
Nickel	7440-02-0	mg/kg	1.91	8.68	2.16
Selenium	7782-49-2	mg/kg	0.237 J	1.2	0.299 J
Silver	7440-22-4	mg/kg	<0.091	<0.095	<0.093
Thallium	7440-28-0	mg/kg	<0.08	0.199 J	0.0847 U
Vanadium	7440-62-2	mg/kg	5.64	15	11
Zinc	7440-66-6	mg/kg	4.96	24.5	4.83
Mercury#	7439-97-6	mg/kg	<0.00033	0.019	<0.00037
Cyanide	57-12-5	mg/kg	<0.68	<0.78	<0.76
PESTICIDES and PCBs					
4,4´-DDD	72-54-8	mg/kg	<0.0006	<0.00066	<0.00063
4,4´-DDE	72-55-9	mg/kg	<0.0006	0.014	<0.00063
4,4´-DDT	50-29-3	mg/kg	<0.0006	0.055	<0.00063
Aldrin	309-00-2	mg/kg	<0.00036	<0.0004	<0.00038
alpha-BHC	319-84-6	mg/kg	<0.00036	<0.0004	<0.00038
alpha-Chlordane	5103-71-9	mg/kg	<0.00024	<0.00026	<0.00025
beta-BHC	319-85-7	mg/kg	<0.00036	<0.0004	<0.00038
delta-BHC	319-86-8	mg/kg	<0.00024	<0.00026	<0.00025
Dieldrin	60-57-1	mg/kg	<0.0006	<0.00066	<0.00063
Endosulfan I	959-98-8	mg/kg	<0.00036	<0.0004	<0.00038
Endosulfan II	33213-65-9	mg/kg	<0.00071	0.004 J	<0.00076
Endosulfan sulfate	1031-07-8	mg/kg	<0.00071	<0.00079	<0.00076
Endrin	72-20-8	mg/kg	<0.00071	0.0046 J	<0.00076
Endrin aldehyde	7421-93-4	mg/kg	<0.00071	0.0032 J	<0.00076
gamma-BHC	58-89-9	mg/kg	<0.00024	<0.00026	<0.00025
gamma-Chlordane	5103-74-2	mg/kg	<0.00024	0.018 J	<0.00025
Heptachlor	76-44-8	mg/kg	<0.00036	<0.0004	<0.00038
Heptachlor epoxide	1024-57-3	mg/kg	<0.00036	<0.0004	<0.00038
Methoxychlor	72-43-5	mg/kg	<0.0041	<0.0045	<0.0043
Toxaphene	8001-35-2	mg/kg	<0.0057	<0.0063	<0.0061
Aroclor 1016	12674-11-2	mg/kg	<0.0029	<0.0063	<0.003
Aroclor 1221	11104-28-2	mg/kg	<0.0029	<0.0063	<0.003
Aroclor 1232	11141-16-5	mg/kg	<0.0029	<0.0063	<0.003
Aroclor 1242	53469-21-9	mg/kg	<0.0029	<0.0063	<0.003
Aroclor 1248	12672-29-6	mg/kg	<0.0029	<0.0063	<0.003
Aroclor 1254	11097-69-1	mg/kg	<0.0029	0.51	<0.003
Aroclor 1260	11096-82-5	mg/kg	<0.0021	<0.0047	<0.0023
Total PCBs	TPCB	mg/kg	<0.00975	<0.5281	<0.01015
VOLATILE ORGANIC COMPOUNDS					
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.00063	<0.00075	<0.00072
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.0015	<0.0018	<0.0018
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.00045	<0.00054	<0.00052
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.0012	<0.0014	<0.0013
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.0018	<0.0022	<0.0021
1 1-Dichloroethane	75-34-3	mg/kg	<0.00045	<0.00054	<0.00052
1,1-Dichloroethene	75-35-4	mg/kg	<0.0014	<0.0016	<0.0015
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.00081	<0.00097	<0.00093
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.00072	<0.00086	<0.00082
1 2-Dibromoethane	106-93-4	mg/kg	<0.00063	<0.00075	<0.00072
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.00072	<0.00086	<0.00082
1 2-Dichloroethane	107-06-2	mg/kg	<0.00054	<0.00065	<0.00062
1 2-Dichloropropane	78-87-5	mg/kg	<0.00045	<0.00054	<0.00052
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.00072	<0.00086	<0.00082
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.00081	<0.00097	<0.00093
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.00063	<0.00075	<0.00072
2-Butanone	78-93-3	mg/kg	<0.002	<0.0024	<0.0023
2-Hexanone	591-78-6	mg/kg	<0.0015	<0.0018	<0.0018
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.00091	<0.0011	<0.001
Acetone	67-64-1	mg/kg	<0.0042	0.014 U	<0.0047
Benzene#	71-43-2	mg/kg	<0.00054	<0.00065	<0.00062
Bromodichloromethane	75-27-4	mg/kg	<0.00054	<0.00065	<0.00062
Bromoform	75-25-2	mg/kg	<0.00063	<0.00075	<0.00072
Bromomethane	74-83-9	mg/kg	<0.00091	<0.0011	<0.001
Carbon disulfide	75-15-0	mg/kg	<0.0014	<0.0017	<0.0016
Carbon tetrachloride	56-23-5	mg/kg	<0.0011	<0.0013	<0.0012

Bolded - detection above the SDL
< - Analyte not detected above the SDL
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--- Not analyzed

Soil Analytical Data Summary
Second Transmissive Unit
Brine Service Company Superfund Site

Sample Location Depth Interval Sample Date			ESSB13 26-27 ft 3/6/2012	ESSB15 22-23 ft 3/7/2012	SPSB19C 36-37 ft 1/16/2012
Analyte	CAS No.	Units			
Chlorobenzene	108-90-7	mg/kg	<0.00045	<0.00054	<0.00052
Chloroethane	75-00-3	mg/kg	<0.00091	<0.0011	<0.001
Chloroform	67-66-3	mg/kg	<0.0016	<0.0019	<0.0019
Chloromethane	74-87-3	mg/kg	<0.00081	<0.00097	<0.00093
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.0014	<0.0016	<0.0015
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.00045	<0.00054	<0.00052
Cyclohexane	110-82-7	mg/kg	<0.0011	<0.0013	<0.0012
Dibromochloromethane	124-48-1	mg/kg	<0.00045	<0.00054	<0.00052
Dichlorodifluoromethane	75-71-8	mg/kg	<0.0016	<0.0019	<0.0019
Ethylbenzene	100-41-4	mg/kg	<0.00081	0.0027 J	<0.00093
Isopropylbenzene	98-82-8	mg/kg	<0.00091	<0.0011	<0.001
Methyl acetate	79-20-9	mg/kg	<0.00091	<0.0011	<0.001
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.0017	<0.002	<0.002
Methylcyclohexane	108-87-2	mg/kg	<0.0014	<0.0016	<0.0015
Methylene chloride	75-09-2	mg/kg	<0.0023	<0.0027	0.0063 J
Naphthalene	91-20-3	mg/kg	<0.00072	<0.00086	<0.00082
n-Butylbenzene	104-51-8	mg/kg	<0.00054	<0.00065	<0.00062
n-Propylbenzene	103-65-1	mg/kg	<0.00081	0.0012 J	<0.00093
sec-Butylbenzene	135-98-8	mg/kg	<0.00054	<0.00065	<0.00062
Styrene	100-42-5	mg/kg	<0.00054	<0.00065	<0.00062
tert-Butylbenzene	98-06-6	mg/kg	<0.00054	<0.00065	<0.00062
Tetrachloroethene	127-18-4	mg/kg	<0.00091	<0.0011	<0.001
Toluene	108-88-3	mg/kg	<0.00063	<0.00075	<0.00072
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.00081	<0.00097	<0.00093
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00045	<0.00054	<0.00052
Trichloroethene	79-01-6	mg/kg	<0.0014	<0.0017	<0.0016
Trichlorofluoromethane	75-69-4	mg/kg	<0.00072	<0.00086	<0.00082
Vinyl chloride	75-01-4	mg/kg	<0.00091	<0.0011	<0.001
Xylenes, Total	1330-20-7	mg/kg	<0.0024	<0.0028	<0.0027
SEMIVOLATILE ORGANIC COMPOUNDS					
1,1´-Biphenyl	92-52-4	mg/kg	<0.0019	<0.0021	<0.002
1-Methylnaphthalene#	90-12-0	mg/kg	<0.0019	<0.0021	<0.002
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0019	<0.0021 JL	<0.002
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.0019	<0.0021 JL	<0.002
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0019	<0.0021 JL	<0.002
2 4-Dimethylphenol	105-67-9	mg/kg	<0.0019	<0.0021 JL	<0.002
2 4-Dinitrophenol	51-28-5	mg/kg	<0.0039	<0.0043 JL	<0.0042 JL
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.0019	<0.0021	<0.002
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.0019	<0.0021	<0.002
2-Chloronaphthalene	91-58-7	mg/kg	<0.0019	<0.0021	<0.002
2-Chlorophenol	95-57-8	mg/kg	<0.0019	<0.0021 JL	<0.002
2-Methylnaphthalene	91-57-6	mg/kg	<0.0019	<0.0021	<0.002
2-Methylphenol	95-48-7	mg/kg	<0.0019	<0.0021 JL	<0.002
2-Nitroaniline	88-74-4	mg/kg	<0.0019	<0.0021	<0.002
2-Nitrophenol	88-75-5	mg/kg	<0.0019	<0.0021 JL	<0.002
3&4-Methylphenol	106-44-5	mg/kg	<0.0019	<0.0021 JL	<0.002
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0019	<0.0021	<0.002 JL
3-Nitroaniline	99-09-2	mg/kg	<0.0019	<0.0021	<0.002 JL
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.0019	<0.0021 JL	<0.002 JL
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.0019	<0.0021	<0.002
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.0019	<0.0021 JL	<0.002
4-Chloroaniline	106-47-8	mg/kg	<0.0019	<0.0021	<0.002 JL
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0019	<0.0021	<0.002
4-Nitroaniline	100-01-6	mg/kg	<0.0019	<0.0021	<0.002
4-Nitrophenol	100-02-7	mg/kg	<0.0039	<0.0043 JL	<0.0042
Acenaphthene	83-32-9	mg/kg	<0.0019	<0.0021	<0.002
Acenaphthylene	208-96-8	mg/kg	<0.0019	<0.0021	<0.002
Acetophenone	98-86-2	mg/kg	<0.0019	<0.0021	<0.002
Anthracene	120-12-7	mg/kg	<0.0019	<0.0021	<0.002
Benz(a)anthracene	56-55-3	mg/kg	<0.0019	<0.0021	<0.002
Benzaldehyde	100-52-7	mg/kg	<0.0019 JL	0.0037 JL	<0.002 JL
Benzo(a)pyrene	50-32-8	mg/kg	<0.0019	<0.0021	<0.002
Benzo(b)fluoranthene	205-99-2	mg/kg	<0.0019	<0.0021	<0.002
Benzo(g h i)perylene	191-24-2	mg/kg	<0.002	<0.0022	<0.0022
Benzo(k)fluoranthene	207-08-9	mg/kg	<0.0019	<0.0021	<0.002
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.0019	<0.0021	<0.002
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0019	<0.0021	<0.002
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0019	<0.0021	<0.002
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	0.004 U	0.015 U	<0.002
Butyl benzyl phthalate	85-68-7	mg/kg	0.0038 U	<0.0037	<0.0036
Caprolactam	105-60-2	mg/kg	<0.0024	0.0051 J	<0.0025
Carbazole	86-74-8	mg/kg	<0.0019	<0.0021	<0.002
Chrysene	218-01-9	mg/kg	<0.0019	<0.0021	<0.002
Dibenz(a h)anthracene	53-70-3	mg/kg	<0.0024	<0.0026	<0.0025
Dibenzofuran	132-64-9	mg/kg	<0.0019	<0.0021	<0.002
Diethyl phthalate	84-66-2	mg/kg	<0.0019	<0.0021	<0.002
Dimethyl phthalate	131-11-3	mg/kg	<0.0024	<0.0026	<0.0025
Di-n-butyl phthalate	84-74-2	mg/kg	<0.0024	0.0035 J	<0.0025
Di-n-octyl phthalate	117-84-0	mg/kg	0.01 U	<0.0026	<0.0025
Fluoranthene	206-44-0	mg/kg	<0.0019	<0.0021	<0.002
Fluorene	86-73-7	mg/kg	<0.0019	<0.0021	<0.002

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Soil Analytical Data Summary
Second Transmissive Unit
Brine Service Company Superfund Site

Sample Location Depth Interval Sample Date			ESSB13 26-27 ft 3/6/2012	ESSB15 22-23 ft 3/7/2012	SPSB19C 36-37 ft 1/16/2012
Analyte	CAS No.	Units			
Hexachlorobenzene	118-74-1	mg/kg	<0.0019	<0.0021	<0.002
Hexachlorobutadiene	87-68-3	mg/kg	<0.0019	<0.0021	<0.002
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0019	<0.0021	<0.002
Hexachloroethane	67-72-1	mg/kg	<0.0019	<0.0021	<0.002
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	<0.0019	<0.0021	<0.002
Isophorone	78-59-1	mg/kg	<0.0019	<0.0021	<0.002
Naphthalene	91-20-3	mg/kg	<0.0019	<0.0021	<0.002
Nitrobenzene	98-95-3	mg/kg	<0.0019	<0.0021	<0.002
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0024	<0.0026	<0.0025
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0024	<0.0026	<0.0025
Pentachlorophenol	87-86-5	mg/kg	<0.0021	<0.0024 JL	<0.0023
Phenanthrene	85-01-8	mg/kg	<0.003	<0.0033	<0.0032
Phenol	108-95-2	mg/kg	<0.0024	<0.0026 JL	<0.0025
Pyrene	129-00-0	mg/kg	<0.0019	<0.0021	<0.002

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--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			ENSB01	ENSB01	ENSB01	ENSB02	ENSB02	ENSB02	ENSB02	ENSB03	ENSB03	ENSB03	ENSB06	ENSB06	ENSB06	ENSB07	ENSB07	ENSB07	ENSB09	ENSB09	ENSB09	ENSB09
Sample Date			1-2 ft	2-3 ft	6-7 ft	1-2 ft	2-3 ft	2-3 ft	6-7 ft	1-2 ft	2-3 ft	5-6 ft	1-2 ft	4-5 ft	9-10 ft	1-2 ft	3-4 ft	9-10 ft	1-2 ft	1-2 ft	2-3 ft	9-10 ft
Sample Date			11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/9/2010	11/9/2010	11/9/2010	12/8/2010	12/8/2010	12/8/2010	11/9/2010	11/9/2010	11/9/2010	11/9/2010
Analyte	CAS No.	Units																				
METALS																						
Aluminum	7429-90-5	mg/kg	9700	6780	5930	10000	8350	9310	10300	9150	8230	7110	5290	5950	3600	8700	12800	8030	4690	4550	6510	3900
Antimony	7440-36-0	mg/kg	<0.27	<0.25	<0.26	<0.29	<0.29	<0.27	<0.33	<0.26	<0.29	<0.29	<0 26	<0.27	<0.27	0.301 J	<0 26	<0.27	<0.26	<0.25	<0.29	<0.28
Arsenic	7440-38-2	mg/kg	7.67	3.03	2.37	3.36	2.91	3.35	7.14	3.39	2.83	2.7	4.01	3.48	2.26	8.09	3.32	2.91	2.83	3.22	3.34	1.77
Barium	7440-39-3	mg/kg	188	136	159	289	242	366	529	100	102	177	2920	415	223	289	152	249	158 J	283 J	123	191
Beryllium	7440-41-7	mg/kg	0.742	0.534	0.449 J	0.705	0.628	0.677	0.81	0.625	0.578 J	0.531 J	0.421 J	0.493 J	0.343 J	0.494 J	0.625	0.471 J	0.364 J	0.386 J	0.515 J	0.32 J
Cadmium	7440-43-9	mg/kg	0.296 J	0.155 J	0.131 J	0.159 J	0.147 J	0.156 J	0.223 J	0.147 J	0.137 J	0.147 J	5.44	0.257 J	0.126 J	12	0.198 J	0.123 J	3.72	2.74	6.99	0.0901 J
Chromium	7440-47-3	mg/kg	5.4	4.14	3.76	5.6	4.69	5.09	5.84	5.08	4.55	4.23	5.13	3.79	2.13	8.44	5.88	4.15	3.67	4.47	3.92	2.24
Cobalt	7440-48-4	mg/kg	5.04	2.97	2.79	3.84	3.85	3.82	5.63	3.92	3.44	3.15	3.37	3.43	2.06	4.28	4.99	3.37	2.47	2.85	3.88	2.43
Copper	7440-50-8	mg/kg	5.11	3.36	2.54	5.05	4.18	4.46	5.61	4.32	3.71	3.29	17.4	5.29	2.65	57.7	6.56	3.67	29.9 J	13.4 J	20.6	3.11
Lead	7439-92-1	mg/kg	10.9	6.71	5.7	8.46	7.75	8.55	10	7.02	7.18	6.73	71.6	12.3	5.75	155	10.3	21.7	141 J	49.3 J	17.9	5.22
Manganese	7439-96-5	mg/kg	424	191	189	208	230	211	190	218	199	159	271	234	115	328	599	136	152	167	367	94.9
Nickel	7440-02-0	mg/kg	6.65	4.42	3.7	5.74	5.35	5.47	6.83	5.57	4.97	4.09	5.57	5.21	2.93	7.04	7.81	4.64	3.59	4.46	8.82	3.28
Selenium	7782-49-2	mg/kg	1.12	0.733	0.597	0.832	0.812	0.832	1	0.854	0.728	0.632	1.22	1.08	0.526 J	12.8	3.41	0.607	6.74 J	2.67 J	3.73	0.548 J
Silver	7440-22-4	mg/kg	<0.043	<0.04	<0.042	0.0561 J	<0.047	<0.043	<0.053	0.0506 J	<0.047	<0.047	0.584	0.0799 J	<0.043	1.32	0.0618 J	<0.043	1.07	0.303 J	0.195 J	<0.045
Thallium	7440-28-0	mg/kg	0.232 J	0.0956 J	0.0966 J	0.11 J	<0.082	0.193 J	0.161 J	0.0853 J	0.0871 J	0.0872 J	0.0779 J	0.0772 J	<0.076	0.144 U	0.144 U	0.128 U	0.0897 J	<0.071	<0.08	<0.079
Vanadium	7440-62-2	mg/kg	14.7	12.2	15.7	21.2	21	24.1	15	16.7	18.5	13.4	8.33	11.1	8.33	13.6	10.2	15	8.18	8.84	12.7	9.33
Zinc	7440-66-6	mg/kg	22.9	15.2	17.8	17	14.7	15.1	22.4	16	14.9	15.3	688	34.1	7.87	1570	19.7	14.3	394	404	578	8.24
Mercury	7439-97-6	mg/kg	0.99	0.0116	0.00368 J	0.0426	0.00184 J	0.00346 J	0.00349 J	0.014	0.0062	0.00895	3.45	0.0474	0.00407 J	7.9	0.0791	<0.00026	13.9 J	31.1 J	2.47	0.00337 J
Cyanide	57-12-5	mg/kg	<0.67	<0.62	<0.64	<0.71	<0.71	<0.72	<0.81	<0.65	<0.65	<0.68	<0.67	<0.72	<0.7	<0.68	<0.7	<0.71	<0.68	<0.68	<0.74	<0.72
PESTICIDES and PCBs																						
4,4´-DDD	72-54-8	mg/kg	<0.0006	<0.00056	<0.00059	<0.00061	<0.0006	<0.00061	<0.00068	<0.00058	<0.0006	<0.00063	<0.0028	<0.00061	<0.003	<0.00057	<0.00059	<0.00062	<0.00058	<0.0029	<0.0031	<0.00061
4,4´-DDE	72-55-9	mg/kg	<0.0006	<0.00056	<0.00059	<0.00061	<0.0006	<0.00061	<0.00068	<0.00058	<0.0006	<0.00063	<0.0028	<0.00061	<0.003	<0.00057	<0.00059	<0.00062	<0.00058	<0.0029	<0.0031	<0.00061
4,4´-DDT	50-29-3	mg/kg	<0.0006	<0.00056	<0.00059	<0.00061	<0.0006	<0.00061	<0.00068	<0.00058	<0.0006	<0.00063	<0.0028	<0.00061	<0.003	<0.00057	<0.00059	<0.00062	<0.00058	<0.0029	<0.0031	<0.00061
Aldrin	309-00-2	mg/kg	<0.00036	<0.00033	<0.00035	<0.00036	<0.00036	<0.00037	<0.00041	<0.00035	<0.00036	<0.00038	<0.0017	<0.00037	<0.0018	<0.00034	<0.00035	<0.00037	<0.00035	<0.0017	<0.0019	<0.00037
alpha-BHC	319-84-6	mg/kg	<0.00036	<0.00033	<0.00035	<0.00036	<0.00036	<0.00037	<0.00041	<0.00035	<0.00036	<0.00038	<0.0017	<0.00037	<0.0018	<0.00034	<0.00035	0.0017 J	<0.00035	<0.0017	<0.0019	0.001 J
alpha-Chlordane	5103-71-9	mg/kg	<0.00024	<0.00022	<0.00024	<0.00024	<0.00024	<0.00024	<0.00027	<0.00023	<0.00024	<0.00025	<0.0011	<0.00025	<0.0012	<0.00023	<0.00024	<0.00025	<0.00023	<0.0011	<0.0012	<0.00024
beta-BHC	319-85-7	mg/kg	<0.00036	<0.00033	<0.00035	<0.00036	<0.00036	<0.00037	<0.00041	<0.00035	<0.00036	<0.00038	<0.0017	<0.00037	<0.0018	<0.00034	<0.00035	<0.00037	<0.00035	<0.0017	<0.0019	<0.00037
delta-BHC	319-86-8	mg/kg	<0.00024	<0.00022	<0.00024	<0.00024	<0.00024	<0.00024	<0.00027	<0.00023	<0.00024	<0.00025	<0.0011	<0.00025	<0.0012	<0.00023	<0.00024	<0.00025	<0.00023	<0.0011	<0.0012	0.001 J
Dieldrin	60-57-1	mg/kg	<0.0006	<0.00056	<0.00059	<0.00061	<0.0006	<0.00061	<0.00068	<0.00058	<0.0006	<0.00063	<0.0028	<0.00061	<0.003	<0.00057	<0.00059	<0.00062	<0.00058	<0.0029	<0.0031	<0.00061
Endosulfan I	959-98-8	mg/kg	<0.00036	<0.00033	<0.00035	<0.00036	<0.00036	<0.00037	<0.00041	<0.00035	<0.00036	<0.00038	<0.0017	<0.00037	<0.0018	<0.00034	<0.00035	<0.00037	<0.00035	<0.0017	<0.0019	<0.00037
Endosulfan II	33213-65-9	mg/kg	<0.00072	<0.00067	<0.00071	<0.00073	<0.00072	<0.00073	<0.00082	<0.00069	<0.00072	<0.00075	<0.0034	<0.00074	<0.0036	<0.00069	<0.00071	<0.00074	<0.00069	<0.0034	<0.0037	<0.00073
Endosulfan sulfate	1031-07-8	mg/kg	<0.00072	<0.00067	<0.00071	<0.00073	<0.00072	<0.00073	<0.00082	<0.00069	<0.00072	<0.00075	<0.0034	<0.00074	<0.0036	<0.00069	<0.00071	<0.00074	<0.00069	<0.0034	<0.0037	<0.00073
Endrin	72-20-8	mg/kg	<0.00072	<0.00067	<0.00071	<0.00073	<0.00072	<0.00073	<0.00082	<0.00069	<0.00072	<0.00075	<0.0034	<0.00074	<0.0036	<0.00069	<0.00071	<0.00074	<0.00069	<0.0034	<0.0037	<0.00073
Endrin aldehyde	7421-93-4	mg/kg	<0.00072	<0.00067	<0.00071	<0.00073	<0.00072	<0.00073	<0.00082	<0.00069	<0.00072	<0.00075	<0.0034	<0.00074	<0.0036	<0.00069	<0.00071	<0.00074	<0.00069	<0.0034	<0.0037	<0.00073
gamma-BHC	58-89-9	mg/kg	<0.00024	<0.00022	<0.00024	<0.00024	<0.00024	<0.00024	<0.00027	<0.00023	<0.00024	<0.00025	<0.0011	<0.00025	<0.0012	<0.00023	<0.00024	<0.00025	<0.00023	<0.0011	<0.0012	<0.00024
gamma-Chlordane	5103-74-2	mg/kg	<0.00024	<0.00022	<0.00024	<0.00024	<0.00024	<0.00024	<0.00027	<0.00023	<0.00024	<0.00025	<0.0011	<0.00025	<0.0012	<0.00023	<0.00024	<0.00025	<0.00023	<0.0011	<0.0012	<0.00024
Heptachlor	76-44-8	mg/kg	<0.00036	<0.00033	<0.00035	<0.00036	<0.00036	<0.00037	<0.00041	<0.00035	<0.00036	<0.00038	<0.0017	<0.00037	<0.0018	<0.00034	<0.00035	<0.00037	<0.00035	<0.0017	<0.0019	<0.00037
Heptachlor epoxide	1024-57-3	mg/kg	<0.00036	<0.00033	<0.00035	<0.00036	<0.00036	<0.00037	<0.00041	<0.00035	<0.00036	<0.00038	<0.0017	<0.00037	<0.0018	<0.00034	<0.00035	<0.00037	<0.00035	<0.0017	<0.0019	<0.00037
Methoxychlor	72-43-5	mg/kg	<0.0041	<0.0038	<0.004	<0.0041	<0.0041	<0.0042	<0.0046	<0.0039	<0.0041	<0.0043	<0.019	<0.0042	<0.02	<0.0039	<0.004	<0.0042	<0.0039	<0.02	<0.021	<0.0041
Toxaphene	8001-35-2	mg/kg	<0.0046	<0.0042	<0.0045	<0.0046	<0.0046	<0.0046	<0.0052	<0.0044	<0.0046	<0.0048	<0.021	<0.0047	<0.023	<0.0044	<0.0045	<0.0047	<0.0044	<0.022	<0.024	<0.0046
Aroclor 1016	12674-11-2	mg/kg	<0.0029	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0028	<0.0029	<0.003	<0.0027	<0.0029	<0.0029	<0.0028	<0.0028	<0.003	<0.0028	<0.0028	<0.003	<0.0029
Aroclor 1221	11104-28-2	mg/kg	<0.0029	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0028	<0.0029	<0.003	<0.0027	<0.0029	<0.0029	<0.0028	<0.0028	<0.003	<0.0028	<0.0028	<0.003	<0.0029
Aroclor 1232	11141-16-5	mg/kg	<0.0029	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0028	<0.0029	<0.003	<0.0027	<0.0029	<0.0029	<0.0028	<0.0028	<0.003	<0.0028	<0.0028	<0.003	<0.0029
Aroclor 1242	53469-21-9	mg/kg	<0.0029	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0028	<0.0029	<0.003	<0.0027	<0.0029	<0.0029	<0.0028	<0.0028	<0.003	<0.0028	<0.0028	<0.003	<0.0029
Aroclor 1248	12672-29-6	mg/kg	<0.0029	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0028	<0.0029	<0.003	<0.0027	<0.0029	<0.0029	<0.0028	<0.0028	<0.003	<0.0028	<0.0028	<0.003	<0.0029
Aroclor 1254	11097-69-1	mg/kg	<0.0029	<0.0027	<0.0028	<0.0029	0.012 J	<0.0029	<0.0033	<0.0028	<0.0029	<0.003	<0.0027	<0.0029	<0.0029	<0.0028	<0.0028	<0.003	<0.0028	<0.0028	<0.003	<0.0029
Aroclor 1260	11096-82-5	mg/kg	<0.0022	<0.002	<0.0021	<0.0022	<0.0022	<0.0022	<0.0025	<0.0021	<0.0022	<0.0023	<0.002	<0.0022	<0.0021	<0.0021	<0.0021	<0.0022	<0.0021	<0.0021	<0.0022	<0.0022
Total PCBs	TPCB	mg/kg	<0.0098	<0.0091	<0.00945	<0.0098	0.02035	<0.0098	<0.01115	<0.00945	<0.0098	<0.01015	<0.0091	<0.0098	<0.00975	<0.00945	<0.00945	<0.0101	<0.00945	<0.00945	<0.0101	<0.0098
VOLATILE ORGANIC COMPOUNDS																						
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1 1-Dichloroethane	75-34-3	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1,1-Dichloroethene	75-35-4	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.00066	<0.0005	<0.00053	<0.00054	<0.00055	<0.00057	<0.00082	<0.00054	<0.00057	<0.00061	<0.00052	<0.00054	<0.00052	<0.00058	<0.00056	<0.035	<0.00064	<0.00055	<0.00063	<0.00053
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1 2-Dibromoethane	106-93-4	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1 2-Dichloroethane	107-06-2	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1 2-Dichloropropane	78-87-5	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
2-Butanone	78-93-3	mg/kg	<0.0015	<0.0012	<0.0012	<0.0013	<0.0013	<0.0013	<0.0019	<0.0013	<0.0013	<0.0014	<0.0012	<0.0013	<0.0012	<0.0013	<0.0013	<0.082	<0.0015	<0.0013	<0.0015	<0.0012
2-Hexanone	591-78-6	mg/kg	<0.0011	<0.00083	<0.00088	<0.00091	<0.00091	<0.00095	<0.0014	<0.0009	<0.00096	<0.001	<0.00086	<0.00089	<0.00087	<0.00096	<0.00093	<0.059	<0.0011	<0.00092	<0.001	<0.00089
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.0011	<0.00083	<0.00088	<0.00091	<0.00091	<0.00095	<0.0014	<0.0009	<0.00096	<0.001	<0.00086	<0.00089	<0.00087	<0.00096	<0.00093	<0.059	<0.0011	<0.00092	<0.001	<0.00089
Acetone	67-64-1	mg/kg	<0.0022	<0.0017	<0.0018	<0.0018	<0.0018	<0.0019	<0.0027	<0.0018	<0.0019	<0.002	<0.0017	<0.0018	0.073 U	<0.0019	<0.0019	<0.12	<0.0021	<0.0018	<0.0021	0.27 JH
Benzene	71-43-2	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Bromodichloromethane	75-27-4	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Bromoform	75-25-2	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Bromomethane	74-83-9	mg/kg	<0.0011	<0.00083	<0.00088	<0.00091	<0.00091	<0.00095	<0.0014	<0.0009	<0.00096	<0.001	<0.00086	<0.00089	<0.00087	<0.00096	<0.00093	<0.059	<0.0011	<0.00092	<0.001	<0.00089
Carbon disulfide	75-15-0	mg/kg	<0.0011	<0.00083	<0.00088	<0.00091	<0.00091	<0.00095	<0.0014	<0.0009	<0.00096	<0.001	<0.00086	<0.00089	0.0033 JH	<0.00096	<0.00093	<0.059	<0.0011	<0.00092	<0.001	<0.00089
Carbon tetrachloride	56-23-5	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	0.0062 JH

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			ENSB01	ENSB01	ENSB01	ENSB02	ENSB02	ENSB02	ENSB02	ENSB03	ENSB03	ENSB03	ENSB06	ENSB06	ENSB06	ENSB07	ENSB07	ENSB07	ENSB09	ENSB09	ENSB09	ENSB09
Sample Date			1-2 ft	2-3 ft	6-7 ft	1-2 ft	2-3 ft	2-3 ft	6-7 ft	1-2 ft	2-3 ft	5-6 ft	1-2 ft	4-5 ft	9-10 ft	1-2 ft	3-4 ft	9-10 ft	1-2 ft	1-2 ft	2-3 ft	9-10 ft
Sample Date			11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/9/2010	11/9/2010	11/9/2010	12/8/2010	12/8/2010	12/8/2010	11/9/2010	11/9/2010	11/9/2010	11/9/2010
Analyte	CAS No.	Units																				
Chlorobenzene	108-90-7	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Chloroethane	75-00-3	mg/kg	<0.0011	<0.00083	<0.00088	<0.00091	<0.00091	<0.00095	<0.0014	<0.0009	<0.00096	<0.001	<0.00086	<0.00089	<0.00087	<0.00096	<0.00093	<0.059	<0.0011	<0.00092	<0.001	<0.00089
Chloroform	67-66-3	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Chloromethane	74-87-3	mg/kg	<0.0011	<0.00083	<0.00088	<0.00091	<0.00091	<0.00095	<0.0014	<0.0009	<0.00096	<0.001	<0.00086	<0.00089	<0.00087	<0.00096	<0.00093	<0.059	<0.0011	<0.00092	<0.001	<0.00089
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	0.00069 JH	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Cyclohexane	110-82-7	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	3	<0.00053	<0.00046	<0.00052	<0.00045
Dibromochloromethane	124-48-1	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Dichlorodifluoromethane	75-71-8	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Ethylbenzene	100-41-4	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	0.001 J	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Isopropylbenzene	98-82-8	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	3.3	<0.00048	<0.00047	1.2	<0.00053	<0.00046	<0.00052	2.2
Methyl acetate	79-20-9	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Methylcyclohexane	108-87-2	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	7.9	<0.00053	<0.00046	<0.00052	0.16 JH
Methylene chloride	75-09-2	mg/kg	<0.0011	<0.00083	<0.00088	<0.00091	<0.00091	<0.00095	<0.0014	<0.0009	<0.00096	<0.001	<0.00086	<0.00089	<0.00087	<0.00096	<0.00093	<0.059	<0.0011	<0.00092	<0.001	<0.00089
Naphthalene	91-20-3	mg/kg	0.0016 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0018 U	0.0011 U	0.0012 U	0.0013 U	<0.00043	<0.00045	0.037	<0.00048	<0.00047	3.1	0.0024 U	0.0013 U	0.0015 U	0.0038 U
n-Butylbenzene	104-51-8	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	0.043	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
n-Propylbenzene	103-65-1	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	4.4	<0.00048	0.00047 J	3.2	<0.00053	<0.00046	<0.00052	2.7
sec-Butylbenzene	135-98-8	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	0.65	<0.00053	<0.00046	<0.00052	0.11 JH
Styrene	100-42-5	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
tert-Butylbenzene	98-06-6	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	0.049 J	<0.00053	<0.00046	<0.00052	<0.00045
Tetrachloroethene	127-18-4	mg/kg	<0.00066	<0.0005	<0.00053	<0.00054	<0.00055	<0.00057	<0.00082	<0.00054	<0.00057	<0.00061	<0.00052	<0.00054	<0.00052	<0.00058	<0.00056	<0.035	<0.00064	<0.00055	<0.00063	<0.00053
Toluene	108-88-3	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	0.0014 J	0.0014 J	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Trichloroethene	79-01-6	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Trichlorofluoromethane	75-69-4	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Vinyl chloride	75-01-4	mg/kg	<0.00055	<0.00042	<0.00044	<0.00045	<0.00046	<0.00047	<0.00069	<0.00045	<0.00048	<0.00051	<0.00043	<0.00045	<0.00044	<0.00048	<0.00047	<0.029	<0.00053	<0.00046	<0.00052	<0.00045
Xylenes, Total	1330-20-7	mg/kg	<0.0016	<0.0012	<0.0013	<0.0014	<0.0014	<0.0014	<0.0021	<0.0013	<0.0014	<0.0015	<0.0013	<0.0013	<0.0013	0.0024 J	0.0024 J	<0.088	<0.0016	<0.0014	<0.0016	<0.0013
SEMIVOLATILE ORGANIC COMPOUNDS																						
1,1´-Biphenyl	92-52-4	mg/kg	<0.0035	<0.0032	<0.0034	<0.0035	<0.0035	<0.0035	<0.004	<0.0033	<0.0035 JL	<0.0036	<0.0033	<0.0036	<0.017	<0.0033	0.004 JL	<0.0036 JL	<0.0033	<0.0033	<0.0036	<0.07
1-Methylnaphthalene	90-12-0	mg/kg	<0.0028	<0.0026	<0.0027	<0.0028	<0.0028	<0.0028	<0.0031	<0.0027	<0.0028 JL	<0.0029	<0.0026	<0.0028	<0.014	0.013	0.011 JL	0.33 JL	<0.0026	<0.0026	<0.0029	<0.056
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0034 JL	<0.0031 JL	<0.0033 JL	<0.0034 JL	<0.0034 JL	<0.0034 JL	<0.0038 JL	<0.0032 JL	<0.0034 JL	<0.0035 JL	<0.0032 JL	<0.0034	<0.017	<0.0032 JL	<0.0033 JL	<0.0035 JL	<0.0032	<0.0032	<0.0035	<0.068
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.004 JL	<0.0037 JL	<0.0039 JL	<0.004 JL	<0.004 JL	<0.004 JL	<0.0045 JL	<0.0038 JL	<0.004 JL	<0.0041 JL	<0.0037 JL	<0.004	<0.02	<0.0038 JL	<0.0039 JL	<0.0041 JL	<0.0038	<0.0038	<0.0041	<0.08
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0026 JL	<0.0024 JL	<0.0026 JL	<0.0027 JL	<0.0026 JL	<0.0027 JL	<0.003 JL	<0.0025 JL	<0.0027 JL	<0.0028 JL	<0.0025 JL	<0.0027	<0.013	<0.0025 JL	<0.0026 JL	<0.0027 JL	<0.0025	<0.0025	<0.0027	<0.053
2 4-Dimethylphenol	105-67-9	mg/kg	<0.004 JL	<0.0037 JL	<0.0039 JL	<0.004 JL	<0.004 JL	<0.004 JL	<0.0045 JL	<0.0038 JL	<0.004 JL	<0.0041 JL	<0.0037 JL	<0.004	<0.02	<0.0038 JL	0.0073 JL	0.019 JL	<0.0038	<0.0038	<0.0041	<0.08
2 4-Dinitrophenol	51-28-5	mg/kg	<0.004 JL	<0.0037 JL	<0.0039 JL	<0.004 JL	<0.004 JL	<0.004 JL	<0.0045 JL	<0.0038 JL	<0.004 JL	<0.0041 JL	<0.0037 JL	<0.004	<0.02	<0.0038 JL	<0.0039 JL	<0.0041 JL	<0.0038	<0.0038	<0.0041 JL	<0.08
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.004	<0.0037	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0038	<0.004 JL	<0.0041	<0.0037	<0.004	<0.02	<0.0038	<0.0039 JL	<0.0041 JL	<0.0038	<0.0038	<0.0041	<0.08
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.0039	<0.0036	<0.0038	<0.0039	<0.0038	<0.0039	<0.0044	<0.0037	<0.0039 JL	<0.004	<0.0036	<0.0039	<0.019	<0.0037	<0.0038 JL	<0.0039 JL	<0.0037	<0.0037	<0.004	<0.078
2-Chloronaphthalene	91-58-7	mg/kg	<0.0049	<0.0046	<0.0048	<0.005	<0.0049	<0.005	<0.0056	<0.0047	<0.005 JL	<0.0051	<0.0046	<0.005	<0.024	<0.0047	<0.0048 JL	<0.0051 JL	<0.0047	<0.0047	<0.0051	<0.1
2-Chlorophenol	95-57-8	mg/kg	<0.0039 JL	<0.0036 JL	<0.0038 JL	<0.0039 JL	<0.0038 JL	<0.0039 JL	<0.0044 JL	<0.0037 JL	<0.0039 JL	<0.004 JL	<0.0036 JL	<0.0039	<0.019	<0.0037 JL	<0.0038 JL	<0.0039 JL	<0.0037	<0.0037	<0.004	<0.078
2-Methylnaphthalene	91-57-6	mg/kg	0.0035 U	<0.003	<0.0032	<0.0033	<0.0032	<0.0033	<0.0037	<0.0031	<0.0033 JL	<0.0034	<0.003	<0.0033	<0.016	0.019	0.018 JL	0.44 JL	<0.0031	<0.0031	<0.0034	<0.066
2-Methylphenol	95-48-7	mg/kg	<0.0035 JL	<0.0032 JL	<0.0034 JL	<0.0035 JL	<0.0035 JL	<0.0035 JL	<0.004 JL	<0.0033 JL	<0.0035 JL	<0.0036 JL	<0.0033 JL	<0.0036	<0.017	0.005 JL	0.02 JL	0.016 JL	<0.0033	<0.0033	<0.0036	<0.07
2-Nitroaniline	88-74-4	mg/kg	<0.004	<0.0037	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0038	<0.004 JL	<0.0041	<0.0037	<0.004	<0.02	<0.0038	<0.0039 JL	<0.0041 JL	<0.0038	<0.0038	<0.0041	<0.08
2-Nitrophenol	88-75-5	mg/kg	<0.0055 JL	<0.0051 JL	<0.0054 JL	<0.0056 JL	<0.0055 JL	<0.0056 JL	<0.0063 JL	<0.0053 JL	<0.0056 JL	<0.0058 JL	<0.0052 JL	<0.0056	<0.027	<0.0053 JL	<0.0054 JL	<0.0057 JL	<0.0053	<0.0053	<0.0057	<0.11
3&4-Methylphenol	106-44-5	mg/kg	<0.0034 JL	<0.0031 JL	<0.0033 JL	<0.0034 JL	<0.0034 JL	<0.0034 JL	<0.0038 JL	<0.0032 JL	<0.0034 JL	<0.0035 JL	<0.0032 JL	<0.0034	<0.017	0.015 JL	0.046 JL	0.03 JL	<0.0032	<0.0032	<0.0035	<0.068
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0037	<0.0035	<0.0037	<0.0038	<0.0037	<0.0038	<0.0042	<0.0036	<0.0037 JL	<0.0039	<0.0035	<0.0038	<0.018	<0.0036	<0.0037 JL	<0.0038 JL	<0.0036	<0.0036	<0.0039 JL	<0.075
3-Nitroaniline	99-09-2	mg/kg	<0.0031	<0.0029	<0.0031	<0.0032	<0.0031	<0.0032	<0.0036	<0.003	<0.0031 JL	<0.0033	<0.0029	<0.0032	<0.015	<0.003 JL	<0.0031 JL	<0.0032 JL	<0.003	<0.003	<0.0032	<0.063
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.004 JL	<0.0037 JL	<0.0039 JL	<0.004 JL	<0.004 JL	<0.004 JL	<0.0045 JL	<0.0038 JL	<0.004 JL	<0.0041 JL	<0.0037 JL	<0.004	<0.02	<0.0038 JL	<0.0039 JL	<0.0041 JL	<0.0038	<0.0038	<0.0041 JL	<0.08
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.004	<0.0037	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0038	<0.004 JL	<0.0041	<0.0037	<0.004	<0.02	<0.0038	<0.0039 JL	<0.0041 JL	<0.0038	<0.0038	<0.0041	<0.08
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.004 JL	<0.0037 JL	<0.0039 JL	<0.004 JL	<0.004 JL	<0.004 JL	<0.0045 JL	<0.0038 JL	<0.004 JL	<0.0041 JL	<0.0037 JL	<0.004	<0.02	<0.0038 JL	<0.0039 JL	<0.0041 JL	<0.0038	<0.0038	<0.0041	<0.08
4-Chloroaniline	106-47-8	mg/kg	<0.0026	<0.0024	<0.0026	<0.0027	<0.0026	<0.0027	<0.003 JL	<0.0025	<0.0027 JL	<0.0028	<0.0025	<0.0027	<0.013	<0.0025	<0.0026 JL	<0.0027 JL	<0.0025	<0.0025	<0.0027	<0.053
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0026	<0.0024	<0.0026	<0.0027	<0.0026	<0.0027	<0.003	<0.0025	<0.0027 JL	<0.0028	<0.0025	<0.0027	<0.013	<0.0025	<0.0026 JL	<0.0027 JL	<0.0025	<0.0025	<0.0027	<0.053
4-Nitroaniline	100-01-6	mg/kg	<0.004	<0.0037	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0038	<0.004 JL	<0.0041	<0.0037	<0.004	<0.02	<0.0038	<0.0039 JL	<0.0041 JL	<0.0038	<0.0038	<0.0041	<0.08
4-Nitrophenol	100-02-7	mg/kg	<0.0046 JL	<0.0042 JL	<0.0045 JL	<0.0046 JL	<0.0046 JL	<0.0046 JL	<0.0052 JL	<0.0044 JL	<0.0046 JL	<0.0048 JL	<0.0043 JL	<0.0047	<0.023	<0.0044 JL	<0.0045 JL	<0.0047 JL	<0.0044	<0.0044	<0.0047	<0.092
Acenaphthene	83-32-9	mg/kg	0.013	<0.0024	<0.0026	<0.0027	<0.0026	<0.0027	<0.003	<0.0025	<0.0027 JL	<0.0028	<0.0025	<0.0027	<0.013	0.0033 J	<0.0026 JL	0.048 JL	0.0084	<0.0025	<0.0027	<0.053
Acenaphthylene	208-96-8	mg/kg	<0.0026	<0.0024	<0.0026	<0.0027	<0.0026	<0.0027	<0.003	<0.0025	<0.0027 JL	<0.0028	<0.0025	<0.0027	<0.013	<0.0025	<0.0026 JL	0.041 JL	<0.0025	<0.0025	<0.0027	<0.053
Acetophenone	98-86-2	mg/kg	<0.0029	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0028	<0.0029 JL	<0.003	<0.0027	<0.0029	<0.014	0.033 U	0.062 U	0.024 U	<0.0028	<0.0028	<0.003	<0.058
Anthracene	120-12-7	mg/kg	0.045	<0.0024	<0.0026	<0.0027	<0.0026	<0.0027	<0.003	<0.0025	<0.0027 JL	<0.0028	0.0077	<0.0027	<0.013	0.01	<0.0026 JL	0.0048 JL	0.013	<0.0025	<0.0027	<0.053
Benz(a)anthracene	56-55-3	mg/kg	0.11	<0.0031	<0.0033	<0.0034	<0.0034	<0.0034	<0.0038	<0.0032	<0.0034 JL	<0.0035	0.017	<0.0034	<0.017	0.075	<0.0033 JL	0.0094 JL	0.04	0.019	0.04	<0.068
Benzaldehyde	100-52-7	mg/kg	<0.0055 JL	<0.0051 JL	<0.0054 JL	<0.0056 JL	<0.0055 JL	<0.0056 JL	<0.0063 JL	<0.0053 JL	<0.0056 JL	<0.0058 JL	<0.0052 JL	<0.0056 JL	<0.027 JL	<0.0053 JL	<0.0054 JL	<0.0057 JL	<0.0053 JL	<0.0053 JL	<0.0057 JL	<0.11 JL
Benzo(a)pyrene	50-32-8	mg/kg	0.11	<0.0026	<0.0027	<0.0028	<0.0028	<0.0028	<0.0031	<0.0027	<0.0028 JL	<0.0029	0.012	<0.0028	0.047	0.065	<0.0027 JL	0.0054 JL	0.042 J	0.019 J	0.064	0.099 J
Benzo(b)fluoranthene	205-99-2	mg/kg	0.079	<0.0037	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0038	<0.004 JL	<0.0041	0.018	<0.004	<0.02	0.065	<0.0039 JL	<0.0041 JL	0.053 J	0.019 J	0.033	<0.08
Benzo(g h i)perylene	191-24-2	mg/kg	0.05	<0.0032	<0.0034	<0.0035	<0.0035	<0.0035	<0.004	<0.0033	<0.0035 JL	<0.0036	0.014	<0.0036	<0.017	0.041	<0.0034 JL	<0.0036 JL	0.031	0.026	0.029	<0.07
Benzo(k)fluoranthene	207-08-9	mg/kg	0.11	<0.0037	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0038	<0.004 JL	<0.0041	0.026	<0.004	<0.02	0.019	<0.0039 JL	<0.0041 JL	0.026	0.028	0.039	<0.08
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.0029	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0028	<0.0029 JL	<0.003	<0.0027	<0.0029	<0.014	<0.0028	<0.0028 JL	<0.003 JL	<0.0028	<0.0028	<0.003	<0.058
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0034	<0.0031	<0.0033	<0.0034	<0.0034	<0.0034	<0.0038	<0.0032	<0.0034 JL	<0.0035	<0.0032	<0.0034	<0.017	<0.0032	<0.0033 JL	<0.0035 JL	<0.0032	<0.0032	<0.0035	<0.068
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0033	<0.003	<0.0032	<0.0033	<0.0032	<0.0033	<0.0037	<0.0031	<0.0033 JL	<0.0034	<0.003	<0.0033	<0.016	<0.0031	<0.0032 JL	<0.0033 JL	<0.0031	<0.0031	<0.0034	<0.066
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	<0.0079	<0.0073	<0.0078	<0.008	<0.0079	<0.0081	<0.009	<0.0076	<0.008 JL	<0.0083	0.033	0.018	<0.039	0.01	<0.0078 JL	<0.0081 JL	0.0087	0.026	<0.0082	<0.16
Butyl benzyl phthalate	85-68-7	mg/kg	<0.003	<0.0028	<0.003	<0.003	<0.003	<0.0031	<0.0034	<0.0029	<0.003 JL	<0.0031	<0.0028	<0.0031	<0.015	<0.0029	<0.003 JL	<0.0031 JL	<0.0029	<0.0029	<0.0031	<0.061
Caprolactam	105-60-2	mg/kg	<0.0029	0.0058 J	0.0058 J	<0.0029	<0.0029	<0.0029	<0.0033 JL	<0.0028	0.005 JL	<0.003	<0.0027	<0.0029	<0.014	<0.0028	<0.0028 JL	<0.003 JL	<0.0028	<0.0028	<0.003	<0.058
Carbazole	86-74-8	mg/kg	0.029	<0.0024	<0.0026	<0.0027	<0.0026	<0.0027	<0.003	<0.0025	<0.0027 JL	<0.0028	<0.0025	<0.0027	<0.013	0.0049 JL	<0.0026 JL	<0.0027 JL	0.007 J	0.0029 J	<0.0027	<0.053
Chrysene	218-01-9	mg/kg	0.15	<0.0032	<0.0034	<0.0035	<0.0035	<0.0035	<0.004	<0.0033	<0.0035 JL	<0.0036	0.025	<0.0036	<0.017	0.24	<0.0034 JL	0.009 JL	0.043	0.022	0.026	0.16
Dibenz(a h)anthracene	53-70-3	mg/kg	0.023	<0.0024	<0.0026	<0.0027	<0.0026	<0.0027	<0.003	<0.0025	<0.0027 JL	<0.0028	<0.0025	<0.0027	<0.013	0.019	<0.0026 JL	<0.0027 JL	0.0072 J	<0.0025	<0.0027	<0.053
Dibenzofuran	132-64-9	mg/kg	0.007 J	<0.0024	<0.0026	<0.0027	<0.0026	<0.0027	<0.003	<0.0025	<0.0027 JL	<0.0028	<0.0025	<0.0027	<0.013	<0.0025	<0.0026 JL	0.078 JL	0.0038 J	<0.0025	<0.0027	<0.053
Diethyl phthalate	84-66-2	mg/kg	<0.004	<0.0037	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0038	<0.004 JL	<0.0041	<0.0037	<0.004	<0.02	<0.0038	<0.0039 JL	<0.0041 JL	<0.0038	<0.0038	<0.0041	<0.08
Dimethyl phthalate	131-11-3	mg/kg	<0.0029	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029	<0.0033	<0.0028	<0.0029 JL	<0.003	<0.0027	<0.0029	<0.014	<0.0028	<0.0028 JL	<0.003 JL	<0.0028	<0.0028	<0.003	<0.058
Di-n-butyl phthalate	84-74-2	mg/kg	<0.003	<0.0028	<0.003	<0.003	<0.003	<0.0031	<0.0034	<0.0029	<0.003 JL	<0.0031	0.021 U	0.0041 U	0.1 U	<0.0029	<0.003 JL	<0.0031 JL	<0.0029 J	0.049 U	<0.0031	0.46
Di-n-octyl phthalate	117-84-0	mg/kg	<0.0035	<0.0032	<0.0034	<0.0035	<0.0035	<0.0035	<0.004	<0.0033	<0.0035 JL	<0.0036	<0.0033	<0.0036	<0.017	<0.0033	<0.0034 JL	<0.0036 JL	0.015	<0.0033	<0.0036	<0.07
Fluoranthene	206-44-0	mg/kg	0.28	<0.0024	<0.0026	<0.0027	<0.0026	<0.0027	<0.003	<0.0025	<0.0027 JL	<0.0028	0.044	<0.0027	<0.013	0.067	<0.0026 JL	0.015 JL	0.081 J	0.037 J	0.074	<0.053
Fluorene	86-73-7	mg/kg	0.011	<0.0024	<0.0026	<0.0027	<0.0026	<0.0027	<0.003	<0.0025	<0.0027 JL	<0.0028	<0.0025	<0.0027	0.52	0.0038 J	<0.0026 JL	0.054 JL	0.0077 J	<0.0025 J	<0.0027	1.1

Bolded - detection above the SDL
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--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			ENSB01	ENSB01	ENSB01	ENSB02	ENSB02	ENSB02	ENSB02	ENSB03	ENSB03	ENSB03	ENSB06	ENSB06	ENSB06	ENSB07	ENSB07	ENSB07	ENSB09	ENSB09	ENSB09	ENSB09
Sample Date			1-2 ft	2-3 ft	6-7 ft	1-2 ft	2-3 ft	2-3 ft	6-7 ft	1-2 ft	2-3 ft	5-6 ft	1-2 ft	4-5 ft	9-10 ft	1-2 ft	3-4 ft	9-10 ft	1-2 ft	1-2 ft	2-3 ft	9-10 ft
Sample Date			11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/9/2010	11/9/2010	11/9/2010	12/8/2010	12/8/2010	12/8/2010	11/9/2010	11/9/2010	11/9/2010	11/9/2010
Analyte	CAS No.	Units																				
Hexachlorobenzene	118-74-1	mg/kg	<0.0031	<0.0029	<0.0031	<0.0032	<0.0031	<0.0032	<0.0036	<0.003	<0.0031 JL	<0.0033	<0.0029	<0.0032	<0.015	<0.003	<0.0031 JL	<0.0032 JL	<0.003	<0.003	<0.0032	<0.063
Hexachlorobutadiene	87-68-3	mg/kg	<0.0053	<0.0049	<0.0052	<0.0053	<0.0053	<0.0054	<0.006	<0.0051	<0.0053 JL	<0.0055	<0.005	<0.0054	<0.026	<0.0051	<0.0052 JL	<0.0054 JL	<0.0051	<0.0051	<0.0055	<0.11
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0043	<0.004	<0.0043	<0.0044	<0.0043	<0.0044	<0.0049 JL	<0.0042	<0.0044 JL	<0.0045	<0.0041	<0.0044	<0.021	<0.0041	<0.0043 JL	<0.0044 JL	<0.0041	<0.0041	<0.0045 JL	<0.087
Hexachloroethane	67-72-1	mg/kg	<0.0047	<0.0043	<0.0046	<0.0047	<0.0047	<0.0048	<0.0053	<0.0045	<0.0047 JL	<0.0049	<0.0044	<0.0048	<0.023	<0.0045	<0.0046 JL	<0.0048 JL	<0.0045	<0.0045	<0.0049	<0.095
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	0.062	<0.0039	<0.0041	<0.0042	<0.0042	<0.0043	<0.0048	<0.004	<0.0042 JL	<0.0044	0.016	<0.0043	<0.021	0.024	<0.0041 JL	<0.0043 JL	0.031	0.022	0.027	<0.085
Isophorone	78-59-1	mg/kg	<0.0036	<0.0033	<0.0035	<0.0036	<0.0036	<0.0037	<0.0041	<0.0035	<0.0036 JL	<0.0038	<0.0034	<0.0037	<0.018	<0.0035	<0.0035 JL	<0.0037 JL	<0.0035	<0.0035	<0.0037	<0.073
Naphthalene	91-20-3	mg/kg	<0.004	<0.0037	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0038	<0.004 JL	<0.0041	<0.0037	<0.004	<0.02	0.0084 U	0.0071 U	0.037 JL	0.0045 J	<0.0038	<0.0041	<0.08
Nitrobenzene	98-95-3	mg/kg	<0.004	<0.0037	<0.0039	<0.004	<0.004	<0.004	<0.0045	<0.0038	<0.004 JL	<0.0041	<0.0037	<0.004	<0.02	<0.0038	<0.0039 JL	<0.0041 JL	<0.0038	<0.0038	<0.0041	<0.08
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0048	<0.0045	<0.0047	<0.0049	<0.0048	<0.0049	<0.0055 JL	<0.0046	<0.0048 JL	<0.005	<0.0045	<0.0049	<0.024	<0.0046	<0.0047 JL	<0.0049 JL	<0.0046	<0.0046	<0.005	<0.097
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0026	<0.0024	<0.0026	<0.0027	<0.0026	<0.0027	<0.003	<0.0025	<0.0027 JL	<0.0028	<0.0025	<0.0027	<0.013	<0.0025	<0.0026 JL	<0.0027 JL	0.0067 J	<0.0025	<0.0027	<0.053
Pentachlorophenol	87-86-5	mg/kg	<0.0034 JL	<0.0031 JL	<0.0033 JL	<0.0034 JL	<0.0034 JL	<0.0034 JL	<0.0038 JL	<0.0032 JL	<0.0034 JL	<0.0035 JL	<0.0032 JL	<0.0034 JL	<0.017 JL	<0.0032 JL	<0.0033 JL	<0.0035 JL	<0.0032 JL	<0.0032 JL	<0.0035 JL	<0.068 JL
Phenanthrene	85-01-8	mg/kg	0.14	<0.0033	<0.0035	<0.0036	<0.0036	<0.0037	<0.0041	<0.0035	<0.0036 JL	<0.0038	0.018	<0.0037	<0.018	0.057	<0.0035 JL	0.12 JL	0.058 J	0.015 J	0.034	2.5
Phenol	108-95-2	mg/kg	<0.004 JL	<0.0037 JL	<0.0039 JL	<0.004 JL	<0.004 JL	<0.004 JL	<0.0045 JL	<0.0038 JL	<0.004 JL	<0.0041 JL	<0.0037 JL	<0.004	<0.02	0.037 JL	0.11 JL	0.033 JL	<0.0038	<0.0038	<0.0041	<0.08
Pyrene	129-00-0	mg/kg	0.23	<0.0024	<0.0026	<0.0027	<0.0026	<0.0027	<0.003	<0.0025	<0.0027 JL	<0.0028	0.033	<0.0027	<0.013	0.17	<0.0026 JL	0.018 JL	0.07 J	0.03 J	0.057	<0.053

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--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			ENSS01	ENSS02	ENSS03	ENSS03	ENSS04	ENSS05	ENSS06	ENSS07	ENSS08	ENSS09	ESSB09	ESSB09	ESSB09	ESSB09	ESSB09	ESSB09	ESSS06	ESSS07	ESSS08	NPSB01
Sample Date			0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	4-5 ft	12-13 ft	12.5-13.5 ft	14-15 ft	33-34 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft
Sample Date			10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	12/14/2011	1/10/2012	1/10/2012	1/10/2012	1/10/2012	1/10/2012	1/16/2012	10/12/2010	10/12/2010	10/12/2010	11/11/2010
Analyte	CAS No.	Units																				
METALS																						
Aluminum	7429-90-5	mg/kg	5420	1830	4060	3790	8210	8480	7220	3110	9220	---	7410	10100	9380	12200	5650	1880	8350	635	6280	10900
Antimony	7440-36-0	mg/kg	0.671	0.292 J	<0.24	0.257 J	<0.24	<0.24	1	<0.25	<0.26	---	0.542	<0.23	<0.25	<0.3	<0 23	<0.24	0.262 J	0.283 J	<0.24	<0.29
Arsenic	7440-38-2	mg/kg	6.42	2.51	2.44	2.41	2.35	3.44	8.7	6.11	4.31	---	9.8	4.53	3.88	4.15	1.68	1.35	4.31	1.33	2.02	2.14
Barium	7440-39-3	mg/kg	668	1080	1160	1050	493	1610	11800	979	1380	---	200	204	175	823	72.7	3.66	636	178	332	417
Beryllium	7440-41-7	mg/kg	0.283 J	0.122 J	0.192 J	0.184 J	0.362 J	0.37 J	0.335 J	0.185 J	0.392 J	---	0.499 J	0.723 J	0.658 J	0.884	0.459 J	0.162 J	0.448 J	0.0705 J	0.318 J	0.579 J
Cadmium	7440-43-9	mg/kg	15.1	1.76	0.745	1.06	0.235 J	1.16	0.702	1.08	15.6	---	26.3	0.217 J	0.151 J	0.292 J	0.11 J	<0.059	5.74	0.923	0.351 J	0.229 J
Chromium	7440-47-3	mg/kg	25.6	8.69	8.26	8	5.34	8.64	15.3	5.71	9.85	---	8.51	7.26	5.81	7.73	3.33	2.08	37.1	7.98	4.01	6.78
Cobalt	7440-48-4	mg/kg	2.59	1.22	1.46	1.46	2.46	2.69	2.26	1.36	4.9	---	4.21	3.13	4.28	5.1	2.17	0.838	3.39	1.2	2.25	3.37
Copper	7440-50-8	mg/kg	26.9	13.8	7.4	7.26	5.82	9.49	13	7.2	9.08	---	82.6	6.8	5.2	9.19	4	0.766	22.6	5.69	5.48	6.37
Lead	7439-92-1	mg/kg	59.2	48.8	37.7	39.8	17.7	45	57.1	12.4	38	---	227	10.2	9.72	16.1	6.52	2.2	138	35.9	12.9	12.3
Manganese	7439-96-5	mg/kg	154	81.9	101	102	146	165	170	112	264	---	422	121	304	189	111	18.4 JH	257	45.8	144	136
Nickel	7440-02-0	mg/kg	6.74	2.97	3.49	3.6	4.44	5.39	6.2	5.34	5.7	---	7.82	5.91	6.02	8.02	3.64	1.54	7.68	2.38	3.61	5.82
Selenium	7782-49-2	mg/kg	0.461 J	0.309 J	0.421 J	0.395 J	0.351 J	0.484 J	0.353 J	7.52	6.51	---	8.46	4.35	1.62	2.16	0.87	0.248 J	4.96	<0.24	0.393 J	1.09
Silver	7440-22-4	mg/kg	0.0468 J	<0.037	<0.038	<0.036	<0.038	0.0512 J	0.0639 J	0.0963 J	<0.042	---	2.09	<0.091	<0.098	<0.12	<0.093	<0.094	0.424 J	<0.038	<0.038	0.053 J
Thallium	7440-28-0	mg/kg	0.147 U	<0.064	<0.066	<0.064	0.112 U	0.121 U	0.101 U	0.082 U	0.13 U	---	0.234 J	0.165 J	0.155 J	0.169 J	0.188 J	<0.083	0.144 J	0.0765 J	0.203 J	0.103 J
Vanadium	7440-62-2	mg/kg	7.98	6.13	7.64	7.27	9.41	9.82	16	9.69	15.6	---	15.1	16.4	20.8	17.3	10.6	5.1	13.3	4.17	7.91	11
Zinc	7440-66-6	mg/kg	756	890	960	658	96.8	362	396	196	356	---	2160	24	21.7	30.6	13.1	5.65	715	2430	45.1	37.2
Mercury	7439-97-6	mg/kg	0.897	0.0723	0.253	0.273	0.0446	0.449	0.248	0.0973	0.19	0.0404	58.1	0.0239	0.0101	0.0558	0.00231 J	<0.00036	8.97	0.0342	0.24	0.0452
Cyanide	57-12-5	mg/kg	2.48	10.7	10.8	<0.59	3.94	14.6	<0.61	<0.63	34.3	---	<0.66	<0.7	<0.82	<0.89	<0.75	<0.76	<0.66	2.88	<0.59	<0.72
PESTICIDES and PCBs																						
4,4´-DDD	72-54-8	mg/kg	<0.0029	<0.0025	<0.0026	<0.00052	<0.00055	<0.0027	<0.0052	<0.0027	<0.00058	---	<0.0028	<0.0029	<0.00068	<0.00079	<0.00063	<0.00064	<0.0057	<0.0025	<0.0026	<0.0006
4,4´-DDE	72-55-9	mg/kg	<0.0029	<0.0025	<0.0026	<0.00052	<0.00055	<0.0027	<0.0052	<0.0027	<0.00058	---	<0.0028	<0.0029	<0.00068	<0.00079	<0.00063	<0.00064	<0.0057	<0.0025	<0.0026	<0.0006
4,4´-DDT	50-29-3	mg/kg	<0.0029	<0.0025	<0.0026	<0.00052	<0.00055	<0.0027	<0.0052	<0.0027	<0.00058	---	<0.0028	<0.0029	<0.00068	<0.00079	<0.00063	<0.00064	<0.0057	<0.0025	<0.0026	<0.0006
Aldrin	309-00-2	mg/kg	<0.0017	<0.0015	<0.0016	<0.00031	<0.00033	<0.0016	<0.0031	<0.0016	<0.00035	---	<0.0017	<0.0018	<0.00041	<0.00047	<0.00038	<0.00038	<0.0034	<0.0015	<0.0016	<0.00036
alpha-BHC	319-84-6	mg/kg	<0.0017	<0.0015	<0.0016	<0.00031	<0.00033	<0.0016	<0.0031	<0.0016	<0.00035	---	<0.0017	<0.0018	<0.00041	<0.00047	<0.00038	<0.00038	<0.0034	<0.0015	<0.0016	<0.00036
alpha-Chlordane	5103-71-9	mg/kg	<0.0011	<0.001	<0.001	<0.00021	<0.00022	<0.0011	<0.0021	<0.0011	<0.00023	---	<0.0011	<0.0012	<0.00027	<0.00031	<0.00025	<0.00025	<0.0023	<0.001	<0.0011	<0.00024
beta-BHC	319-85-7	mg/kg	<0.0017	<0.0015	<0.0016	<0.00031	<0.00033	<0.0016	<0.0031	<0.0016	<0.00035	---	<0.0017	<0.0018	<0.00041	<0.00047	<0.00038	<0.00038	<0.0034	<0.0015	<0.0016	<0.00036
delta-BHC	319-86-8	mg/kg	<0.0011	<0.001	<0.001	<0.00021	<0.00022	<0.0011	<0.0021	<0.0011	<0.00023	---	<0.0011	<0.0012	<0.00027	<0.00031	<0.00025	<0.00025	<0.0023	<0.001	<0.0011	<0.00024
Dieldrin	60-57-1	mg/kg	<0.0029	<0.0025	<0.0026	<0.00052	<0.00055	<0.0027	<0.0052	<0.0027	<0.00058	---	<0.0028	<0.0029	<0.00068	<0.00079	<0.00063	<0.00064	<0.0057	<0.0025	<0.0026	<0.0006
Endosulfan I	959-98-8	mg/kg	<0.0017	<0.0015	<0.0016	<0.00031	<0.00033	<0.0016	<0.0031	<0.0016	<0.00035	---	<0.0017	<0.0018	<0.00041	<0.00047	<0.00038	<0.00038	<0.0034	<0.0015	<0.0016	<0.00036
Endosulfan II	33213-65-9	mg/kg	<0.0034	<0.003	<0.0031	<0.00063	<0.00066	<0.0033	<0.0062	<0.0032	<0.00069	---	<0.0033	<0.0035	<0.00082	<0.00094	<0.00075	<0.00076	<0.0068	<0.003	<0.0032	<0.00072
Endosulfan sulfate	1031-07-8	mg/kg	<0.0034	<0.003	<0.0031	<0.00063	<0.00066	<0.0033	<0.0062	<0.0032	<0.00069	---	<0.0033	<0.0035	<0.00082	<0.00094	<0.00075	<0.00076	<0.0068	<0.003	<0.0032	<0.00072
Endrin	72-20-8	mg/kg	<0.0034	<0.003	<0.0031	<0.00063	<0.00066	<0.0033	<0.0062	<0.0032	<0.00069	---	<0.0033	<0.0035	<0.00082	<0.00094	<0.00075	<0.00076	<0.0068	<0.003	<0.0032	<0.00072
Endrin aldehyde	7421-93-4	mg/kg	0.019	<0.003	<0.0031	<0.00063	<0.00066	<0.0033	<0.0062	0.02	0.0036 J	---	<0.0033	<0.0035	<0.00082	<0.00094	<0.00075	<0.00076	<0.0068	0.012 U	<0.0032	<0.00072
gamma-BHC	58-89-9	mg/kg	<0.0011	<0.001	<0.001	<0.00021	<0.00022	<0.0011	<0.0021	<0.0011	<0.00023	---	<0.0011	<0.0012	<0.00027	<0.00031	<0.00025	<0.00025	<0.0023	<0.001	<0.0011	<0.00024
gamma-Chlordane	5103-74-2	mg/kg	<0.0011	<0.001	<0.001	<0.00021	<0.00022	<0.0011	<0.0021	<0.0011	<0.00023	---	<0.0011	<0.0012	<0.00027	<0.00031	<0.00025	<0.00025	<0.0023	<0.001	<0.0011	<0.00024
Heptachlor	76-44-8	mg/kg	<0.0017	<0.0015	<0.0016	<0.00031	<0.00033	<0.0016	<0.0031	<0.0016	<0.00035	---	<0.0017	<0.0018	<0.00041	<0.00047	<0.00038	<0.00038	<0.0034	<0.0015	<0.0016	<0.00036
Heptachlor epoxide	1024-57-3	mg/kg	<0.0017	<0.0015	<0.0016	<0.00031	<0.00033	<0.0016	<0.0031	<0.0016	<0.00035	---	<0.0017	<0.0018	<0.00041	<0.00047	<0.00038	<0.00038	<0.0034	<0.0015	<0.0016	<0.00036
Methoxychlor	72-43-5	mg/kg	<0.019	<0.017	<0.018	<0.0036	<0.0038	<0.019	<0.035	<0.018	<0.0039	---	<0.019	<0.02	<0.0046	<0.0054	<0.0043	<0.0043	<0.039	<0.017	<0.018	<0.0041
Toxaphene	8001-35-2	mg/kg	<0.022	<0.019	<0.02	<0.004	<0.0042	<0.021	<0.039	<0.02	<0.0044	---	<0.026	<0.028	<0.0066	<0.0076	<0.006	<0.0061	<0.043	<0.019	<0.02	<0.0046
Aroclor 1016	12674-11-2	mg/kg	<0.0027	<0.0024	<0.0025	<0.0025	<0.0027	<0.0026	<0.0025	<0.0026	<0.0028	---	<0.0026	<0.0028	<0.0033	<0.0038	<0.003	<0.0031	<0.0027	<0.0024	<0.0025	<0.0029
Aroclor 1221	11104-28-2	mg/kg	<0.0027	<0.0024	<0.0025	<0.0025	<0.0027	<0.0026	<0.0025	<0.0026	<0.0028	---	<0.0026	<0.0028	<0.0033	<0.0038	<0.003	<0.0031	<0.0027	<0.0024	<0.0025	<0.0029
Aroclor 1232	11141-16-5	mg/kg	<0.0027	<0.0024	<0.0025	<0.0025	<0.0027	<0.0026	<0.0025	<0.0026	<0.0028	---	<0.0026	<0.0028	<0.0033	<0.0038	<0.003	<0.0031	<0.0027	<0.0024	<0.0025	<0.0029
Aroclor 1242	53469-21-9	mg/kg	<0.0027	<0.0024	<0.0025	<0.0025	<0.0027	<0.0026	<0.0025	<0.0026	<0.0028	---	<0.0026	<0.0028	<0.0033	<0.0038	<0.003	<0.0031	<0.0027	<0.0024	<0.0025	<0.0029
Aroclor 1248	12672-29-6	mg/kg	<0.0027	<0.0024	<0.0025	<0.0025	<0.0027	<0.0026	<0.0025	<0.0026	<0.0028	---	<0.0026	<0.0028	<0.0033	<0.0038	<0.003	<0.0031	<0.0027	<0.0024	<0.0025	<0.0029
Aroclor 1254	11097-69-1	mg/kg	<0.0027	<0.0024	<0.0025	<0.0025	<0.0027	<0.0026	<0.0025	<0.0026	<0.0028	---	<0.0026	<0.0028	<0.0033	<0.0038	<0.003	<0.0031	<0.0027	<0.0024	<0.0025	<0.0029
Aroclor 1260	11096-82-5	mg/kg	0.015 J	0.0093 J	<0.0019	<0.0019	<0.002	<0.002	<0.0019	<0.0019	<0.0021	---	<0.002	<0.0021	<0.0025	<0.0028	<0.0023	<0.0023	0.015 J	<0.0018	<0.0019	<0.0022
Total PCBs	TPCB	mg/kg	0.0231	0.0165	<0.00845	<0.00845	<0.0091	<0.0088	<0.00845	<0.00875	<0.00945	---	<0.0088	<0.00945	<0.01115	<0.0128	<0.01015	<0.01045	0.0231	<0.0081	<0.00845	<0.0098
VOLATILE ORGANIC COMPOUNDS																						
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00088	<0.00088	<0.05	<0.00095	<0.048	<0.00036	<0.00058	<0.00062	<0.00058	<0.00048
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0021	<0.0021	<0.12	<0.0023	<0.12	<0.00088	<0.00058	<0.00062	<0.00058	<0.00048
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00063	<0.00063	<0.035	<0.00068	<0.034	<0.00026	<0.00058	<0.00062	<0.00058	<0.00048
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0016	<0.0016	<0.092	<0.0018	<0.088	<0.00067	<0.00058	<0.00062	<0.00058	<0.00048
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0025	<0.0025	<0.14	<0.0027	<0.14	<0.001	<0.00058	<0.00062	<0.00058	<0.00048
1 1-Dichloroethane	75-34-3	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00063	<0.00063	<0.035	<0.00068	<0.034	<0.00026	<0.00058	<0.00062	<0.00058	<0.00048
1,1-Dichloroethene	75-35-4	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0019	<0.0019	<0.11	<0.002	<0.1	<0.00078	<0.00058	<0.00062	<0.00058	<0.00048
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.00075	<0.00052	<0.00073	<0.00066	<0.00091	<0.00073	<0.00057	<0.0008	<0.00084	---	<0.0011	<0.0011	<0.064	<0.0012	<0.061	<0.00047	<0.00069	<0.00074	<0.0007	<0.00058
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.001	<0.001	8.3	0.035	1.1	<0.00042	<0.00058	<0.00062	<0.00058	<0.00048
1 2-Dibromoethane	106-93-4	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00088	<0.00088	<0.05	<0.00095	<0.048	<0.00036	<0.00058	<0.00062	<0.00058	<0.00048
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.001	<0.001	<0.057	<0.0011	<0.054	<0.00042	<0.00058	<0.00062	<0.00058	<0.00048
1 2-Dichloroethane	107-06-2	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00075	<0.00076	<0.042	<0.00081	<0.041	<0.00031	<0.00058	<0.00062	<0.00058	<0.00048
1 2-Dichloropropane	78-87-5	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00063	<0.00063	<0.035	<0.00068	<0.034	<0.00026	<0.00058	<0.00062	<0.00058	<0.00048
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.001	<0.001	4.9	0.013	<0.054	<0.00042	<0.00058	<0.00062	<0.00058	<0.00048
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0011	<0.0011	<0.064	<0.0012	<0.061	<0.00047	<0.00058	<0.00062	<0.00058	<0.00048
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00088	<0.00088	<0.05	<0.00095	<0.048	<0.00036	<0.00058	<0.00062	<0.00058	<0.00048
2-Butanone	78-93-3	mg/kg	<0.0017	<0.0012	<0.0017	<0.0015	<0.0021	<0.0017	<0.0013	<0.0019	<0.002	---	<0.0028	<0.0028	<0.16	0.012 J	<0.15	<0.0011	<0.0016	<0.0017	<0.0016	<0.0014
2-Hexanone	591-78-6	mg/kg	<0.0012	<0.00087	<0.0012	<0.0011	<0.0015	<0.0012	<0.00095	<0.0013	<0.0014	---	<0.0021	<0.0021	<0.12	<0.0023	<0.12	<0.00088	<0.0012	<0.0012	<0.0012	<0.00097
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.0012	<0.00087	<0.0012	<0.0011	<0.0015	<0.0012	<0.00095	<0.0013	<0.0014	---	<0.0013	<0.0013	<0.071	<0.0014	<0.068	<0.00052	<0.0012	<0.0012	<0.0012	<0.00097
Acetone	67-64-1	mg/kg	0.0027 U	<0.0017	<0.0024	<0.0022	<0.003	<0.0024	0.0019 U	<0.0027	<0.0028	---	<0.0058	<0.0058	<0.33	0.095	<0 31	<0.0024	<0.0023	<0.0025	<0.0023	<0.0019
Benzene	71-43-2	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00075	<0.00076	<0.042	<0.00081	<0.041	<0.00031	<0.00058	<0.00062	<0.00058	<0.00048
Bromodichloromethane	75-27-4	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00075	<0.00076	<0.042	<0.00081	<0.041	<0.00031	<0.00058	<0.00062	<0.00058	<0.00048
Bromoform	75-25-2	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00088	<0.00088	<0.05	<0.00095	<0.048	<0.00036	<0.00058	<0.00062	<0.00058	<0.00048
Bromomethane	74-83-9	mg/kg	<0.0012	<0.00087	<0.0012	<0.0011	<0.0015	<0.0012	<0.00095	<0.0013	<0.0014	---	<0.0013	<0.0013	<0.071	<0.0014	<0.068	<0.00052	<0.0012	<0.0012	<0.0012	<0.00097
Carbon disulfide	75-15-0	mg/kg	<0.0012	<0.00087	<0.0012	<0.0011	<0.0015	<0.0012	<0.00095	<0.0013	<0.0014	---	<0.002	<0.002	<0.11	<0.0022	<0.11	<0.00083	<0.0012	<0.0012	<0.0012	<0.00097
Carbon tetrachloride	56-23-5	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0015	<0.0015	<0.085	<0.0016	<0.081	<0.00062	<0.00058	<0.00062	<0.00058	<0.00048

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			ENSS01	ENSS02	ENSS03	ENSS03	ENSS04	ENSS05	ENSS06	ENSS07	ENSS08	ENSS09	ESSB09	ESSB09	ESSB09	ESSB09	ESSB09	ESSB09	ESSS06	ESSS07	ESSS08	NPSB01
Sample Date			0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	4-5 ft	12-13 ft	12.5-13.5 ft	14-15 ft	33-34 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft
Sample Date			10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	12/14/2011	1/10/2012	1/10/2012	1/10/2012	1/10/2012	1/10/2012	1/16/2012	10/12/2010	10/12/2010	10/12/2010	11/11/2010
Analyte	CAS No.	Units																				
Chlorobenzene	108-90-7	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00063	<0.00063	<0.035	<0.00068	<0.034	<0.00026	<0.00058	<0.00062	<0.00058	<0.00048
Chloroethane	75-00-3	mg/kg	<0.0012	<0.00087	<0.0012	<0.0011	<0.0015	<0.0012	<0.00095	<0.0013	<0.0014	---	<0.0013	<0.0013	<0.071	<0.0014	<0.068	<0.00052	<0.0012	<0.0012	<0.0012	<0.00097
Chloroform	67-66-3	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0023	<0.0023	<0.13	<0.0024	<0.12	<0.00093	<0.00058	<0.00062	<0.00058	<0.00048
Chloromethane	74-87-3	mg/kg	<0.0012	<0.00087	<0.0012	<0.0011	<0.0015	<0.0012	<0.00095	<0.0013	<0.0014	---	<0.0011	<0.0011	<0.064	<0.0012	<0.061	<0.00047	<0.0012	<0.0012	<0.0012	<0.00097
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0019	<0.0019	<0.11	<0.002	<0.1	<0.00078	<0.00058	<0.00062	<0.00058	<0.00048
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00063	<0.00063	<0.035	<0.00068	<0.034	<0.00026	<0.00058	<0.00062	<0.00058	<0.00048
Cyclohexane	110-82-7	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0015	<0.0015	<0.085	0.0035 J	11	<0.00062	<0.00058	<0.00062	<0.00058	<0.00048
Dibromochloromethane	124-48-1	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00063	<0.00063	<0.035	<0.00068	<0.034	<0.00026	<0.00058	<0.00062	<0.00058	<0.00048
Dichlorodifluoromethane	75-71-8	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0023	<0.0023	<0.13	<0.0024	<0.12	<0.00093	<0.00058	<0.00062	<0.00058	<0.00048
Ethylbenzene	100-41-4	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0011	<0.0011	0.87	0.22	1.8	<0.00047	<0.00058	<0.00062	<0.00058	<0.00048
Isopropylbenzene	98-82-8	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0013	<0.0013	1.1	0.064	2.3	<0.00052	<0.00058	<0.00062	<0.00058	<0.00048
Methyl acetate	79-20-9	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0013	<0.0013	<0.071	<0.0014	<0.068	<0.00052	<0.00058	<0.00062	<0.00058	<0.00048
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0024	<0.0024	<0.13	<0.0026	<0.13	<0.00099	<0.00058	<0.00062	<0.00058	<0.00048
Methylcyclohexane	108-87-2	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	0.0022 J	<0.0019	<0.11	0.0059 J	67	<0.00078	<0.00058	<0.00062	<0.00058	<0.00048
Methylene chloride	75-09-2	mg/kg	<0.0012	0.001 U	0.0037 U	0.0012 U	<0.0015	0.0024 U	0.0016 U	0.0019 U	0.0015 U	---	<0.0031	<0.0031	<0.18	<0.0034	<0.17	0.0031 J	<0.0012	0.0021 U	0.003 U	0.0016 U
Naphthalene	91-20-3	mg/kg	0.0026 U	0.0018 U	0.0025 U	0.0022 U	<0.00076	0.0025 U	<0.00048	<0.00067	0.0029 U	---	0.006 J	0.0043 J	1.2	0.032	1.6	<0.00042	<0.00058	0.00062 U	<0.00058	<0.00048
n-Butylbenzene	104-51-8	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00075	<0.00076	1.4	<0.00081	0.55	<0.00031	<0.00058	<0.00062	<0.00058	<0.00048
n-Propylbenzene	103-65-1	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0011	<0.0011	1.4	0.054	2.4	<0.00047	<0.00058	<0.00062	<0.00058	<0.00048
sec-Butylbenzene	135-98-8	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00075	<0.00076	1.3	0.0039 J	1.1	<0.00031	<0.00058	<0.00062	<0.00058	<0.00048
Styrene	100-42-5	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00075	<0.00076	<0.042	<0.00081	<0.041	<0.00031	<0.00058	<0.00062	<0.00058	<0.00048
tert-Butylbenzene	98-06-6	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00075	<0.00076	0.41	<0.00081	0.67	<0.00031	<0.00058	<0.00062	<0.00058	<0.00048
Tetrachloroethene	127-18-4	mg/kg	<0.00075	<0.00052	<0.00073	<0.00066	<0.00091	<0.00073	<0.00057	<0.0008	<0.00084	---	<0.0013	<0.0013	<0.071	<0.0014	<0.068	<0.00052	<0.00069	<0.00074	<0.0007	<0.00058
Toluene	108-88-3	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00088	<0.00088	<0.05	<0.00095	<0.048	<0.00036	<0.00058	<0.00062	<0.00058	<0.00048
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0011	<0.0011	<0.064	<0.0012	<0.061	<0.00047	<0.00058	<0.00062	<0.00058	<0.00048
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.00063	<0.00063	<0.035	<0.00068	<0.034	<0.00026	<0.00058	<0.00062	<0.00058	<0.00048
Trichloroethene	79-01-6	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.002	<0.002	<0.11	<0.0022	<0.11	<0.00083	<0.00058	<0.00062	<0.00058	<0.00048
Trichlorofluoromethane	75-69-4	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.001	<0.001	<0.057	<0.0011	<0.054	<0.00042	<0.00058	<0.00062	<0.00058	<0.00048
Vinyl chloride	75-01-4	mg/kg	<0.00062	<0.00043	<0.00061	<0.00055	<0.00076	<0.00061	<0.00048	<0.00067	<0.0007	---	<0.0013	<0.0013	<0.071	<0.0014	<0.068	<0.00052	<0.00058	<0.00062	<0.00058	<0.00048
Xylenes, Total	1330-20-7	mg/kg	<0.0019	<0.0013	<0.0018	<0.0016	<0.0023	<0.0018	<0.0014	<0.002	<0.0021	---	<0.0033	<0.0033	<0.18	0.0084 J	<0.18	<0.0013	<0.0017	<0.0018	<0.0017	<0.0015
SEMIVOLATILE ORGANIC COMPOUNDS																						
1,1´-Biphenyl	92-52-4	mg/kg	<0.0033	<0.0029	<0.003	<0.003	0.004 J	<0.0032	<0.03	<0.0031	<0.0033	---	<0.0018	<0.0019	0.0095	0.0074 J	0.018	<0.002	<0.033	<0.0029	<0.0031	<0.0035
1-Methylnaphthalene	90-12-0	mg/kg	<0.0026	<0.0023	<0.0024	<0.0024	0.0042 J	<0.0025	<0.024	<0.0025	<0.0027	---	<0.0018	<0.0019	0.043	0.017	1.2	<0.002	<0.026	<0.0023	0.003 J	<0.0028
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0032	<0.0028 JL	<0.0029	<0.0029	<0.0031	<0.0031	<0.029	<0.003	<0.0032	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.032 JL	<0.0028 JL	<0.0029	<0.0034
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.0038	<0.0033 JL	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.038 JL	<0.0033 JL	<0.0035	<0.004
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0025	<0.0022 JL	<0.0023	<0.0023	<0.0024	<0.0024	<0.023	<0.0024	<0.0025	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.025 JL	<0.0022 JL	<0.0023	<0.0027
2 4-Dimethylphenol	105-67-9	mg/kg	<0.0038	<0.0033 JL	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0018	<0.0019	0.0083 J	<0.0025	0.055	<0.002	<0.038 JL	<0.0033 JL	<0.0035 JL	<0.004 JL
2 4-Dinitrophenol	51-28-5	mg/kg	<0.0038	<0.0033 JL	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0036	<0.0039	<0.0045	<0.0052	<0.0041	<0.0042 JL	<0.038 JL	<0.0033 JL	<0.0035 JL	<0.004
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.0038	<0.0033	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.038	<0.0033	<0.0035	<0.004
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.0037	<0.0032	<0.0034	<0.0033	<0.0035	<0.0035	<0.033	<0.0034	<0.0037	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.036	<0.0032	<0.0034	<0.0039
2-Chloronaphthalene	91-58-7	mg/kg	<0.0047	<0.0041	<0.0043	<0.0043	<0.0045	<0.0045	<0.042	<0.0044	<0.0047	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.047	<0.0041	<0.0043	<0.0049
2-Chlorophenol	95-57-8	mg/kg	<0.0037	<0.0032 JL	<0.0034	<0.0033	<0.0035	<0.0035	<0.033	<0.0034	<0.0037	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.036 JL	<0.0032 JL	<0.0034	<0.0039
2-Methylnaphthalene	91-57-6	mg/kg	<0.0031	0.0037 J	0.0041 J	0.0039 J	0.0086	0.0047 J	<0.028	<0.0029	<0.0031	---	<0.0018	<0.0019	0.024	0.011	1.5	<0.002	<0.031	<0.0027	0.0096	<0.0033
2-Methylphenol	95-48-7	mg/kg	<0.0033	<0.0029 JL	<0.003	<0.003	<0.0032	<0.0032	<0.03	<0.0031	<0.0033	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.033 JL	<0.0029 JL	<0.0031	<0.0035
2-Nitroaniline	88-74-4	mg/kg	<0.0038	<0.0033	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.038	<0.0033	<0.0035	<0.004
2-Nitrophenol	88-75-5	mg/kg	<0.0053	<0.0046 JL	<0.0048	<0.0048	<0.0051	<0.0051	<0.048	<0.0049	<0.0053	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.052 JL	<0.0046 JL	<0.0048	<0.0055
3&4-Methylphenol	106-44-5	mg/kg	<0.0032	<0.0028 JL	<0.0029	<0.0029	<0.0031	<0.0031	<0.029	<0.003	<0.0032	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.032 JL	<0.0028 JL	<0.0029	<0.0034
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0035	<0.0031	<0.0032	<0.0032	<0.0034	<0.0034	<0.032	<0.0033	<0.0036	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002 JL	<0.035	<0.0031	<0.0033	<0.0037
3-Nitroaniline	99-09-2	mg/kg	<0.003	<0.0026	<0.0027	<0.0027	<0.0029	<0.0029	<0.027	<0.0028	<0.003	---	<0.0018 JL	<0.0019 JL	<0.0022 JL	<0.0025 JL	<0.002 JL	<0.002 JL	<0.03	<0.0026	<0.0027	<0.0031
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.0038	<0.0033 JL	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002 JL	<0.038 JL	<0.0033 JL	<0.0035	<0.004
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.0038	<0.0033	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.038	<0.0033	<0.0035	<0.004
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.0038	<0.0033 JL	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.038 JL	<0.0033 JL	<0.0035	<0.004
4-Chloroaniline	106-47-8	mg/kg	<0.0025	<0.0022	<0.0023	<0.0023	<0.0024	<0.0024	<0.023	<0.0024	<0.0025	---	<0.0018 JL	<0.0019 JL	<0.0022 JL	<0.0025 JL	<0.002 JL	<0.002 JL	<0.025	<0.0022	<0.0023	<0.0027
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0025	<0.0022	<0.0023	<0.0023	<0.0024	<0.0024	<0.023	<0.0024	<0.0025	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.025	<0.0022	<0.0023	<0.0027
4-Nitroaniline	100-01-6	mg/kg	<0.0038	<0.0033	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0018 JL	<0.0019 JL	<0.0022 JL	<0.0025 JL	<0.002 JL	<0.002	<0.038	<0.0033	<0.0035	<0.004
4-Nitrophenol	100-02-7	mg/kg	<0.0043	<0.0038 JL	<0.004	<0.004	<0.0042	<0.0042	<0.039	<0.0041	<0.0044	---	<0.0036	<0.0039	<0.0045	<0.0052	<0.0041	<0.0042	<0.043 JL	<0.0038 JL	<0.004	<0.0046
Acenaphthene	83-32-9	mg/kg	<0.0025	0.0022 J	0.0026 J	0.0042 J	<0.0024	<0.0024	<0.023	<0.0024	<0.0025	---	<0.0018	<0.0019	0.0032 J	0.006 J	0.038	<0.002	<0.025	0.0025 J	0.0034 J	<0.0027
Acenaphthylene	208-96-8	mg/kg	<0.0025	<0.0022	<0.0023	<0.0023	<0.0024	0.004 J	<0.023	<0.0024	<0.0025	---	<0.0018	<0.0019	<0.0022	0.0027 J	0.044	<0.002	<0.025	<0.0022	<0.0023	<0.0027
Acetophenone	98-86-2	mg/kg	<0.0027	<0.0024	0.0039 J	0.0028 J	<0.0026	0.0045 J	<0.025	<0.0026	<0.0028	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.027	0.0099	0.012	<0.0029
Anthracene	120-12-7	mg/kg	0.0032 J	0.007	0.0059 J	0.0087	0.0046 J	0.0085	<0.023	<0.0024	<0.0025	---	0.0031 J	<0.0019	<0.0022	0.0058 J	0.0063 J	<0.002	<0.025	0.0074	0.013	<0.0027
Benz(a)anthracene	56-55-3	mg/kg	0.035	0.025	0.046	0.049	0.023	0.048	<0.029	<0.003	0.022	---	0.017	<0.0019	<0.0022	<0.0025	0.0037 J	<0.002	0.19	0.028	0.034	0.0036 J
Benzaldehyde	100-52-7	mg/kg	<0.0053 JL	<0.0046 JL	<0.0048 JL	<0.0048 JL	<0.0051 JL	<0.0051 JL	<0.048 JL	<0.0049 JL	<0.0053 JL	---	0.0042 UJL	0.0049 UJL	<0.0022 JL	<0.0025 JL	<0.002 JL	<0.002 JL	<0.052 JL	<0.0046 JL	<0.0048 JL	<0.0055 JL
Benzo(a)pyrene	50-32-8	mg/kg	0.038	0.03	0.052	0.058	0.027	0.057	0.031 J	<0.0025	0.027	---	0.018	<0.0019	<0.0022	<0.0025	0.0029 J	<0.002	<0.026	0.034	0.028	<0.0028
Benzo(b)fluoranthene	205-99-2	mg/kg	0.069	0.039	0.073	0.09	0.033	0.085	0.054 J	<0.0035	0.029	---	0.023	<0.0019	<0.0022	<0.0025	0.0021 J	<0.002	0.12	0.028	0.03	<0.004
Benzo(g h i)perylene	191-24-2	mg/kg	0.041	0.027	0.043	0.049	0.023	0.048	0.046 J	<0.0031	0.021	---	0.018	<0.002	<0.0023	<0.0027	0.0024 J	<0.0022	<0.033	0.018	0.026	<0.0035
Benzo(k)fluoranthene	207-08-9	mg/kg	0.03	0.034	0.029	0.033	0.012	0.026	<0.034	<0.0035	0.022	---	0.013	<0.0019	<0.0022	<0.0025	<0.002	<0.002	0.14	0.022	0.027	<0.004
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.0027	<0.0024	<0.0025	<0.0025	<0.0026	<0.0026	<0.025	<0.0026	<0.0028	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.027	<0.0024	<0.0025	<0.0029
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0032	<0.0028	<0.0029	<0.0029	<0.0031	<0.0031	<0.029	<0.003	<0.0032	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.032	<0.0028	<0.0029	<0.0034
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0031	<0.0027	<0.0028	<0.0028	<0.003	<0.003	<0.028	<0.0029	<0.0031	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.031	<0.0027	<0.0028	<0.0033
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	0.11 U	0.072 U	0.12 U	0.1 U	0.029 U	0.087 U	0.32 U	<0.0071	0.16 U	---	0.0043 U	<0.0019	0.0078 U	0.029 U	0.2	<0.002	<0.075	0.061 U	0.012 U	<0.008
Butyl benzyl phthalate	85-68-7	mg/kg	0.034	0.013	0.049 J	0.018 J	0.0045 J	0.026	<0.026	<0.0027	0.018	---	<0.0031	<0.0033	<0.0038	<0.0044	<0.0035	<0.0036	<0.028	0.027	<0.0026	<0.003
Caprolactam	105-60-2	mg/kg	<0.0027	<0.0024	<0.0025	0.013	<0.0026	<0.0026	0.22	<0.0026	<0.0028	---	<0.0022	<0.0023	<0.0027	<0.0032	<0.0025	<0.0025	<0.027	<0.0024	<0.0025	<0.0029
Carbazole	86-74-8	mg/kg	<0.0025	0.0035 J	0.0064 J	0.009	0.0038 J	0.0067 J	<0.023	<0.0024	<0.0025	---	<0.0018 JL	<0.0019 JL	<0.0022 JL	<0.0025 JL	<0.002 JL	<0.002	<0.025	<0.0022	0.0078	<0.0027
Chrysene	218-01-9	mg/kg	0.064	0.048	0.054	0.058	0.029	0.058	0.035 J	<0.0031	0.03	---	0.019	<0.0019	<0.0022	0.0051 J	0.0071 J	<0.002	0.087	0.045	0.051	0.0038 J
Dibenz(a h)anthracene	53-70-3	mg/kg	0.013	<0.0022	0.015	0.017	0.0076	0.014	<0.023	<0.0024	<0.0025	---	<0.0022	<0.0023	<0.0027	<0.0032	<0.0025	<0.0025	<0.025	<0.0022	<0.0023	<0.0027
Dibenzofuran	132-64-9	mg/kg	<0.0025	<0.0022	<0.0023	<0.0023	<0.0024	<0.0024	<0.023	<0.0024	<0.0025	---	<0.0018	<0.0019	0.0065 J	0.0083 J	0.057	<0.002	<0.025	<0.0022	<0.0023	<0.0027
Diethyl phthalate	84-66-2	mg/kg	<0.0038	<0.0033	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.038	<0.0033	<0.0035	<0.004
Dimethyl phthalate	131-11-3	mg/kg	<0.0027	<0.0024	0.0057 J	0.0085	<0.0026	<0.0026	<0.025	<0.0026	<0.0028	---	<0.0022	<0.0023	<0.0027	<0.0032	<0.0025	<0.0025	<0.027	<0.0024	<0.0025	<0.0029
Di-n-butyl phthalate	84-74-2	mg/kg	0.011	0.0046 J	0.0077	0.0083	0.0035 J	0.011	0.041 J	<0.0027	0.0064 J	---	<0.0022	0.0047 U	<0.0027	<0.0032	0.0059 U	<0.0025	<0.028	0.025 U	<0.0026	<0.003
Di-n-octyl phthalate	117-84-0	mg/kg	<0.0033	0.044	<0.003 J	0.062 J	<0.0032	<0.0032	<0.03	<0.0031	0.0073 J	---	<0.0022	<0.0023	<0.0027	<0.0032	<0.0025	<0.0025	<0.033	<0.0029	<0.0031	<0.0035
Fluoranthene	206-44-0	mg/kg	0.053	0.055	0.09	0.11	0.049	0.09	0.052 J	<0.0024	0.05	---	0.029	<0.0019	<0.0022	0.0061 J	0.0077 J	<0.002	0.3	0.075	0.086	0.0061 J
Fluorene	86-73-7	mg/kg	<0.0025	<0.0022	<0.0023	0.0038 J	<0.0024	<0.0024	<0.023	<0.0024	<0.0025	---	<0.0018	<0.0019	0.0059 J	0.0048 J	0.04	<0.002	<0.025	<0.0022	0.0032 J	<0.0027

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			ENSS01	ENSS02	ENSS03	ENSS03	ENSS04	ENSS05	ENSS06	ENSS07	ENSS08	ENSS09	ESSB09	ESSB09	ESSB09	ESSB09	ESSB09	ESSB09	ESSS06	ESSS07	ESSS08	NPSB01
Sample Date			0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	4-5 ft	12-13 ft	12.5-13.5 ft	14-15 ft	33-34 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft
Sample Date			10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	12/14/2011	1/10/2012	1/10/2012	1/10/2012	1/10/2012	1/10/2012	1/16/2012	10/12/2010	10/12/2010	10/12/2010	11/11/2010
Analyte	CAS No.	Units																				
Hexachlorobenzene	118-74-1	mg/kg	<0.003	<0.0026	<0.0027	<0.0027	<0.0029	<0.0029	<0.027	<0.0028	<0.003	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.03	<0.0026	<0.0027	<0.0031
Hexachlorobutadiene	87-68-3	mg/kg	<0.005	<0.0044	<0.0046	<0.0046	<0.0049	<0.0048	<0.046	<0.0047	<0.0051	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.05	<0.0044	<0.0046	<0.0053
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0041	<0.0036	<0.0038	<0.0038	<0.004	<0.004	<0.037	<0.0039	<0.0042	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.041	<0.0036	<0.0038	<0.0043
Hexachloroethane	67-72-1	mg/kg	<0.0045	<0.0039	<0.0041	<0.0041	<0.0043	<0.0043	<0.04	<0.0042	<0.0045	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.044	<0.0039	<0.0041	<0.0047
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	0.036	0.027	0.048	0.055	0.025	0.052	0.043 J	<0.0038	0.019	---	0.017	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.04	0.02	0.027	<0.0042
Isophorone	78-59-1	mg/kg	<0.0034	<0.003	<0.0031	<0.0031	<0.0033	<0.0033	<0.031	<0.0032	<0.0035	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.034	<0.003	<0.0032	<0.0036
Naphthalene	91-20-3	mg/kg	<0.0038	<0.0033	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0018	<0.0019	0.017	0.013	0.59	<0.002	<0.038	<0.0033	0.0048 J	<0.004
Nitrobenzene	98-95-3	mg/kg	<0.0038	<0.0033	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0018	<0.0019	<0.0022	<0.0025	<0.002	<0.002	<0.038	<0.0033	<0.0035	<0.004
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0046	<0.004	<0.0042	<0.0042	<0.0044	<0.0044	<0.041	<0.0043	<0.0046	---	<0.0022	<0.0023	<0.0027	<0.0032	<0.0025	<0.0025	<0.046	<0.004	<0.0042	<0.0048
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0025	<0.0022	<0.0023	<0.0023	<0.0024	<0.0024	<0.023	<0.0024	<0.0025	---	<0.0022	<0.0023	<0.0027	<0.0032	<0.0025	<0.0025	<0.025	<0.0022	<0.0023	<0.0027
Pentachlorophenol	87-86-5	mg/kg	<0.0032	<0.0028 JL	<0.0029	<0.0029	<0.0031	<0.0031	<0.029	<0.003	<0.0032	---	<0.002	<0.0021	<0.0025	<0.0028	<0.0023	<0.0023	<0.032 JL	<0.0028 JL	<0.0029	<0.0034 JL
Phenanthrene	85-01-8	mg/kg	0.014	0.021	0.03	0.042	0.02	0.029	<0.031	<0.0032	0.015	---	0.012	<0.0029	0.023	0.032	0.09	<0.0032	0.094	0.029	0.042	0.0062 J
Phenol	108-95-2	mg/kg	<0.0038	<0.0033 JL	<0.0035	<0.0035	<0.0036	<0.0036	<0.034	<0.0035	<0.0038	---	<0.0022	<0.0023	<0.0027	<0.0032	<0.0025	<0.0025	<0.038 JL	<0.0033 JL	<0.0035	<0.004
Pyrene	129-00-0	mg/kg	0.05	0.05	0.071	0.079	0.04	0.076	0.046 J	<0.0024	0.04	---	0.024	<0.0019	0.0026 J	0.008 J	0.011	<0.002	0.24	0.054	0.063	0.0058 J

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			NPSB01	NPSB01	NPSB02	NPSB02	NPSB02	NPSB03	NPSB03	NPSB03	NPSB04	NPSB04	NPSB04	NPSB04	NPSB05	NPSB05	NPSB05	NPSB06	NPSB06	NPSB06	NPSB06	NPSB07
Sample Date			2-3 ft	10-11 ft	1-2 ft	4-5 ft	5-6 ft	1-2 ft	4-5 ft	11-12 ft	1-2 ft	1-2 ft	2-3 ft	9-10 ft	1-2 ft	4-5 ft	9-10 ft	1-2 ft	2-3 ft	2-3 ft	7-8 ft	1-2 ft
Sample Date			11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	11/11/2010	11/11/2010	11/11/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	11/9/2010
Analyte	CAS No.	Units																				
METALS																						
Aluminum	7429-90-5	mg/kg	11100	13200	10800	6710	8980	12100	16000	10300	11400	10100	8290	10700	10200	12400	12900	12100	8800	8830	11200	6990
Antimony	7440-36-0	mg/kg	<0.26	<0.3	<0.25	<0.29	<0.3	0.614	<0.28	<0.31	<0.28	<0.25	<0 25	<0.34	<0.26	<0.27	<0 32	<0.27	<0.28	<0.28	<0.31	0.825
Arsenic	7440-38-2	mg/kg	3.25	4.56	12.6	2.38	2.78	27.2	3.59	4.25	5.06	7.15	3.5	3.56	7.47	6.85	4.64	5.67	2.63	3.2	4.57	32.3
Barium	7440-39-3	mg/kg	1170	233	160	412	484	337	463	156	270	240	142	350	244	231	296	281	106 J	203 J	203	311
Beryllium	7440-41-7	mg/kg	0.594	0.684	0.693	0.403 J	0.536 J	0.639	0.805	0.593 J	0.62	0.594	0.481 J	0.648 J	0.573	0.758	0.792	0.57	0.483 J	0.552 J	0.676	0.525 J
Cadmium	7440-43-9	mg/kg	0.198 J	0.201 J	0.239 J	0.413 J	0.385 J	32.6	0.338 J	0.202 J	0.428 J	1.37	0.135 J	0.207 J	26	1.98	0.262 J	9.33	0.136 J	1.47	0.162 J	67.2
Chromium	7440-47-3	mg/kg	6.56	7.2	7.03	6.19	5.73	8.64	8.85	5.98	6.27	6.16	4.7	5.87	8.31	7.36	8.49	6.89	4.9	5.63	6.48	6.42
Cobalt	7440-48-4	mg/kg	4.47	4.67	3.58	3.07	3.54	5.29	5.08	4.21	4.37	4.42	3.23	3.52	4.41	4.7	5.27	4.77	3.22	3.93	4.79	9.28
Copper	7440-50-8	mg/kg	7.02	5.71	5.61	7.9	7.21	57.7	7.66	5.46	6.31	7.41	4.02	6.46	84.2	10.4	7.37	15	4.28	6.35	4.91	475
Lead	7439-92-1	mg/kg	17.4	10.1	10	45.2	21.2	375	11.5	9.98	9.07 J	18.9 J	6.18	10	168	29	12.9	52.3	6 J	15.8 J	8.14	858
Manganese	7439-96-5	mg/kg	312	282	245	153	157	584	332	268	307	275	213	214	239	323	273	323	192	182	317	377
Nickel	7440-02-0	mg/kg	7.13	7.46	6.66	4.69	5.36	10.6	9.04	6.91	6.59	6.28	4.75	5.89	7.1	8.02	9.02	6.65	4.69	5.95	6.66	7.26
Selenium	7782-49-2	mg/kg	1.46	0.941	0.995	0.735	0.947	4.27	1.28	0.91	1.36	1.47	1.77	0.868	3.15	2.05	1.15	2.32	0.919 J	3.39 J	0.784	5.06
Silver	7440-22-4	mg/kg	0.0786 J	<0.048	<0.041	0.165 J	0.0957 J	3.82	0.0782 J	<0.049	0.053 J	0.197 J	<0.04	<0.054	2.47	0.321 J	<0.051	0.556	<0.045	0.0465 J	<0.049	10.2
Thallium	7440-28-0	mg/kg	0.101 J	0.145 J	0.234 J	<0.08	0.0978 J	0.153 J	0.173 J	0.122 J	0.13 J	0.124 J	0.0918 J	0.116 J	0.139 J	0.16 J	0.206 J	0.127 J	0.098 J	0.164 J	0.182 J	<0.16
Vanadium	7440-62-2	mg/kg	10.3	21.3	16.6	8.68	10.3	25.4	20.6	16.1	19.3	16	14.1	14.5	14.2	20	19.1	22.6	11.6	13.1	18.8	20.6
Zinc	7440-66-6	mg/kg	34.1	23.9	39	178	63.2	1500	30.8	21.3	31.2 J	64.5 J	17.3	23.4	2520	122	36	485	21.5 J	520 J	23.1	13700
Mercury	7439-97-6	mg/kg	0.0198	0.000531 J	0.0352	0.143	0.019	1.66	0.0492	0.00989	0.152	0.149	0.00235 J	0.0953	7.85	0.00808	0.00848	0.593	0.0391 J	0.0082 J	0.00155 J	8.3
Cyanide	57-12-5	mg/kg	<0.7	<0.76	<0.67	6.35	1.36 J	<0.72	<0.73	<0.78	<0.69	<0.69	<0.65	<0.79	<0.68	0.983 J	<0 84	<0.72	<0.68	<0.72	<0.77	<0.73
PESTICIDES and PCBs																						
4,4´-DDD	72-54-8	mg/kg	<0.00059	<0.00064	<0.0028	<0.0032	<0.00069	<0.00061	<0.00062	<0.00066	<0.00058	<0.00058	<0.00057	<0.0007	<0.0029	<0.00059	<0.0007	<0.0031	<0.00061	<0.00061	<0.00065	<0.0031
4,4´-DDE	72-55-9	mg/kg	<0.00059	<0.00064	<0.0028	0.12	<0.00069	<0.00061	<0.00062	<0.00066	<0.00058	<0.00058	<0.00057	<0.0007	<0.0029	<0.00059	<0.0007	<0.0031	<0.00061	<0.00061	<0.00065	<0.0031
4,4´-DDT	50-29-3	mg/kg	<0.00059	<0.00064	<0.0028	<0.0032	<0.00069	<0.00061	<0.00062	<0.00066	<0.00058	<0.00058	<0.00057	<0.0007	<0.0029	<0.00059	<0.0007	<0.0031	<0.00061	<0.00061	<0.00065	<0.0031
Aldrin	309-00-2	mg/kg	<0.00035	<0.00038	<0.0017	<0.0019	<0.00041	<0.00037	<0.00037	<0.00039	<0.00035	<0.00035	<0.00034	<0.00042	<0.0017	<0.00035	<0.00042	<0.0019	<0.00037	<0.00037	<0.00039	<0.0018
alpha-BHC	319-84-6	mg/kg	<0.00035	<0.00038	<0.0017	<0.0019	<0.00041	<0.00037	<0.00037	<0.00039	<0.00035	<0.00035	<0.00034	<0.00042	<0.0017	<0.00035	<0.00042	<0.0019	<0.00037	<0.00037	<0.00039	<0.0018
alpha-Chlordane	5103-71-9	mg/kg	<0.00024	<0.00026	<0.0011	0.025 J	<0.00028	<0.00024	<0.00025	<0.00026	<0.00023	<0.00023	<0.00023	<0.00028	<0.0012	<0.00023	<0.00028	<0.0012	<0.00024	<0.00025	<0.00026	<0.0012
beta-BHC	319-85-7	mg/kg	<0.00035	<0.00038	<0.0017	<0.0019	<0.00041	<0.00037	<0.00037	<0.00039	<0.00035	<0.00035	<0.00034	<0.00042	0.012 J	<0.00035	<0.00042	<0.0019	<0.00037	<0.00037	<0.00039	<0.0018
delta-BHC	319-86-8	mg/kg	<0.00024	<0.00026	<0.0011	<0.0013	<0.00028	<0.00024	<0.00025	<0.00026	<0.00023	<0.00023	<0.00023	<0.00028	<0.0012	<0.00023	<0.00028	<0.0012	<0.00024	<0.00025	<0.00026	<0.0012
Dieldrin	60-57-1	mg/kg	<0.00059	<0.00064	<0.0028	0.024	<0.00069	<0.00061	<0.00062	<0.00066	<0.00058	<0.00058	<0.00057	<0.0007	<0.0029	<0.00059	<0.0007	<0.0031	<0.00061	<0.00061	<0.00065	<0.0031
Endosulfan I	959-98-8	mg/kg	<0.00035	<0.00038	<0.0017	<0.0019	<0.00041	<0.00037	<0.00037	<0.00039	<0.00035	<0.00035	<0.00034	<0.00042	<0.0017	<0.00035	<0.00042	<0.0019	<0.00037	<0.00037	<0.00039	<0.0018
Endosulfan II	33213-65-9	mg/kg	<0.00071	<0.00077	<0.0034	<0.0038	<0.00083	<0.00073	<0.00074	<0.00079	<0.00069	<0.0007	<0.00069	<0.00085	<0.0035	<0.0007	<0.00084	<0.0037	<0.00073	<0.00074	<0.00078	<0.0037
Endosulfan sulfate	1031-07-8	mg/kg	<0.00071	<0.00077	<0.0034	<0.0038	<0.00083	<0.00073	<0.00074	<0.00079	<0.00069	<0.0007	<0.00069	<0.00085	<0.0035	<0.0007	<0.00084	<0.0037	<0.00073	<0.00074	<0.00078	<0.0037
Endrin	72-20-8	mg/kg	<0.00071	<0.00077	<0.0034	<0.0038	<0.00083	<0.00073	<0.00074	<0.00079	<0.00069	<0.0007	<0.00069	<0.00085	<0.0035	<0.0007	<0.00084	<0.0037	<0.00073	<0.00074	<0.00078	<0.0037
Endrin aldehyde	7421-93-4	mg/kg	<0.00071	<0.00077	<0.0034	<0.0038	<0.00083	<0.00073	<0.00074	<0.00079	<0.00069	<0.0007	<0.00069	<0.00085	<0.0035	<0.0007	<0.00084	<0.0037	<0.00073	<0.00074	<0.00078	<0.0037
gamma-BHC	58-89-9	mg/kg	<0.00024	<0.00026	<0.0011	<0.0013	<0.00028	<0.00024	<0.00025	<0.00026	<0.00023	<0.00023	<0.00023	<0.00028	<0.0012	<0.00023	<0.00028	<0.0012	<0.00024	<0.00025	<0.00026	<0.0012
gamma-Chlordane	5103-74-2	mg/kg	<0.00024	<0.00026	<0.0011	0.044 J	<0.00028	<0.00024	<0.00025	<0.00026	<0.00023	<0.00023	<0.00023	<0.00028	<0.0012	<0.00023	<0.00028	<0.0012	<0.00024	<0.00025	<0.00026	<0.0012
Heptachlor	76-44-8	mg/kg	<0.00035	<0.00038	<0.0017	<0.0019	<0.00041	<0.00037	<0.00037	<0.00039	<0.00035	<0.00035	<0.00034	<0.00042	<0.0017	<0.00035	<0.00042	<0.0019	<0.00037	<0.00037	<0.00039	<0.0018
Heptachlor epoxide	1024-57-3	mg/kg	<0.00035	<0.00038	<0.0017	0.021	<0.00041	<0.00037	<0.00037	<0.00039	<0.00035	<0.00035	<0.00034	<0.00042	<0.0017	<0.00035	<0.00042	<0.0019	<0.00037	<0.00037	<0.00039	<0.0018
Methoxychlor	72-43-5	mg/kg	<0.004	<0.0043	<0.019	<0.022	<0.0047	<0.0041	<0.0042	<0.0045	<0.0039	<0.0039	<0.0039	<0.0048	<0.02	<0.004	<0.0048	<0.021	<0.0041	<0.0042	<0.0044	<0.021
Toxaphene	8001-35-2	mg/kg	<0.0045	<0.0048	<0.021	<0.024	<0.0052	<0.0046	<0.0047	<0.005	<0.0044	<0.0044	<0.0044	<0.0054	<0.022	<0.0045	<0.0053	<0.024	<0.0046	<0.0047	<0.0049	<0.023
Aroclor 1016	12674-11-2	mg/kg	<0.0028	<0.0031	<0.0027	<0.0031	<0.0033	<0.0029	<0.003	<0.0032	<0.0028	<0.0028	<0.0028	<0.0034	<0.0028	<0.0028	<0.0034	<0.003	<0.0029	<0.0029	<0.0031	<0.003
Aroclor 1221	11104-28-2	mg/kg	<0.0028	<0.0031	<0.0027	<0.0031	<0.0033	<0.0029	<0.003	<0.0032	<0.0028	<0.0028	<0.0028	<0.0034	<0.0028	<0.0028	<0.0034	<0.003	<0.0029	<0.0029	<0.0031	<0.003
Aroclor 1232	11141-16-5	mg/kg	<0.0028	<0.0031	<0.0027	<0.0031	<0.0033	<0.0029	<0.003	<0.0032	<0.0028	<0.0028	<0.0028	<0.0034	<0.0028	<0.0028	<0.0034	<0.003	<0.0029	<0.0029	<0.0031	<0.003
Aroclor 1242	53469-21-9	mg/kg	<0.0028	<0.0031	<0.0027	<0.0031	<0.0033	<0.0029	<0.003	<0.0032	<0.0028	<0.0028	<0.0028	<0.0034	<0.0028	<0.0028	<0.0034	<0.003	<0.0029	<0.0029	<0.0031	<0.003
Aroclor 1248	12672-29-6	mg/kg	<0.0028	<0.0031	<0.0027	<0.0031	<0.0033	<0.0029	<0.003	<0.0032	<0.0028	<0.0028	<0.0028	<0.0034	<0.0028	<0.0028	<0.0034	<0.003	<0.0029	<0.0029	<0.0031	<0.003
Aroclor 1254	11097-69-1	mg/kg	<0.0028	<0.0031	<0.0027	<0.0031	<0.0033	<0.0029	<0.003	<0.0032	<0.0028	<0.0028	<0.0028	<0.0034	<0.0028	<0.0028	<0.0034	<0.003	<0.0029	<0.0029	<0.0031	<0.003
Aroclor 1260	11096-82-5	mg/kg	<0.0021	<0.0023	<0.002	<0.0023	<0.0025	<0.0022	<0.0022	<0.0024	<0.0021	<0.0021	<0.0021	<0.0025	<0.0021	<0.0021	<0.0025	<0.0022	<0.0022	<0.0022	<0.0023	<0.0022
Total PCBs	TPCB	mg/kg	<0.00945	<0.01045	<0.0091	<0.01045	<0.01115	<0.0098	<0.0101	<0.0108	<0.00945	<0.00945	<0.00945	<0.01145	<0.00945	<0.00945	<0.01145	<0.0101	<0.0098	<0.0098	<0.01045	<0.0101
VOLATILE ORGANIC COMPOUNDS																						
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1 1-Dichloroethane	75-34-3	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1,1-Dichloroethene	75-35-4	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.0005	<0.0006	<0.00053	<0.00061	<0.00072	<0.00055	<0.00057	<0.00065	<0.00051	<0.0005	<0.00057	<0.00071	<0.00052	<0.00056	<0.00075 JL	<0.00061	<0.00056	<0.00059	<0.00061	<0.00056
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	0.0086	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1 2-Dibromoethane	106-93-4	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063 JL	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1 2-Dichloroethane	107-06-2	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1 2-Dichloropropane	78-87-5	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	0.0036 J	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063 JL	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063 JL	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
2-Butanone	78-93-3	mg/kg	<0.0012	<0.0014	<0.0012	0.015	0.013	<0.0013	<0.0013	0.0045 J	<0.0012	<0.0012	<0.0013	0.0091 J	<0.0012	<0.0013	<0.0018	<0.0014	<0.0013	<0.0014	<0.0014	<0.0013
2-Hexanone	591-78-6	mg/kg	<0.00084	<0.001	<0.00088	<0.001	<0.0012	<0.00092	<0.00095	<0.0011	<0.00086	<0.00084	<0.00096	<0.0012	<0.00087	<0.00093	<0.0013	<0.001	<0.00094	<0.00098	<0.001	<0.00093
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.00084	<0.001	<0.00088	<0.001	<0.0012	<0.00092	<0.00095	<0.0011	<0.00086	<0.00084	<0.00096	<0.0012	<0.00087	<0.00093	<0.0013	<0.001	<0.00094	<0.00098	<0.001	<0.00093
Acetone	67-64-1	mg/kg	<0.0017	0.026 U	0.0077 U	0.078 U	0.08 U	<0.0018	<0.0019	0.032 U	<0.0017	<0.0017	<0.0019	0.053 U	<0.0017	<0.0019	0.018 U	<0.002	<0.0019	<0.002	<0.002	<0.0019
Benzene	71-43-2	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Bromodichloromethane	75-27-4	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Bromoform	75-25-2	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Bromomethane	74-83-9	mg/kg	<0.00084	<0.001	<0.00088	<0.001	<0.0012	<0.00092	<0.00095	<0.0011	<0.00086	<0.00084	<0.00096	<0.0012	<0.00087	<0.00093	<0.0013	<0.001	<0.00094	<0.00098	<0.001	<0.00093
Carbon disulfide	75-15-0	mg/kg	<0.00084	<0.001	<0.00088	<0.001	<0.0012	<0.00092	<0.00095	<0.0011	<0.00086	<0.00084	<0.00096	<0.0012	<0.00087	<0.00093	<0.0013	<0.001	<0.00094	<0.00098	<0.001	<0.00093
Carbon tetrachloride	56-23-5	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			NPSB01	NPSB01	NPSB02	NPSB02	NPSB02	NPSB03	NPSB03	NPSB03	NPSB04	NPSB04	NPSB04	NPSB04	NPSB05	NPSB05	NPSB05	NPSB06	NPSB06	NPSB06	NPSB06	NPSB07
Sample Date			2-3 ft	10-11 ft	1-2 ft	4-5 ft	5-6 ft	1-2 ft	4-5 ft	11-12 ft	1-2 ft	1-2 ft	2-3 ft	9-10 ft	1-2 ft	4-5 ft	9-10 ft	1-2 ft	2-3 ft	2-3 ft	7-8 ft	1-2 ft
Sample Date			11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	11/11/2010	11/11/2010	11/11/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	11/9/2010
Analyte	CAS No.	Units																				
Chlorobenzene	108-90-7	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Chloroethane	75-00-3	mg/kg	<0.00084	<0.001	<0.00088	<0.001	<0.0012	<0.00092	<0.00095	<0.0011	<0.00086	<0.00084	<0.00096	<0.0012	<0.00087	<0.00093	<0.0013	<0.001	<0.00094	<0.00098	<0.001	<0.00093
Chloroform	67-66-3	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Chloromethane	74-87-3	mg/kg	<0.00084	<0.001	<0.00088	<0.001	<0.0012	<0.00092	<0.00095	<0.0011	<0.00086	<0.00084	<0.00096	<0.0012	<0.00087	<0.00093	<0.0013	<0.001	<0.00094	<0.00098	<0.001	<0.00093
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Cyclohexane	110-82-7	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	0.026	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Dibromochloromethane	124-48-1	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Dichlorodifluoromethane	75-71-8	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Ethylbenzene	100-41-4	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	0.002 J	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	0.0019 J	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Isopropylbenzene	98-82-8	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	0.018	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	0.00078 J	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Methyl acetate	79-20-9	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Methylcyclohexane	108-87-2	mg/kg	<0.00042	<0.0005	<0.00044	0.0063	0.061	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	0.0038 J	<0.00043	<0.00047	<0.00063 JL	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Methylene chloride	75-09-2	mg/kg	0.0027 U	0.0021 U	<0.00088	0.0037 U	0.0063 U	<0.00092	0.0011 U	0.0016 U	<0.00086	<0.00084	<0.00096	<0.0012	<0.00087	0.0015 U	<0.0013	<0.001	<0.00094	<0.00098	<0.001	<0.00093
Naphthalene	91-20-3	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	0.0011 U	0.001 U	0.0012 U	0.021	0.0013 U	<0.00047	<0.00063 JL	0.0017 U	<0.00047	<0.00049	<0.00051	0.0012 U
n-Butylbenzene	104-51-8	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	0.0037 J	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
n-Propylbenzene	103-65-1	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	0.016	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	0.00094 J	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
sec-Butylbenzene	135-98-8	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Styrene	100-42-5	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
tert-Butylbenzene	98-06-6	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063 JL	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Tetrachloroethene	127-18-4	mg/kg	<0.0005	<0.0006	<0.00053	<0.00061	<0.00072	<0.00055	<0.00057	<0.00065	<0.00051	<0.0005	<0.00057	<0.00071	<0.00052	<0.00056	<0.00075	<0.00061	<0.00056	<0.00059	<0.00061	<0.00056
Toluene	108-88-3	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Trichloroethene	79-01-6	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Trichlorofluoromethane	75-69-4	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Vinyl chloride	75-01-4	mg/kg	<0.00042	<0.0005	<0.00044	<0.00051	<0.0006	<0.00046	<0.00048	<0.00054	<0.00043	<0.00042	<0.00048	<0.00059	<0.00043	<0.00047	<0.00063	<0.00051	<0.00047	<0.00049	<0.00051	<0.00047
Xylenes, Total	1330-20-7	mg/kg	<0.0013	<0.0015	<0.0013	<0.0015	0.002 J	<0.0014	<0.0014	<0.0016	<0.0013	<0.0013	<0.0014	<0.0018	<0.0013	<0.0014	<0.0019	<0.0015	<0.0014	<0.0015	<0.0015	<0.0014
SEMIVOLATILE ORGANIC COMPOUNDS																						
1,1´-Biphenyl	92-52-4	mg/kg	<0.0034	<0.0037	<0.0033	<0.0037	<0.004	<0.0035	<0.0036	<0.0038	<0.0034	<0.0034	<0.0033	<0.0041	<0.0033	<0.0034	0.0079 J	<0.0036	<0.0035	<0.0036	<0.0038	<0.0036
1-Methylnaphthalene	90-12-0	mg/kg	<0.0027	<0.0029	<0.0026	<0.0029	5.8 JL	<0.0028	<0.0028	<0.003	<0.0027	<0.0027	<0.0026	<0.0032	<0.0026	<0.0027	<0.0032	<0.0029	<0.0028	<0.0028	<0.003	<0.0028
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0033	<0.0036	<0.0032	<0.0036	<0.0039	<0.0034	<0.0035	<0.0037	<0.0032	<0.0032	<0.0032	<0.0039	<0.0032	<0.0033	<0.0039	<0.0035	<0.0034	<0.0034 JL	<0.0036	<0.0034
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.0039	<0.0042	<0.0037	<0.0042	<0.0045	<0.004	<0.0041	<0.0043	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038	<0.0039	<0.0046	<0.0041	<0.004	<0.004 JL	<0.0043	<0.0041
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0026	<0.0028	<0.0025	<0.0028	<0.003	<0.0027	<0.0027	<0.0029	<0.0025	<0.0026	<0.0025	<0.0031	<0.0025	<0.0026	<0.0031	<0.0027	<0.0027	<0.0027 JL	<0.0029	<0.0027
2 4-Dimethylphenol	105-67-9	mg/kg	<0.0039 JL	<0.0042 JL	<0.0037 JL	<0.0042 JL	<0.0045 JL	<0.004 JL	<0.0041 JL	<0.0043 JL	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038 JL	<0.0039 JL	<0.0046 JL	<0.0041	<0.004	<0.004 JL	<0.0043	<0.0041
2 4-Dinitrophenol	51-28-5	mg/kg	<0.0039	<0.0042	<0.0037	<0.0042	<0.0045	<0.004	<0.0041	<0.0043	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038	<0.0039	<0.0046 JL	<0.0041	<0.004	<0.004 JL	<0.0043	<0.0041
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.0039	<0.0042	<0.0037	<0.0042	<0.0045	<0.004	<0.0041	<0.0043	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038	<0.0039	<0.0046	<0.0041	<0.004	<0.004	<0.0043	<0.0041
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.0038	<0.0041	<0.0036	<0.0041	<0.0044	<0.0039	<0.004	<0.0042	<0.0037	<0.0037	<0.0037	<0.0045	<0.0037	<0.0037	<0.0045	<0.004	<0.0039	<0.0039	<0.0042	<0.0039
2-Chloronaphthalene	91-58-7	mg/kg	<0.0048	<0.0052	<0.0046	<0.0052	<0.0056	<0.005	<0.0051	<0.0054	<0.0047	<0.0048	<0.0047	<0.0058	<0.0047	<0.0048	<0.0058	<0.0051	<0.005	<0.005	<0.0053	<0.005
2-Chlorophenol	95-57-8	mg/kg	<0.0038	<0.0041	<0.0036	<0.0041	<0.0044	<0.0039	<0.004	<0.0042	<0.0037	<0.0037	<0.0037	<0.0045	<0.0037	<0.0037	<0.0045	<0.004	<0.0039	<0.0039 JL	<0.0042	<0.0039
2-Methylnaphthalene	91-57-6	mg/kg	<0.0032	<0.0034	<0.003	<0.0034	7.4 JL	<0.0033	<0.0033	<0.0036	<0.0031	<0.0031	<0.0031	<0.0038	<0.0031	<0.0032	<0.0038	<0.0034	<0.0033	<0.0033	<0.0035	<0.0033
2-Methylphenol	95-48-7	mg/kg	<0.0034	<0.0037	<0.0033	<0.0037	<0.004	<0.0035	<0.0036	<0.0038	<0.0034	<0.0034	<0.0033	<0.0041	<0.0033	<0.0034	<0.0041	<0.0036	<0.0035	<0.0036 JL	<0.0038	<0.0036
2-Nitroaniline	88-74-4	mg/kg	<0.0039	<0.0042	<0.0037	<0.0042	<0.0045	<0.004	<0.0041	<0.0043	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038	<0.0039	<0.0046	<0.0041	<0.004	<0.004	<0.0043	<0.0041
2-Nitrophenol	88-75-5	mg/kg	<0.0054	<0.0059	<0.0052	<0.0059	<0.0063	<0.0056	<0.0057	<0.0061	<0.0053	<0.0053	<0.0053	<0.0065	<0.0053	<0.0054	<0.0065	<0.0057	<0.0056	<0.0056 JL	<0.006	<0.0057
3&4-Methylphenol	106-44-5	mg/kg	<0.0033	<0.0036	<0.0032	<0.0036	<0.0039	<0.0034	<0.0035	<0.0037	<0.0032	<0.0032	<0.0032	<0.0039	<0.0032	<0.0033	<0.0039	<0.0035	<0.0034	<0.0034 JL	<0.0036	<0.0034
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0036	<0.004	<0.0035	<0.004	<0.0043	<0.0038	<0.0038	<0.0041	<0.0036	<0.0036	<0.0036	<0.0044	<0.0036	<0.0036	<0.0043	<0.0038	<0.0038	<0.0038	<0.004	<0.0038
3-Nitroaniline	99-09-2	mg/kg	<0.0031	<0.0033	<0.0029	<0.0033	<0.0036	<0.0032	<0.0032	<0.0034	<0.003	<0.003	<0.003	<0.0037	<0.003	<0.003	<0.0036	<0.0032	<0.0032	<0.0032	<0.0034	<0.0032
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.0039	<0.0042	<0.0037	<0.0042	<0.0045	<0.004	<0.0041	<0.0043	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038	<0.0039	<0.0046 JL	<0.0041	<0.004	<0.004 JL	<0.0043	<0.0041
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.0039	<0.0042	<0.0037	<0.0042	<0.0045	<0.004	<0.0041	<0.0043	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038	<0.0039	<0.0046	<0.0041	<0.004	<0.004	<0.0043	<0.0041
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.0039	<0.0042	<0.0037	<0.0042	<0.0045	<0.004	<0.0041	<0.0043	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038	<0.0039	<0.0046	<0.0041	<0.004	<0.004 JL	<0.0043	<0.0041
4-Chloroaniline	106-47-8	mg/kg	<0.0026	<0.0028	<0.0025	<0.0028	<0.003	<0.0027	<0.0027	<0.0029	<0.0025	<0.0026	<0.0025	<0.0031	<0.0025	<0.0026	<0.0031	<0.0027	<0.0027	<0.0027	<0.0029	<0.0027
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0026	<0.0028	<0.0025	<0.0028	<0.003	<0.0027	<0.0027	<0.0029	<0.0025	<0.0026	<0.0025	<0.0031	<0.0025	<0.0026	<0.0031	<0.0027	<0.0027	<0.0027	<0.0029	<0.0027
4-Nitroaniline	100-01-6	mg/kg	<0.0039	<0.0042	<0.0037	<0.0042	<0.0045	<0.004	<0.0041	<0.0043	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038	<0.0039	<0.0046	<0.0041	<0.004	<0.004	<0.0043	<0.0041
4-Nitrophenol	100-02-7	mg/kg	<0.0045	<0.0049	<0.0043	<0.0049	<0.0052	<0.0046	<0.0047	<0.005	<0.0044	<0.0044	<0.0044	<0.0054	<0.0044	<0.0045	<0.0053	<0.0047	<0.0046	<0.0047 JL	<0.0049	<0.0047
Acenaphthene	83-32-9	mg/kg	<0.0026	<0.0028	<0.0025	0.0029 J	0.075	<0.0027	<0.0027	<0.0029	<0.0025	<0.0026	<0.0025	<0.0031	0.0039 J	<0.0026	0.014	<0.0027	<0.0027	<0.0027	<0.0029	0.0045 J
Acenaphthylene	208-96-8	mg/kg	<0.0026	<0.0028	<0.0025	<0.0028	0.094	<0.0027	<0.0027	<0.0029	<0.0025	<0.0026	<0.0025	<0.0031	0.029	<0.0026	0.023	<0.0027	<0.0027	<0.0027	<0.0029	0.0087
Acetophenone	98-86-2	mg/kg	<0.0028	<0.0031	<0.0027	<0.0031	<0.0033	<0.0029	<0.003	<0.0032	<0.0028	<0.0028	<0.0028	<0.0034	<0.0028	<0.0028	<0.0034	<0.003	<0.0029	<0.0029	<0.0031	<0.003
Anthracene	120-12-7	mg/kg	<0.0026	<0.0028	<0.0025	0.0047 J	0.056	<0.0027	<0.0027	<0.0029	<0.0025	0.0041 J	<0.0025	<0.0031	0.07	<0.0026	<0.0031	0.0039 J	<0.0027	<0.0027	<0.0029	0.039
Benz(a)anthracene	56-55-3	mg/kg	<0.0033	<0.0036	<0.0032	0.016	0.052	<0.0034	<0.0035	<0.0037	0.028	0.011	<0.0032	<0.0039	0.1	0.0042 J	0.015	0.013	<0.0034	<0.0034	<0.0036	0.065
Benzaldehyde	100-52-7	mg/kg	<0.0054 JL	<0.0059 JL	<0.0052 JL	<0.0059 JL	<0.0063 JL	<0.0056 JL	<0.0057 JL	<0.0061 JL	<0.0053 JL	<0.0053 JL	<0.0053 JL	<0.0065 JL	<0.0053 JL	<0.0054 JL	<0.0065 JL	<0.0057 JL	<0.0056 JL	<0.0056 JL	<0.006 JL	<0.0057 JL
Benzo(a)pyrene	50-32-8	mg/kg	<0.0027	<0.0029	<0.0026	0.018	<0.0032	<0.0028	<0.0028	<0.003	0.062 J	0.013 J	<0.0026	<0.0032	0.14	0.0061 J	<0.0032	0.019	<0.0028	<0.0028	<0.003	0.068
Benzo(b)fluoranthene	205-99-2	mg/kg	<0.0039	<0.0042	0.007 J	0.018	<0.0045	0.0057 J	<0.0041	<0.0043	0.062 J	0.017 J	<0.0038	<0.0046	0.15	0.0064 J	<0.0046	0.024	<0.004	<0.004	<0.0043	0.097
Benzo(g h i)perylene	191-24-2	mg/kg	<0.0034	<0.0037	<0.0033	<0.0037	<0.004	<0.0035	<0.0036	<0.0038	0.064 J	0.02 J	<0.0033	<0.0041	0.054	0.0076 J	<0.0041	0.019	<0.0035	<0.0036	<0.0038	0.041
Benzo(k)fluoranthene	207-08-9	mg/kg	<0.0039	<0.0042	0.0072 J	0.019	<0.0045	0.0061 J	<0.0041	<0.0043	0.043 J	0.0089 J	<0.0038	<0.0046	0.23	0.0065 J	<0.0046	0.015	<0.004	<0.004	<0.0043	0.11
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.0028	<0.0031	<0.0027	<0.0031	<0.0033	<0.0029	<0.003	<0.0032	<0.0028	<0.0028	<0.0028	<0.0034	<0.0028	<0.0028	<0.0034	<0.003	<0.0029	<0.0029	<0.0031	<0.003
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0033	<0.0036	<0.0032	<0.0036	<0.0039	<0.0034	<0.0035	<0.0037	<0.0032	<0.0032	<0.0032	<0.0039	<0.0032	<0.0033	<0.0039	<0.0035	<0.0034	<0.0034	<0.0036	<0.0034
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0032	<0.0034	<0.003	<0.0034	<0.0037	<0.0033	<0.0033	<0.0036	<0.0031	<0.0031	<0.0031	<0.0038	<0.0031	<0.0032	<0.0038	<0.0034	<0.0033	<0.0033	<0.0035	<0.0033
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	<0.0078	<0.0084	0.0096	0.011	0.021	<0.008	0.029	<0.0087	<0.0076	0.0097 U	<0.0076	<0.0093	0.0094	<0.0077	<0.0093	0.0084 U	0.0082 U	<0.0081	<0.0086	0.014
Butyl benzyl phthalate	85-68-7	mg/kg	<0.0029	<0.0032	<0.0028	0.0097	<0.0034	<0.003	<0.0031	<0.0033	<0.0029	<0.0029	<0.0029	<0.0035	<0.0029	<0.0029	<0.0035	<0.0031	<0.003	<0.0031	<0.0032	<0.0031
Caprolactam	105-60-2	mg/kg	<0.0028	<0.0031	<0.0027	<0.0031	<0.0033	0.008 J	0.0037 J	<0.0032	0.0077	0.0045 J	0.003 J	<0.0034	<0.0028	<0.0028	<0.0034	<0.003	<0.0029	<0.0029	<0.0031	<0.003
Carbazole	86-74-8	mg/kg	<0.0026	<0.0028	<0.0025	0.0038 J	<0.003	<0.0027	<0.0027	<0.0029	<0.0025	<0.0026	<0.0025	<0.0031	0.046	<0.0026	<0.0031	0.0051 J	<0.0027	<0.0027	<0.0029	0.023
Chrysene	218-01-9	mg/kg	<0.0034	<0.0037	0.01	0.026	0.048	0.0045 J	<0.0036	<0.0038	0.034	0.015	<0.0033	<0.0041	0.19	0.005 J	0.03	0.022	<0.0035	<0.0036	<0.0038	0.092
Dibenz(a h)anthracene	53-70-3	mg/kg	<0.0026	<0.0028	<0.0025	<0.0028	<0.003	<0.0027	<0.0027	<0.0029	<0.0025	0.0054 J	<0.0025	<0.0031	<0.0025	<0.0026	<0.0031	<0.0027	<0.0027	<0.0027	<0.0029	<0.0027
Dibenzofuran	132-64-9	mg/kg	<0.0026	<0.0028	<0.0025	<0.0028	0.24	<0.0027	<0.0027	<0.0029	<0.0025	<0.0026	<0.0025	<0.0031	<0.0025	<0.0026	<0.0031	<0.0027	<0.0027	<0.0027	<0.0029	<0.0027
Diethyl phthalate	84-66-2	mg/kg	<0.0039	<0.0042	<0.0037	<0.0042	<0.0045	<0.004	<0.0041	<0.0043	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038	<0.0039	<0.0046	<0.0041	<0.004	<0.004	<0.0043	<0.0041
Dimethyl phthalate	131-11-3	mg/kg	<0.0028	<0.0031	<0.0027	<0.0031	<0.0033	<0.0029	<0.003	<0.0032	<0.0028	<0.0028	<0.0028	<0.0034	<0.0028	<0.0028	<0.0034	<0.003	<0.0029	<0.0029	<0.0031	<0.003
Di-n-butyl phthalate	84-74-2	mg/kg	<0.0029	0.0034 U	0.0036 U	0.0041 U	<0.0034	<0.003	<0.0031	<0.0033	<0.0029	0.0029 U	<0.0029	<0.0035	<0.0029	<0.0029	<0.0035	<0.0031	<0.003	<0.003	<0.0031	<0.0032
Di-n-octyl phthalate	117-84-0	mg/kg	<0.0034	<0.0037	<0.0033	<0.0037	<0.004	<0.0035	<0.0036	<0.0038	<0.0034	<0.0034	<0.0033	<0.0041	<0.0033	<0.0034	<0.0041	<0.0036	<0.0035	<0.0036	<0.0038	<0.0036
Fluoranthene	206-44-0	mg/kg	0.011	<0.0028	0.011	0.042	0.058	0.006 J	<0.0027	<0.0029	0.014	0.02	<0.0025	<0.0031	0.21	0.006 J	0.031	0.031	<0.0027	0.0027 J	<0.0029	0.17
Fluorene	86-73-7	mg/kg	<0.0026	<0.0028	<0.0025	<0.0028	0.27	<0.0027	<0.0027	<0.0029	<0.0025	<0.0026	<0.0025	<0.0031	0.0052 J	<0.0026	<0.0031	<0.0027	<0.0027	<0.0027	<0.0029	0.0037 J

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			NPSB01	NPSB01	NPSB02	NPSB02	NPSB02	NPSB03	NPSB03	NPSB03	NPSB04	NPSB04	NPSB04	NPSB04	NPSB05	NPSB05	NPSB05	NPSB06	NPSB06	NPSB06	NPSB06	NPSB07
Sample Date			2-3 ft	10-11 ft	1-2 ft	4-5 ft	5-6 ft	1-2 ft	4-5 ft	11-12 ft	1-2 ft	1-2 ft	2-3 ft	9-10 ft	1-2 ft	4-5 ft	9-10 ft	1-2 ft	2-3 ft	2-3 ft	7-8 ft	1-2 ft
Sample Date			11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/11/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	11/11/2010	11/11/2010	11/11/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	11/9/2010
Analyte	CAS No.	Units																				
Hexachlorobenzene	118-74-1	mg/kg	<0.0031	<0.0033	<0.0029	<0.0033	<0.0036	<0.0032	<0.0032	<0.0034	<0.003	<0.003	<0.003	<0.0037	<0.003	<0.003	<0.0036	<0.0032	<0.0032	<0.0032	<0.0034	<0.0032
Hexachlorobutadiene	87-68-3	mg/kg	<0.0052	<0.0056	<0.005	<0.0056	<0.0061	<0.0054	<0.0054	<0.0058	<0.0051	<0.0051	<0.0051	<0.0062	<0.0051	<0.0052	<0.0062	<0.0055	<0.0054	<0.0054	<0.0057	<0.0054
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0042	<0.0046	<0.0041	<0.0046	<0.005	<0.0044	<0.0044	<0.0047	<0.0042	<0.0042	<0.0041 JL	<0.0051	<0.0041	<0.0042	<0.0051 JL	<0.0045	<0.0044	<0.0044	<0.0047	<0.0044
Hexachloroethane	67-72-1	mg/kg	<0.0046	<0.005	<0.0044	<0.005	<0.0054	<0.0048	<0.0048	<0.0051	<0.0045	<0.0045	<0.0045	<0.0055	<0.0045	<0.0046	<0.0055	<0.0048	<0.0047	<0.0048	<0.0051	<0.0048
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	<0.0041	<0.0045	<0.0039	<0.0045	<0.0048	<0.0043	<0.0043	<0.0046	0.057 J	<0.0041 J	<0.004	<0.0049	0.068	0.0063 J	<0.0049	0.013	<0.0043	<0.0043	<0.0045	0.041
Isophorone	78-59-1	mg/kg	<0.0035	<0.0038	<0.0034	<0.0038	<0.0041	<0.0037	<0.0037	<0.004	<0.0035	<0.0035	<0.0034	<0.0042	<0.0035	<0.0035	<0.0042	<0.0037	<0.0037	<0.0037	<0.0039	<0.0037
Naphthalene	91-20-3	mg/kg	<0.0039	<0.0042	<0.0037	<0.0042	2 JL	<0.004	<0.0041	<0.0043	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038	<0.0039	<0.0046	<0.0041	<0.004	<0.004	<0.0043	<0.0041
Nitrobenzene	98-95-3	mg/kg	<0.0039	<0.0042	<0.0037	<0.0042	<0.0045	<0.004	<0.0041	<0.0043	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038	<0.0039	<0.0046	<0.0041	<0.004	<0.004	<0.0043	<0.0041
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0047	<0.0051	<0.0045	<0.0051	<0.0055	<0.0049	<0.0049	<0.0053	<0.0046	<0.0046	<0.0046	<0.0056	<0.0046	<0.0047	<0.0056	<0.005	<0.0049	<0.0049	<0.0052	<0.0049
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0026	<0.0028	<0.0025	<0.0028	<0.003	<0.0027	<0.0027	<0.0029	<0.0025	<0.0026	<0.0025	<0.0031	<0.0025	<0.0026	<0.0031	<0.0027	<0.0027	<0.0027	<0.0029	<0.0027
Pentachlorophenol	87-86-5	mg/kg	<0.0033 JL	<0.0036 JL	<0.0032 JL	<0.0036 JL	<0.0039 JL	<0.0034 JL	<0.0035 JL	<0.0037 JL	<0.0032 JL	<0.0032 JL	<0.0032 JL	<0.0039 JL	<0.0032 JL	<0.0033 JL	<0.0039 JL	<0.0035 JL	<0.0034	<0.0034 JL	<0.0036 JL	<0.0034 JL
Phenanthrene	85-01-8	mg/kg	<0.0035	<0.0038	<0.0034	0.02	0.6	<0.0037	<0.0037	<0.004	<0.0035	0.0082	<0.0034	<0.0042	0.036	<0.0035	0.047	0.01	<0.0037	<0.0037	<0.0039	0.055
Phenol	108-95-2	mg/kg	<0.0039	<0.0042	<0.0037	<0.0042	<0.0045	<0.004	<0.0041	<0.0043	<0.0038	<0.0038	<0.0038	<0.0046	<0.0038	<0.0039	<0.0046	<0.0041	<0.004	<0.004 JL	<0.0043	<0.0041
Pyrene	129-00-0	mg/kg	0.011	<0.0028	0.0089	0.033	0.089	0.0054 J	<0.0027	<0.0029	0.014	0.016	<0.0025	0.004 J	0.19	0.0037 J	0.04	0.026	<0.0027	<0.0027	<0.0029	0.15

Bolded - detection above the SDL
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U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			NPSB07	NPSB07	NPSB08	NPSB08	NPSB08	NPSB09	NPSB09	NPSB09	NPSB10	NPSB10	NPSB10	NPSL10	NPSB10	NPSB11	NPSB11	NPSB11	NPSB11	NPSB11	NPSB12
Sample Date			4-5 ft	5-6 ft	1-2 ft	2-3 ft	9-10 ft	1-2 ft	2-3 ft	10-11 ft	1-2 ft	4-5 ft	9-10 ft	10-11 ft	11-12 ft	1-2 ft	4-5 ft	9-10 ft	9-10 ft	10-11 ft	1-2 ft
Sample Date			11/9/2010	11/9/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	1/12/2012	1/12/2012	1/12/2012	1/12/2012	1/12/2012	1/18/2012	1/18/2012	1/18/2012	1/18/2012	1/18/2012	1/25/2012
Analyte	CAS No.	Units																			
METALS																					
Aluminum	7429-90-5	mg/kg	7890	6740	6730	9370	6110	8880	11000	8590	9420	8370	9880	16100	5680	8780	6740	4210	3980	4140	5970	6540 JL
Antimony	7440-36-0	mg/kg	<0.29	<0.3	<0 25	<0.28	<0.28	0.288 J	1.62	<0.29	<0.2	<0.21	<0.25	<0.31	<0.25	<0.21	<0.23	<0.22	<0.21	<0.22	<0 23	<0.19
Arsenic	7440-38-2	mg/kg	3.33	3.83	6.28	8.55	1.68	11.1	8.6	5.59	7.95	6.6	4.17	4.24	1.33	8.81	2.74	1.88	1.07	0.992	3.76	3.33
Barium	7440-39-3	mg/kg	203	195	1070	308	274	283	232	382	423	212	374	531	42.5 JH	179	291	119	107	127	194	186
Beryllium	7440-41-7	mg/kg	0.567 J	0.494 J	0.361 J	0.596	0.45 J	0.504 J	0.635	0.653	0.64	0.726	0.75	1.12	0.452 J	0.627	0.578 J	0.387 J	0.309 J	0.322 J	0.581	0.33 J
Cadmium	7440-43-9	mg/kg	0.22 J	0.398 J	5.94	0.201 J	0.136 J	37.4	31	0.244 J	23.8	15.2	0.224 J	0.407 J	0.118 J	0.423 J	0.159 J	0.136 J	0.0777 J	0.0876 J	0.152 J	0.409 J
Chromium	7440-47-3	mg/kg	3.98	3.71	8.18	5.55	3.53	8.02	6.72	5.3	12.2	5.65	6.49	10.6	4.09	6.23	4.34	2.76	2.33	2.57	3.52	6.48
Cobalt	7440-48-4	mg/kg	3.14	4.03	4.21	7.7	2.88	11.3	4.41	4.32	7.43	6.49	4.47	5.86	2.44	4.21	2.32	2.28	1.78	1.89	3.38	3.05
Copper	7440-50-8	mg/kg	4.57	4.49	28.9	5.5	3.07	66.9	222	5.26	54.5	24.9	5.85	12.8	3.81	6.26	4.2	3.32	2.33	2.78	4.79	15.3
Lead	7439-92-1	mg/kg	8.25	9.85	92.7	10.1	6.01	183	745	9.99	110	43.3	10.3	20.3	6.85	14.3	7.72	7.83	4.92	5.51	9.04	61.6
Manganese	7439-96-5	mg/kg	175	214	352	352	140	451	302	318	297	487	225	170	152	272	176	109	93.6	92.4	118	192
Nickel	7440-02-0	mg/kg	5.58	5.45	6.24	7.76	3.74	6.7	7.21	6.39	7.24	8.72	7.29	10.8	3.84	5.91	5.03	3.1	2.46	2.66	4.31	6.17
Selenium	7782-49-2	mg/kg	2.64	0.809	3.75	0.979	0.654	3.89	157	0.91	3.27	7.43	1.92	1.72	1.05	1.35	1.32	0.951	0.756	0.902	0.908	0.364 U
Silver	7440-22-4	mg/kg	<0.047	0.0481 J	0.766	<0.045	<0.046	1.31	8.51	<0.046	0.777	0.364 J	<0.1	<0.12	<0.098	<0.086	<0.092	<0.088	<0.083	<0.087	<0.091	<0.078
Thallium	7440-28-0	mg/kg	<0.082	<0.084	0.142 J	0.149 J	0.0967 J	<0.15	0.179 J	<0.16	0.155 J	0.159 J	0.171 J	0.253 J	0.0993 J	0.178 U	0.204 U	0.0975 U	<0.073	0.0765 U	0.121 U	0.182 J
Vanadium	7440-62-2	mg/kg	14.7	13.7	12.6	18.1	13.4	14.3	17.8	16.3	18.8	16.6	23.9	17.3	12.1	12.9	14.2 JL	7.55	6.77	7.45	10.4	12.5
Zinc	7440-66-6	mg/kg	16.9	24.7	969	21.8	13.6	1840	2450	21.1	1110	2110	21.7	41.9	13.4	28.2	17	10.1	8.52	9.4	13.7	51.3
Mercury	7439-97-6	mg/kg	0.00721	0.00933	4.42	0.0809	0.00393 J	11	28.6	0.000945 J	13.2	3.07	0.00616	0.0427	0.00263 J	0.58	0.0298	0.00389 J	0.00318 J	0.00448	0.00827	0.0383
Cyanide	57-12-5	mg/kg	<0.73	<0.74	<0.67	<0.75	0.844 J	<0.67	<0.7	<0.75	<0.69	<0.69	<0.78	3.94	<0.79	<0.69	<0.74	<0.75	<0.72	<0.73	<0.75	<0.65
PESTICIDES and PCBs																						
4,4´-DDD	72-54-8	mg/kg	<0.00061	<0.00062	<0.00057	<0.00063	<0.003	<0.003	<0.00061	<0.00066	<0.00058	0.0083	<0.00066	<0.00084	<0.00066	<0.00057	<0.00062	0.0087	<0.0012	<0.0012	<0.0013	<0.0054
4,4´-DDE	72-55-9	mg/kg	<0.00061	<0.00062	<0.00057	<0.00063	<0.003	<0.003	<0.00061	<0.00066	<0.00058	0.0043 J	<0.00066	0.006 J	<0.00066	<0.00057	<0.00062	<0.0012	<0.0012	<0.0012	<0.0013	<0.0054
4,4´-DDT	50-29-3	mg/kg	<0.00061	<0.00062	0.0019 J	<0.00063	0.011 J	<0.003	<0.00061	<0.00066	<0.00058	<0.0012	<0.00066	<0.00084	<0.00066	<0.00057	<0.00062	0.0044 J	<0.0012	<0.0012	<0.0013	<0.0054
Aldrin	309-00-2	mg/kg	<0.00037	<0.00037	<0.00034	<0.00038	<0.0018	<0.0018	<0.00036	<0.00039	<0.00035	<0.00069	<0.00039	<0.0005	<0.0004	<0.00034	<0.00037	<0.00075	<0.00072	<0.00073	<0.00076	<0.0032
alpha-BHC	319-84-6	mg/kg	<0.00037	<0.00037	<0.00034	<0.00038	<0.0018	<0.0018	<0.00036	<0.00039	<0.00035	<0.00069	<0.00039	<0.0005	<0.0004	<0.00034	<0.00037	<0.00075	<0.00072	<0.00073	<0.00076	<0.0032
alpha-Chlordane	5103-71-9	mg/kg	<0.00024	<0.00025	<0.00023	<0.00025	<0.0012	<0.0012	<0.00024	<0.00026	<0.00023	<0.00046	<0.00026	<0.00034	<0.00026	<0.00023	<0.00025	<0.0005	<0.00048	<0.00049	<0.0005	<0.0022
beta-BHC	319-85-7	mg/kg	<0.00037	<0.00037	<0.00034	<0.00038	0.0062 U	<0.0018	<0.00036	<0.00039	<0.00035	<0.00069	<0.00039	<0.0005	0.0022 UJ	<0.00034	<0.00037	<0.00075	<0.00072	<0.00073	<0.00076	<0.0032
delta-BHC	319-86-8	mg/kg	<0.00024	<0.00025	<0.00023	<0.00025	0.011 J	<0.0012	<0.00024	<0.00026	<0.00023	<0.00046	<0.00026	<0.00034	<0.00026	<0.00023	<0.00025	<0.0005	<0.00048	<0.00049	<0.0005	<0.0022
Dieldrin	60-57-1	mg/kg	<0.00061	<0.00062	<0.00057	<0.00063	<0.003	<0.003	<0.00061	<0.00066	<0.00058	<0.0012	<0.00066	<0.00084	<0.00066	<0.00057	<0.00062	<0.0012	<0.0012	<0.0012	<0.0013	<0.0054
Endosulfan I	959-98-8	mg/kg	<0.00037	<0.00037	<0.00034	<0.00038	<0.0018	<0.0018	<0.00036	<0.00039	<0.00035	<0.00069	<0.00039	<0.0005	<0.0004	<0.00034	<0.00037	<0.00075	<0.00072	<0.00073	<0.00076	<0.0032
Endosulfan II	33213-65-9	mg/kg	<0.00073	<0.00075	<0.00068	<0.00075	<0.0036	<0.0036	<0.00073	<0.00079	<0.00069	<0.0014	<0.00079	<0.001	<0.00079	<0.00069	<0.00074	<0.0015	<0.0014	<0.0015	<0.0015	<0.0065
Endosulfan sulfate	1031-07-8	mg/kg	<0.00073	<0.00075	<0.00068	<0.00075	<0.0036	<0.0036	<0.00073	<0.00079	<0.00069	<0.0014	<0.00079	<0.001	<0.00079	<0.00069	<0.00074	<0.0015	<0.0014	<0.0015	<0.0015	<0.0065
Endrin	72-20-8	mg/kg	<0.00073	<0.00075	<0.00068	<0.00075	<0.0036	<0.0036	<0.00073	<0.00079	<0.00069	<0.0014	<0.00079	<0.001	<0.00079	<0.00069	<0.00074	<0.0015	<0.0014	<0.0015	<0.0015	<0.0065
Endrin aldehyde	7421-93-4	mg/kg	<0.00073	<0.00075	<0.00068	<0.00075	<0.0036	<0.0036	<0.00073	<0.00079	<0.00069	<0.0014	<0.00079	<0.001	<0.00079	<0.00069	<0.00074	<0.0015	<0.0014	<0.0015	<0.0015	<0.0065
gamma-BHC	58-89-9	mg/kg	<0.00024	<0.00025	<0.00023	<0.00025	<0.0012	<0.0012	<0.00024	<0.00026	<0.00023	<0.00046	<0.00026	<0.00034	<0.00026	<0.00023	<0.00025	<0.0005	<0.00048	<0.00049	<0.0005	<0.0022
gamma-Chlordane	5103-74-2	mg/kg	<0.00024	<0.00025	<0.00023	<0.00025	<0.0012	<0.0012	<0.00024	<0.00026	<0.00023	<0.00046	<0.00026	<0.00034	<0.00026	<0.00023	<0.00025	<0.0005	<0.00048	<0.00049	<0.0005	<0.0022
Heptachlor	76-44-8	mg/kg	<0.00037	<0.00037	<0.00034	<0.00038	<0.0018	<0.0018	<0.00036	<0.00039	<0.00035	<0.00069	<0.00039	<0.0005	<0.0004	<0.00034	<0.00037	<0.00075	<0.00072	<0.00073	<0.00076	<0.0032
Heptachlor epoxide	1024-57-3	mg/kg	<0.00037	<0.00037	<0.00034	<0.00038	<0.0018	<0.0018	<0.00036	<0.00039	<0.00035	<0.00069	<0.00039	<0.0005	<0.0004	<0.00034	<0.00037	<0.00075	<0.00072	<0.00073	<0.00076	<0.0032
Methoxychlor	72-43-5	mg/kg	<0.0042	<0.0042	<0.0039	<0.0043	<0.021	<0.02	<0.0041	<0.0045	<0.0039	<0.0079	<0.0045	<0.0057	<0.0045	<0.0039	<0.0042	<0.0085	<0.0082	<0.0083	<0.0086	<0.037
Toxaphene	8001-35-2	mg/kg	<0.0046	<0.0047	<0.0043	<0.0048	<0.023	<0.023	<0.0046	<0.005	<0.0055	<0.011	<0.0063	<0.0081	<0.0063	<0.0055	<0.0059	<0.012	<0.012	<0.012	<0.012	<0.052
Aroclor 1016	12674-11-2	mg/kg	<0.0029	<0.003	<0.0027	<0.003	<0.0029	<0.0029	<0.0029	<0.0032	<0.0028	<0.0028	<0.0032	<0.004	<0.0032	<0.0027	<0.003	<0.003 JL	<0.0029	<0.0029	<0.003 JL	<0.0026
Aroclor 1221	11104-28-2	mg/kg	<0.0029	<0.003	<0.0027	<0.003	<0.0029	<0.0029	<0.0029	<0.0032	<0.0028	<0.0028	<0.0032	<0.004	<0.0032	<0.0027	<0.003	<0.003 JL	<0.0029	<0.0029	<0.003 JL	<0.0026
Aroclor 1232	11141-16-5	mg/kg	<0.0029	<0.003	<0.0027	<0.003	<0.0029	<0.0029	<0.0029	<0.0032	<0.0028	<0.0028	<0.0032	<0.004	<0.0032	<0.0027	<0.003	<0.003 JL	<0.0029	<0.0029	<0.003 JL	<0.0026
Aroclor 1242	53469-21-9	mg/kg	<0.0029	<0.003	<0.0027	<0.003	<0.0029	<0.0029	<0.0029	<0.0032	<0.0028	<0.0028	<0.0032	<0.004	<0.0032	<0.0027	<0.003	<0.003 JL	<0.0029	<0.0029	<0.003 JL	<0.0026
Aroclor 1248	12672-29-6	mg/kg	<0.0029	<0.003	<0.0027	<0.003	<0.0029	<0.0029	<0.0029	<0.0032	<0.0028	<0.0028	<0.0032	<0.004	<0.0032	<0.0027	<0.003	<0.003 JL	<0.0029	<0.0029	<0.003 JL	<0.0026
Aroclor 1254	11097-69-1	mg/kg	<0.0029	<0.003	<0.0027	<0.003	<0.0029	<0.0029	<0.0029	<0.0032	<0.0028	<0.0028	<0.0032	<0.004	<0.0032	<0.0027	<0.003	<0.003 JL	<0.0029	<0.0029	<0.003 JL	<0.0026
Aroclor 1260	11096-82-5	mg/kg	<0.0022	<0.0022	<0.0021	<0.0023	<0.0022	<0.0022	<0.0022	<0.0024	<0.0021	<0.0021	<0.0024	<0.003	<0.0024	<0.0021	<0.0022	<0.0022 JL	<0.0022	<0.0022	<0.0023 JL	<0.0019
Total PCBs	TPCB	mg/kg	<0.0098	<0.0101	<0.00915	<0.01015	<0.0098	<0.0098	<0.0098	<0.0108	<0.00945	<0.00945	<0.0108	<0.0081	<0.0108	<0.00915	<0.0101	<0.0101	<0.0098	<0.0098	<0.01015	<0.00875
VOLATILE ORGANIC COMPOUNDS																						
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00064	<0.00079	<0.00077	<0.0011	<0.00074	<0.001	<0.0006	<0.077	<0.078	<0.084	<0.078	<0.00066
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.0016	<0.0019	<0.0019	<0.0027	<0.0018	<0.0024	<0.0024	<0.0015	<0.19	<0.19	<0.2	<0.19	<0.0016
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00046	<0.00057	<0.00055	<0.00081	<0.00053	<0.00071	<0.00043 JL	<0.055	<0.056	<0.06	<0.056	<0.00047
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.0012	<0.0015	<0.0014	<0.0021	<0.0014	<0.0019	<0.0011 JL	<0.14	<0.14	<0.16	<0.15	<0.0012
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.0018	<0.0023	<0.0022	<0.0032	<0.0021	<0.0028	<0.0017	<0.22	<0.22	<0.24	<0 22	<0.0019
1 1-Dichloroethane	75-34-3	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00046	<0.00057	<0.00055	<0.00081	<0.00053	<0.00071	<0.00043	<0.055	<0.056	<0.06	<0.056	<0.00047
1,1-Dichloroethene	75-35-4	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.0014	<0.0017	<0.0017	<0.0024	<0.0016	<0.0021	<0.0013	<0.17	<0.17	<0.18	<0.17	<0.0014
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.0006	<0.00057	<0.00056	<0.0006	<0.00058	<0.00055	<0.00059	<0.00064	<0.00083	<0.001	<0.00099	<0.0015	<0.00095	<0.0013	<0.00077	<0.099	<0.1	<0.11	<0.1	<0.00085
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	1.2	<0.00046	<0.00049	<0.00053	<0.00073	<0.0009	<0.00088	0.1	<0.00085	<0.0011	<0.00069	<0.088	<0.089	<0.096	<0.09	<0.00076
1 2-Dibromoethane	106-93-4	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00064	<0.00079	<0.00077	<0.0011	<0.00074	<0.001	<0.0006	<0.077	<0.078	<0.084	<0.078	<0.00066
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00073	<0.0009	<0.00088	<0.0013	<0.00085	<0.0011	<0.00069	<0.088	<0.089	<0.096	<0.09	<0.00076
1 2-Dichloroethane	107-06-2	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00055	<0.00068	<0.00066	<0.00097	<0.00063	<0.00085	<0.00051	<0.066	<0.067	<0.072	<0.067	<0.00057
1 2-Dichloropropane	78-87-5	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00046	<0.00057	<0.00055	<0.00081	<0.00053	<0.00071	<0.00043	<0.055	<0.056	<0.06	<0.056	<0.00047
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	6.6	<0.00046	<0.00049	<0.00053	<0.00073	<0.0009	<0.00088	0.045	<0.00085	<0.0011	<0.00069	<0.088	<0.089	<0.096	<0.09	<0.00076
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00083	<0.001	<0.00099	<0.0015	<0.00095	<0.0013	<0.00077	<0.099	<0.1	<0.11	<0.1	<0.00085
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00064	<0.00079	<0.00077	<0.0011	<0.00074	<0.001	<0.0006	<0.077	<0.078	<0.084	<0.078	<0.00066
2-Butanone	78-93-3	mg/kg	<0.0014	<0.0013	<0.0013	0.0037 J	<0.0014	<0.0013	<0.0014	<0.0015	<0.002	<0.0025	<0.0024	0.02	<0.0023	<0.0031	<0.0019 JL	<0.24	<0.24	<0.26	<0 25	<0.0021
2-Hexanone	591-78-6	mg/kg	<0.00099	<0.00095	<0.00093	<0.001	<0.00097	<0.00091	<0.00098	<0.0011	<0.0016	<0.0019	<0.0019	<0.0027	<0.0018	<0.0024	<0.0015	<0.19	<0.19	<0.2	<0.19	<0.0016
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.00099	<0.00095	<0.00093	<0.001	<0.00097	<0.00091	<0.00098	<0.0011	<0.00092	<0.0011	<0.0011	<0.0016	<0.0011	<0.0014	<0.00086	<0.11	<0.11	<0.12	<0.11	<0.00094
Acetone	67-64-1	mg/kg	<0.002	<0.0019	0.0095 U	0.026 U	0.065 U	<0.0018	0.022 U	0.019 U	<0.0042	<0.0052	0.012 U	0.13 U	0.011 U	<0.0065	<0.0039	<0.51	<0.51	<0.55	<0 52	<0.0043
Benzene	71-43-2	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	1.2	<0.00046	<0.00049	<0.00053	<0.00055	<0.00068	<0.00066	<0.00097	<0.00063	<0.00085	<0.00051	<0.066	<0.067	<0.072	<0.067	<0.00057
Bromodichloromethane	75-27-4	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00055	<0.00068	<0.00066	<0.00097	<0.00063	<0.00085	<0.00051	<0.066	<0.067	<0.072	<0.067	<0.00057
Bromoform	75-25-2	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00064	<0.00079	<0.00077	<0.0011	<0.00074	<0.001	<0.0006	<0.077	<0.078	<0.084	<0.078	<0.00066
Bromomethane	74-83-9	mg/kg	<0.00099	<0.00095	<0.00093	<0.001	<0.00097	<0.00091	<0.00098	<0.0011	<0.00092	<0.0011	<0.0011	<0.0016	<0.0011	<0.0014	<0.00086	<0.11	<0.11	<0.12	<0.11	<0.00094
Carbon disulfide	75-15-0	mg/kg	<0.00099	<0.00095	<0.00093	<0.001	0.0037 JH	<0.00091	<0.00098	<0.0011	<0.0015	<0.0018	<0.0018	0.0074 J	<0.0017	<0.0023	<0.0014	<0.18	<0.18	<0.19	<0.18	<0.0015
Carbon tetrachloride	56-23-5	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.0011	<0.0014	<0.0013	<0.0019	<0.0013	<0.0017	<0.001	<0.13	<0.13	<0.14	<0.13	<0.0011

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			NPSB07	NPSB07	NPSB08	NPSB08	NPSB08	NPSB09	NPSB09	NPSB09	NPSB10	NPSB10	NPSB10	NPSL10	NPSB10	NPSB11	NPSB11	NPSB11	NPSB11	NPSB11	NPSB12
Sample Date			4-5 ft	5-6 ft	1-2 ft	2-3 ft	9-10 ft	1-2 ft	2-3 ft	10-11 ft	1-2 ft	4-5 ft	9-10 ft	10-11 ft	11-12 ft	1-2 ft	4-5 ft	9-10 ft	9-10 ft	10-11 ft	11-12 ft	1-2 ft
Sample Date			11/9/2010	11/9/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	1/12/2012	1/12/2012	1/12/2012	1/12/2012	1/12/2012	1/18/2012	1/18/2012	1/18/2012	1/18/2012	1/18/2012	1/18/2012	1/25/2012
Analyte	CAS No.	Units																			
Chlorobenzene	108-90-7	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00046	<0.00057	<0.00055	<0.00081	<0.00053	<0.00071	<0.00043	<0.055	<0.056	<0.06	<0.056	<0.00047
Chloroethane	75-00-3	mg/kg	<0.00099	<0.00095	<0.00093	<0.001	<0.00097	<0.00091	<0.00098	<0.0011	<0.00092	<0.0011	<0.0011	<0.0016	<0.0011	<0.0014	<0.00086	<0.11	<0.11	<0.12	<0.11	<0.00094
Chloroform	67-66-3	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.0017	<0.002	<0.002	<0.0029	<0.0019	<0.0026	<0.0015	<0.2	<0.2	<0.22	<0.2	<0.0017
Chloromethane	74-87-3	mg/kg	<0.00099	<0.00095	<0.00093	<0.001	<0.00097	<0.00091	<0.00098	<0.0011	<0.00083	<0.001	<0.00099	<0.0015	<0.00095	<0.0013	<0.00077	<0.099	<0.1	<0.11	<0.1	<0.00085
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.0014	<0.0017	<0.0017	<0.0024	<0.0016	<0.0021	<0.0013	<0.17	<0.17	<0.18	<0.17	<0.0014
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00046	<0.00057	<0.00055	<0.00081	<0.00053	<0.00071	<0.00043	<0.055	<0.056	<0.06	<0.056	<0.00047
Cyclohexane	110-82-7	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	22	<0.00046	<0.00049	<0.00053	<0.0011	<0.0014	<0.0013	0.0059 J	<0.0013	<0.0017	<0.001	8.3 J	17 J	12	8.9	<0.0011
Dibromochloromethane	124-48-1	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00046	<0.00057	<0.00055	<0.00081	<0.00053	<0.00071	<0.00043	<0.055	<0.056	<0.06	<0.056	<0.00047
Dichlorodifluoromethane	75-71-8	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.0017	<0.002	<0.002	<0.0029	<0.0019	<0.0026	<0.0015	<0.2	<0.2	<0.22	<0.2	<0.0017
Ethylbenzene	100-41-4	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	3.3	<0.00046	<0.00049	<0.00053	<0.00083	<0.001	<0.00099	0.055	<0.00095	<0.0013	<0.00077	<0.099	<0.1	<0.11	<0.1	<0.00085
Isopropylbenzene	98-82-8	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	0.13	<0.00046	<0.00049	<0.00053	<0.00092	<0.0011	<0.0011	0.026	<0.0011	<0.0014	<0.00086	5.8 J	12 J	11	9.4	<0.00094
Methyl acetate	79-20-9	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00092	<0.0011	<0.0011	<0.0016	<0.0011	<0.0014	<0.00086	<0.11	<0.11	<0.12	<0.11	<0.00094
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.0017	<0.0021	<0.0021	<0.0031	<0.002	<0.0027	<0.0016	<0.21	<0.21	<0.23	<0 21	<0.0018
Methylcyclohexane	108-87-2	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	48	<0.00046	<0.00049	<0.00053	<0.0014	<0.0017	<0.0017	0.022	<0.0016	<0.0021	<0.0013	2.2 J	4.1 J	4.1	3.4	<0.0014
Methylene chloride	75-09-2	mg/kg	<0.00099	<0.00095	<0.00093	<0.001	<0.00097	<0.00091	<0.00098	0.0017 U	0.0055 J	0.0055 J	0.0073 J	0.011 J	0.0073 J	<0.0036	<0.0021	<0.28	<0.28	<0.3	<0 28	<0.0024
Naphthalene	91-20-3	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0013 U	5.3	<0.00046	0.0012 U	<0.00053	<0.00073	<0.0009	<0.00088	0.13	<0.00085	<0.0011	<0.00069	<0.088	<0.089	<0.096	<0.09	<0.00076
n-Butylbenzene	104-51-8	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00055	<0.00068	<0.00066	0.035	<0.00063	<0.00085	<0.00051	<0.066	<0.067	<0.072	<0.067	<0.00057
n-Propylbenzene	103-65-1	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	1.5	<0.00046	<0.00049	<0.00053	<0.00083	<0.001	<0.00099	0.018	<0.00095	<0.0013	<0.00077	14 J	36 J	20	14	<0.00085
sec-Butylbenzene	135-98-8	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00055	<0.00068	<0.00066	0.014	<0.00063	<0.00085	<0.00051	2.7 J	5.4 J	5.6	5.5	<0.00057
Styrene	100-42-5	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00055	<0.00068	<0.00066	0.025	<0.00063	<0.00085	<0.00051	<0.066	<0.067	<0.072	<0.067	<0.00057
tert-Butylbenzene	98-06-6	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00055	<0.00068	<0.00066	<0.00097	<0.00063	<0.00085	<0.00051	1.6	3.2	4.9	5.6	<0.00057
Tetrachloroethene	127-18-4	mg/kg	<0.0006	<0.00057	<0.00056	<0.0006	<0.00058	<0.00055	<0.00059	<0.00064	<0.00092	<0.0011	<0.0011	<0.0016	<0.0011	<0.0014	<0.00086	<0.11	<0.11	<0.12	<0.11	<0.00094
Toluene	108-88-3	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	0.83	<0.00046	<0.00049	<0.00053	<0.00064	<0.00079	<0.00077	0.0031 J	<0.00074	<0.001	<0.0006	<0.077	<0.078	<0.084	<0.078	<0.00066
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00083	<0.001	<0.00099	<0.0015	<0.00095	<0.0013	<0.00077	<0.099	<0.1	<0.11	<0.1	<0.00085
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00046	<0.00057	<0.00055	<0.00081	<0.00053	<0.00071	<0.00043 JL	<0.055	<0.056	<0.06	<0.056	<0.00047
Trichloroethene	79-01-6	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.0015	<0.0018	<0.0018	<0.0026	<0.0017	<0.0023	<0.0014	<0.18	<0.18	<0.19	<0.18	<0.0015
Trichlorofluoromethane	75-69-4	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00073	<0.0009	<0.00088	<0.0013	<0.00085	<0.0011	<0.00069	<0.088	<0.089	<0.096	<0.09	<0.00076
Vinyl chloride	75-01-4	mg/kg	<0.0005	<0.00048	<0.00047	<0.0005	<0.00048	<0.00046	<0.00049	<0.00053	<0.00092	<0.0011	<0.0011	<0.0016	<0.0011	<0.0014	<0.00086	<0.11	<0.11	<0.12	<0.11	<0.00094
Xylenes, Total	1330-20-7	mg/kg	<0.0015	<0.0014	<0.0014	<0.0015	20	<0.0014	<0.0015	<0.0016	<0.0024	<0.0029	<0.0029	0.025	<0.0027	<0.0037	<0.0022	<0.29	<0.29	<0.31	<0 29	<0.0025
SEMIVOLATILE ORGANIC COMPOUNDS																						
1,1´-Biphenyl	92-52-4	mg/kg	<0.0035	<0.0036	<0.0033	<0.0036	2.6	<0.0035	<0.0035	<0.0038 JL	<0.0018	<0.0019	<0.0021	0.017	0.023	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
1-Methylnaphthalene	90-12-0	mg/kg	<0.0028	<0.0029	<0.0026	<0.0029	41	<0.0028	<0.0028	<0.003 JL	<0.0018	<0.0019	<0.0021	0.039	0.052	<0.0018	<0.002	9.6	8.4	14	14	<0.017
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0034 JL	<0.0035 JL	<0.0032	<0.0035	<0.068	<0.0034	<0.0034	<0.0037 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.002 JL	<0.002 JL	<0.017
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.004 JL	<0.0041 JL	<0.0038	<0.0041	<0.08	<0.004	<0.004	<0.0043 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.002 JL	<0.002 JL	<0.017
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0027 JL	<0.0027 JL	<0.0025	<0.0028	<0.054	<0.0026	<0.0027	<0.0029 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.002 JL	<0.002 JL	<0.017
2 4-Dimethylphenol	105-67-9	mg/kg	<0.004 JL	<0.0041 JL	<0.0038	<0.0041	<0.08	<0.004	<0.004	<0.0043 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002 JL	<0.002 JL	<0.017
2 4-Dinitrophenol	51-28-5	mg/kg	<0.004 JL	<0.0041 JL	<0.0038	<0.0041	<0.08	<0.004	<0.004	<0.0043 JL	<0.0038	<0.0038	<0.0043	<0.0056	<0.0044	<0.0038	<0.0041	<0.0041 JL	<0.004	<0.004 JL	<0.0042 JL	<0.036
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.004	<0.0041	<0.0038	<0.0041	<0.08	<0.004	<0.004	<0.0043 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.0039	<0.004	<0.0037	<0.004	<0.078	<0.0038	<0.0039	<0.0042 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
2-Chloronaphthalene	91-58-7	mg/kg	<0.005	<0.0051	<0.0047	<0.0051	<0.1	<0.0049	<0.005	<0.0054 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
2-Chlorophenol	95-57-8	mg/kg	<0.0039 JL	<0.004 JL	<0.0037	<0.004	<0.078	<0.0038	<0.0039	<0.0042 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.002 JL	<0.002 JL	<0.017
2-Methylnaphthalene	91-57-6	mg/kg	<0.0033	<0.0034	<0.0031	<0.0034	58	<0.0032	<0.0033	<0.0036 JL	0.0045 J	<0.0019	<0.0021	0.026	0.053	<0.0018	<0.002	11	10	16	15	<0.017
2-Methylphenol	95-48-7	mg/kg	<0.0035 JL	<0.0036 JL	<0.0033	<0.0036	<0.071	<0.0035	<0.0035	<0.0038 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.002 JL	<0.002 JL	<0.017
2-Nitroaniline	88-74-4	mg/kg	<0.004	<0.0041	<0.0038	<0.0041	<0.08	<0.004	<0.004	<0.0043 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
2-Nitrophenol	88-75-5	mg/kg	<0.0056 JL	<0.0057 JL	<0.0052	<0.0058	<0.11	<0.0055	<0.0056	<0.0061 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.002 JL	<0.002 JL	<0.017
3&4-Methylphenol	106-44-5	mg/kg	<0.0034 JL	<0.0035 JL	<0.0032	<0.0035	<0.068	<0.0034	<0.0034	<0.0037 JL	<0.0018	<0.0019	<0.0021	0.0029 J	0.0043 J	<0.0018	<0.002	<0.002 JL	<0.0019	<0.002 JL	<0.002 JL	<0.017
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0038	<0.0039	<0.0035	<0.0039	<0.075	<0.0037	<0.0038	<0.0041 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017 JL
3-Nitroaniline	99-09-2	mg/kg	<0.0032	<0.0032	<0.003	<0.0033	<0.063	<0.0031	<0.0032	<0.0034 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.004 JL	<0.0041 JL	<0.0038	<0.0041	<0.08	<0.004	<0.004	<0.0043 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.002 JL	<0.002 JL	<0.017
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.004	<0.0041	<0.0038	<0.0041	<0.08	<0.004	<0.004	<0.0043 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.004 JL	<0.0041 JL	<0.0038	<0.0041	<0.08	<0.004	0.008 J	<0.0043 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002 JL	<0.0019	<0.002 JL	<0.002 JL	<0.017
4-Chloroaniline	106-47-8	mg/kg	<0.0027	<0.0027	<0.0025	<0.0028	<0.054	<0.0026	<0.0027	<0.0029 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0027	<0.0027	<0.0025	<0.0028	<0.054	<0.0026	<0.0027	<0.0029 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
4-Nitroaniline	100-01-6	mg/kg	<0.004	<0.0041	<0.0038	<0.0041	<0.08	<0.004	<0.004	<0.0043 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
4-Nitrophenol	100-02-7	mg/kg	<0.0046 JL	<0.0047 JL	<0.0043	<0.0048	<0.092	<0.0046	<0.0046	<0.005 JL	<0.0038 JL	<0.0038	<0.0043	<0.0056	<0.0044	<0.0038	<0.0041	<0.0041 JL	<0.004	<0.004 JL	<0.0042 JL	<0.036
Acenaphthene	83-32-9	mg/kg	<0.0027	<0.0027	<0.0025	<0.0028	2.1	<0.0026	<0.0027	<0.0029 JL	<0.0018	0.0034 J	<0.0021	0.0088 J	0.014	<0.0018	<0.002	0.21	0.27	0.27	0.31	<0.017
Acenaphthylene	208-96-8	mg/kg	<0.0027	<0.0027	<0.0025	<0.0028	<0.054	<0.0026	<0.0027	<0.0029 JL	<0.0018	0.022	<0.0021	0.0096 J	0.018	<0.0018	<0.002	0.14	0.17	0.23	0.25	<0.017
Acetophenone	98-86-2	mg/kg	<0.0029	<0.003	<0.0027	<0.003	<0.058	<0.0029	<0.0029	<0.0032 JL	0.0052 J	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
Anthracene	120-12-7	mg/kg	<0.0027	<0.0027	<0.0025	<0.0028	<0.054	0.0065 J	<0.0027	<0.0029 JL	0.0033 J	0.048	<0.0021	<0.0027	<0.0021	0.002 J	<0.002	0.19	0.14	0.16	0.22	0.033 J
Benz(a)anthracene	56-55-3	mg/kg	<0.0034	<0.0035	0.0068 J	0.0042 J	0.15 J	0.04	0.019	<0.0037 JL	0.032	0.2	<0.0021	0.004 J	0.013	0.0087	<0.002	0.054	0.065	0.088	0.049	0.059 J
Benzaldehyde	100-52-7	mg/kg	<0.0056 JL	<0.0057 JL	<0.0052 JL	<0.0058 JL	<0.11 JL	<0.0055 JL	<0.0056 JL	<0.0061 JL	---	---	---	0.003 UJL	---	<0.0018 JL	<0.002 JL	<0.002 JL	<0.0019 JL	<0.002 JL	<0.002 JL	<0.017 JL
Benzo(a)pyrene	50-32-8	mg/kg	<0.0028	<0.0029	0.011	0.013	<0.056	0.055	0.021	<0.003 JL	0.035	0.16	<0.0021	0.0034 J	0.0084 J	0.0085	<0.002	0.041	0.045	0.046	0.017	0.096
Benzo(b)fluoranthene	205-99-2	mg/kg	<0.004	<0.0041	0.0065 J	0.015	<0.08	0.042	0.032	<0.0043 JL	0.056 JH	0.34	<0.0021	0.0041 J	0.0061 J	0.013	<0.002	0.046	0.041	0.034	0.028	0.12
Benzo(g h i)perylene	191-24-2	mg/kg	<0.0035	<0.0036	<0.0033	0.014	<0.071	<0.0035	0.015	<0.0038 JL	0.03	0.14	<0.0022	0.0041 J	0.011	0.0094	<0.0021	0.042	0.034	0.048	0.029	0.1
Benzo(k)fluoranthene	207-08-9	mg/kg	<0.004	<0.0041	0.012	0.005 J	<0.08	0.048	0.012	<0.0043 JL	0.019	0.36	<0.0021	<0.0027	0.0081 J	0.0065 J	<0.002	0.017	0.018	0.034	0.0065 J	0.063 J
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.0029	<0.003	<0.0027	<0.003	<0.058	<0.0029	<0.0029	<0.0032 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0034	<0.0035	<0.0032	<0.0035	<0.068	<0.0034	<0.0034	<0.0037 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0033	<0.0034	<0.0031	<0.0034	<0.066	<0.0032	<0.0033	<0.0036 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	<0.0081	<0.0082	<0.0075	<0.0083	<0.16	0.0084 U	<0.008	0.0098 UJL	0.061	0.011 U	0.009 U	0.015	0.0098 U	0.014 U	0.0049 U	0.87	1.2	0.044 U	0.037 U	0.025 U
Butyl benzyl phthalate	85-68-7	mg/kg	<0.0031	<0.0031	0.034	<0.0031	<0.061	<0.003	<0.003	<0.0033 JL	0.006 J	<0.0032	<0.0037	<0.0047	<0.0037	<0.0032	<0.0035	<0.0035	<0.0034	<0.0034	<0.0035	<0.03
Caprolactam	105-60-2	mg/kg	<0.0029	<0.003	<0.0027	<0.003	<0.058	<0.0029	<0.0029	0.0041 JL	<0.0023	<0.0023	0.0043 J	<0.0034	<0.0026	0.0065 J	<0.0025	<0.0025	<0.0024	<0.0024	<0.0025	<0.022
Carbazole	86-74-8	mg/kg	<0.0027	<0.0027	<0.0025	<0.0028	<0.054	0.0047 J	0.0036 J	<0.0029 JL	0.0031 J	0.033	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	0.018 J
Chrysene	218-01-9	mg/kg	<0.0035	<0.0036	0.0099	0.0058 J	0.5	0.058	0.024	<0.0038 JL	0.044	0.37	<0.0021	0.0071 J	0.026	0.0087	<0.002	0.14	0.086	0.14	0.092	0.1
Dibenz(a h)anthracene	53-70-3	mg/kg	<0.0027	<0.0027	<0.0025	0.0033 J	<0.054	<0.0026	0.0039 J	<0.0029 JL	0.011	0.044	<0.0026	<0.0034	<0.0026	0.0029 J	<0.0025	<0.0025	0.012	0.022	<0.0025	<0.022
Dibenzofuran	132-64-9	mg/kg	<0.0027	<0.0027	<0.0025	<0.0028	<0.054	<0.0026	<0.0027	<0.0029 JL	<0.0018	0.0021 J	<0.0021	0.017	0.022	<0.0018	<0.002	0.19 J	0.37 J	0.32	0.72	<0.017
Diethyl phthalate	84-66-2	mg/kg	<0.004	<0.0041	<0.0038	<0.0041	<0.08	<0.004	<0.004	<0.0043 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
Dimethyl phthalate	131-11-3	mg/kg	<0.0029	<0.003	<0.0027	<0.003	<0.058	<0.0029	<0.0029	<0.0032 JL	<0.0023	<0.0023	<0.0026	<0.0034	<0.0026	<0.0023	<0.0025	<0.0025	<0.0024	<0.0024	<0.0025	<0.022
Di-n-butyl phthalate	84-74-2	mg/kg	<0.0031	<0.0031	0.0046 U	<0.0031	<0.061	<0.003	<0.003	<0.0033 JL	<0.0023	<0.0023	<0.0026	0.0041 U	0.017 U	<0.0023	<0.0025	0.12 U	0.074 U	<0.0024	0.19 U	0.039 U
Di-n-octyl phthalate	117-84-0	mg/kg	<0.0035	<0.0036	<0.0033	<0.0036	<0.071	<0.0035	<0.0035	<0.0038 JL	<0.0023	<0.0023	<0.0026	<0.0034	<0.0026	<0.0023	<0.0025	<0.0025	<0.0024	<0.0024	<0.0025	<0.022
Fluoranthene	206-44-0	mg/kg	<0.0027	<0.0027	0.013	<0.0028	1.1	0.069	0.042	<0.0029 JL	0.063	0.24	<0.0021	0.0081 J	0.028	0.013	<0.002	0.18	0.14	0.14	0.11	0.19
Fluorene	86-73-7	mg/kg	<0.0027	<0.0027	<0.0025	<0.0028	5.7	0.0028 J	<0.0027	<0.0029 JL	<0.0018	0.0044 J	<0.0021	0.0073 J	0.012	<0.0018	<0.002	0.39	0.52	0.79	0.84	<0.017

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			NPSB07	NPSB07	NPSB08	NPSB08	NPSB08	NPSB09	NPSB09	NPSB09	NPSB10	NPSB10	NPSB10	NPSL10	NPSB10	NPSB11	NPSB11	NPSB11	NPSB11	NPSB11	NPSB12
Sample Date			4-5 ft	5-6 ft	1-2 ft	2-3 ft	9-10 ft	1-2 ft	2-3 ft	10-11 ft	1-2 ft	4-5 ft	9-10 ft	10-11 ft	11-12 ft	1-2 ft	4-5 ft	9-10 ft	9-10 ft	10-11 ft	11-12 ft	1-2 ft
Sample Date			11/9/2010	11/9/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	11/10/2010	1/12/2012	1/12/2012	1/12/2012	1/12/2012	1/12/2012	1/18/2012	1/18/2012	1/18/2012	1/18/2012	1/18/2012	1/18/2012	1/25/2012
Analyte	CAS No.	Units																			
Hexachlorobenzene	118-74-1	mg/kg	<0.0032	<0.0032	<0.003	<0.0033	<0.063	<0.0031	<0.0032	<0.0034 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
Hexachlorobutadiene	87-68-3	mg/kg	<0.0054	<0.0055	<0.005	<0.0055	<0.11	<0.0053	<0.0053	<0.0058 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0044	<0.0045	<0.0041	<0.0045	<0.088	<0.0043	<0.0044	<0.0047 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
Hexachloroethane	67-72-1	mg/kg	<0.0048	<0.0049	<0.0045	<0.0049	<0.095	<0.0047	<0.0047	<0.0051 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	<0.0043	<0.0044	<0.004	0.014	<0.085	<0.0042	0.019	<0.0046 JL	0.03	0.19	<0.0021	0.0047 J	0.0052 J	0.0075 J	<0.002	<0.002 J	0.031 J	0.017	<0.002	0.087
Isophorone	78-59-1	mg/kg	<0.0037	<0.0037	<0.0034	<0.0038	<0.073	<0.0036	<0.0036	<0.0039 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
Naphthalene	91-20-3	mg/kg	<0.004	<0.0041	<0.0038	<0.0041	15	<0.004	<0.004	<0.0043 JL	0.0023 J	<0.0019	<0.0021	0.0042 J	0.005 J	<0.0018	<0.002	1.2 J	0.57 J	0.75	<0.002	<0.017
Nitrobenzene	98-95-3	mg/kg	<0.004	<0.0041	<0.0038	<0.0041	<0.08	<0.004	<0.004	<0.0043 JL	<0.0018	<0.0019	<0.0021	<0.0027	<0.0021	<0.0018	<0.002	<0.002	<0.0019	<0.002	<0.002	<0.017
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0049	<0.005	<0.0046	<0.005	<0.097	<0.0048	<0.0049	<0.0053 JL	<0.0023	<0.0023	<0.0026	<0.0034	<0.0026	<0.0023	<0.0025	<0.0025	<0.0024	<0.0024	<0.0025	<0.022
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0027	<0.0027	<0.0025	<0.0028	<0.054	<0.0026	<0.0027	<0.0029 JL	<0.0023	<0.0023	<0.0026	<0.0034	<0.0026	<0.0023	<0.0025	<0.0025	<0.0024	<0.0024	<0.0025	<0.022
Pentachlorophenol	87-86-5	mg/kg	<0.0034 JL	<0.0035 JL	<0.0032 JL	<0.0035 JL	<0.068 JL	<0.0034 JL	<0.0034 JL	<0.0037 JL	<0.0021	<0.0021	<0.0024	<0.003	<0.0024	<0.0021	<0.0022	<0.0022 JL	<0.0022	<0.0022 JL	<0.0023 JL	<0.019
Phenanthrene	85-01-8	mg/kg	<0.0037	<0.0037	0.0057 J	<0.0038	21	0.031	0.02	<0.0039 JL	0.031	0.063	<0.0033	0.015	0.025	0.0059 J	<0.0031	1.4	1.2	1.8	1.9	0.097
Phenol	108-95-2	mg/kg	<0.004 JL	<0.0041 JL	<0.0038	<0.0041	<0.08	<0.004	<0.004	<0.0043 JL	<0.0023	<0.0023	<0.0026	0.0034 J	0.003 J	<0.0023	<0.0025	<0.0025 JL	<0.0024	<0.0024 JL	<0.0025 JL	<0.022
Pyrene	129-00-0	mg/kg	<0.0027	<0.0027	0.015	<0.0028	2.1	0.066	0.036	<0.0029 JL	0.06	0.23	<0.0021	0.011 J	0.054	0.012	<0.002	0.27	0.21	0.32	0.38	0.14

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			NPSB12	NPSB12	NPSB12	NPSS01	NPSS02	NPSS03	NPSS04	NPSS05	NPSS06	NPSS07	NPSS08	NPSS08	WSB05	WSB05	WSB05	WSB06	WSB06	WSB06	WSB07	WSB07
Sample Date			4-5 ft	7-8 ft	7.5-8.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	4-5 ft	11-12 ft	1-2 ft	2-3 ft	10-11 ft	1-2 ft	4-5 ft
Sample Date			1/25/2012	1/25/2012	1/25/2012	10/12/2010	10/13/2010	10/12/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	11/3/2010	11/3/2010	11/3/2010	12/6/2010	12/6/2010	12/6/2010	11/2/2010	11/2/2010
Analyte	CAS No.	Units																				
METALS																						
Aluminum	7429-90-5	mg/kg	10200 JL	8490 JL	4850	11700	7920	6050	1600	7200	7480	6280	6610	6300	9020	11300	8980	14900	14400	1750	7750	7130
Antimony	7440-36-0	mg/kg	<0.21	<0.23	<0.22	<0.25	<2.8	0.53 J	<2.4	<2.7	<2.6	<2.8	<2.6	<2.6	<0.28	<0.28	<0 31	<0.28	<0.29	<0.26	0.338 J	<0.29
Arsenic	7440-38-2	mg/kg	4.23	5.66	0.891	1.65	3.23 J	6.56	6.63	4.59 J	5.04 J	4.77 J	2.96 J	8.36	3.86	4.8	7.94	4.39	4.27	1.41	13.8	3.21
Barium	7440-39-3	mg/kg	189	385	186	293	370	468	3590	522	1420	1010	327	314	259	181	260	274	304	35.4	211	188
Beryllium	7440-41-7	mg/kg	1.38	1.31	0.358 J	0.585	0.829 J	0.305 J	<0.49	0.786 J	0.669 J	0.677 J	0.715 J	0.678 J	0.597 J	0.669 J	0.546 J	0.764	0.84	0.149 J	0.537 J	0.504 J
Cadmium	7440-43-9	mg/kg	0.235 J	0.248 J	0.131 J	1.27	1.38 J	7.38	2.08 J	9.47	2.06 J	5.6	0.907 J	0.743 J	0.237 J	0.18 J	0.195 J	0.209 J	0.241 J	<0.041	31.9	0.146 J
Chromium	7440-47-3	mg/kg	8.26	7.12	2.43	61.8	19	30.5 JL	13	35.3	19.2	61.5	8.16	8.28	5.57	6.57	5.57	10.6	10.5	1.78	8.81	4.43
Cobalt	7440-48-4	mg/kg	5.3	7.5	1.32	2.27	3.29 J	2.74	0.518 J	3.24 J	4.38 J	5.11 J	3.28 J	3.21 J	3.01	3.24	4.87	5.73	4.68	1.15	8.27	3.09
Copper	7440-50-8	mg/kg	5.74	5.72	2.43	14.3	15.6	27.2	8.26	34.5	18.1	25.9	7.15	5.84	6.77	5.34	4.99	7.42	7.19	1.2	106	3.22
Lead	7439-92-1	mg/kg	9.54	12.5	5.48	136	63.6	173	53.5	158	37	1800	10.1	9.25	10.1	8.71	10.3	11.1	10.3	2.75	209	5.61
Manganese	7439-96-5	mg/kg	327	449	102	126	205	262	93.4	205	254	379	162	189	155	217	787	369	250	65.9	439	187
Nickel	7440-02-0	mg/kg	8.39	7.71	2.54	12.3	7.73	6.1	4.1 J	6.48	15.1	12	10.3	8.35	6.7	6.46	6.06	8.73	8.45	1.48	7	4.43
Selenium	7782-49-2	mg/kg	0.675 U	0 549 U	0.584	0.584	<2.8	2.5	<2.4	12	2.7 J	5.41 J	<2.6	<2.6	0.879	0.869	0.835	0.778	0.752	<0.26	3.28	0.621
Silver	7440-22-4	mg/kg	<0.082	<0.093	<0.089	0.0937 J	<0.45	0.641	<0.39	0.585 J	<0.41	<0.44	<0.41	<0.42	<0.23	<0.22	<0 25	<0.045	<0.047	<0.041	1.87	<0.046
Thallium	7440-28-0	mg/kg	0.225 J	0.227 J	<0.077	0.11 J	<0.79	0.254 J	<0.69	<0.76	<0.72	<0.78	<0.72	<0.74	0.13 J	0.166 J	0.231 J	0.201 J	0.311 J	<0.072	0.149 J	0.131 J
Vanadium	7440-62-2	mg/kg	19.9	19.9	9.13	21.8	14.9	10.4	5.22	13.8	23.8	14.1	22	23.6	9.32	20.7	14.6	25	32.6	5.38	19.4	11.3
Zinc	7440-66-6	mg/kg	26.4	24.5 JH	12.6	1030	361	962	1130	888	496	1130	116	111	25.4	23.3	21.1	54.3	51.6	5.86	2280	16.1
Mercury	7439-97-6	mg/kg	0.00548	0.00125 J	0.0366	0.296	1.66	4.14	0.34	7.55	0.435	1.5	0.125	0.142	0.025	0.00537	0.00445	0.0272	0.0159	0.00181 J	3.68	0.00159 J
Cyanide	57-12-5	mg/kg	<0.7	<0.74	<0.76	<0.62	<0.69	<0.67	<0.58	<0.64	<0.63	<0.69	<0.62	<0.62	2.3	<0.71	<0.77	<0.72	<0.75	<0.68	<0.71	<0.7
PESTICIDES and PCBs																						
4,4´-DDD	72-54-8	mg/kg	<0.00058	<0.00062	<0.00063	<0.0026	<0.0059	<0.00057	<0.0025	0.045 J	<0.0056	<0.0058	<0.0056	<0.0055	<0.00058	<0.00059	<0.00065	<0.00061	<0.00063	<0.00058	<0.006	<0.0059
4,4´-DDE	72-55-9	mg/kg	<0.00058	<0.00062	<0.00063	<0.0026	<0.0059	<0.00057	<0.0025	<0.0028	<0.0056	<0.0058	<0.0056	<0.0055	<0.00058	<0.00059	<0.00065	<0.00061	<0.00063	<0.00058	<0.006	<0.0059
4,4´-DDT	50-29-3	mg/kg	<0.00058	<0.00062	<0.00063	<0.0026	<0.0059	<0.00057	<0.0025	0.01 J	<0.0056	<0.0058	<0.0056	<0.0055	<0.00058	<0.00059	<0.00065	<0.00061	<0.00063	<0.00058	<0.006	<0.0059
Aldrin	309-00-2	mg/kg	<0.00035	<0.00037	<0.00038	<0.0016	<0.0035	<0.00034	<0.0015	0.024 J	<0.0034	<0.0035	<0.0033	<0.0033	<0.00035	<0.00035	<0.00039	<0.00037	<0.00038	<0.00035	<0.0036	<0.0035
alpha-BHC	319-84-6	mg/kg	<0.00035	<0.00037	<0.00038	<0.0016	<0.0035	<0.00034	<0.0015	<0.0017	<0.0034	<0.0035	<0.0033	<0.0033	<0.00035	<0.00035	<0.00039	<0.00037	<0.00038	<0.00035	<0.0036	<0.0035
alpha-Chlordane	5103-71-9	mg/kg	<0.00023	<0.00025	<0.00025	<0.0011	<0.0024	<0.00023	<0.001	<0.0011	<0.0022	<0.0023	<0.0022	<0.0022	<0.00023	<0.00024	<0.00026	<0.00024	<0.00025	<0.00023	<0.0024	<0.0023
beta-BHC	319-85-7	mg/kg	<0.00035	<0.00037	<0.00038	<0.0016	<0.0035	<0.00034	<0.0015	<0.0017	<0.0034	<0.0035	<0.0033	<0.0033	<0.00035	<0.00035	<0.00039	<0.00037	<0.00038	<0.00035	<0.0036	<0.0035
delta-BHC	319-86-8	mg/kg	<0.00023	<0.00025	<0.00025	<0.0011	<0.0024	<0.00023	<0.001	<0.0011	<0.0022	<0.0023	<0.0022	<0.0022	<0.00023	<0.00024	<0.00026	<0.00024	<0.00025	<0.00023	<0.0024	<0.0023
Dieldrin	60-57-1	mg/kg	<0.00058	<0.00062	<0.00063	<0.0026	<0.0059	<0.00057	<0.0025	<0.0028	<0.0056	<0.0058	<0.0056	<0.0055	<0.00058	<0.00059	<0.00065	<0.00061	<0.00063	<0.00058	<0.006	<0.0059
Endosulfan I	959-98-8	mg/kg	<0.00035	<0.00037	<0.00038	<0.0016	<0.0035	<0.00034	<0.0015	<0.0017	<0.0034	<0.0035	<0.0033	<0.0033	<0.00035	<0.00035	<0.00039	<0.00037	<0.00038	<0.00035	<0.0036	<0.0035
Endosulfan II	33213-65-9	mg/kg	<0.0007	<0.00074	<0.00076	<0.0032	<0.0071	<0.00069	<0.003	<0.0034	<0.0067	<0.0069	<0.0067	<0.0067	<0.0007	<0.00071	<0.00078	<0.00073	<0.00076	<0.00069	<0.0072	<0.007
Endosulfan sulfate	1031-07-8	mg/kg	<0.0007	<0.00074	<0.00076	<0.0032	<0.0071	<0.00069	<0.003	<0.0034	<0.0067	<0.0069	<0.0067	<0.0067	<0.0007	<0.00071	<0.00078	<0.00073	<0.00076	<0.00069	<0.0072	<0.007
Endrin	72-20-8	mg/kg	<0.0007	<0.00074	<0.00076	<0.0032	<0.0071	0.0044 J	<0.003	0.061 J	<0.0067	<0.0069	<0.0067	<0.0067	<0.0007	<0.00071	<0.00078	<0.00073	<0.00076	<0.00069	<0.0072	<0.007
Endrin aldehyde	7421-93-4	mg/kg	<0.0007	<0.00074	<0.00076	<0.0032	<0.0071	<0.00069	<0.003	<0.0034	<0.0067	<0.0069	<0.0067	<0.0067	<0.0007	<0.00071	<0.00078	<0.00073	<0.00076	<0.00069	<0.0072	<0.007
gamma-BHC	58-89-9	mg/kg	<0.00023	<0.00025	<0.00025	<0.0011	<0.0024	<0.00023	<0.001	<0.0011	<0.0022	<0.0023	<0.0022	<0.0022	<0.00023	<0.00024	<0.00026	<0.00024	<0.00025	<0.00023	<0.0024	<0.0023
gamma-Chlordane	5103-74-2	mg/kg	<0.00023	<0.00025	<0.00025	<0.0011	<0.0024	<0.00023	<0.001	0.0093 U	<0.0022	<0.0023	<0.0022	<0.0022	<0.00023	<0.00024	<0.00026	<0.00024	<0.00025	<0.00023	<0.0024	<0.0023
Heptachlor	76-44-8	mg/kg	<0.00035	<0.00037	<0.00038	<0.0016	<0.0035	<0.00034	<0.0015	<0.0017	<0.0034	<0.0035	<0.0033	<0.0033	<0.00035	<0.00035	<0.00039	<0.00037	<0.00038	<0.00035	<0.0036	<0.0035
Heptachlor epoxide	1024-57-3	mg/kg	<0.00035	<0.00037	<0.00038	<0.0016	<0.0035	<0.00034	<0.0015	<0.0017	<0.0034	<0.0035	<0.0033	<0.0033	<0.00035	<0.00035	<0.00039	<0.00037	<0.00038	<0.00035	<0.0036	<0.0035
Methoxychlor	72-43-5	mg/kg	<0.0039	<0.0042	<0.0043	<0.018	<0.04	<0.0039	<0.017	<0.019	<0.038	<0.039	<0.038	<0.038	<0.004	<0.004	<0.0044	<0.0041	<0.0043	<0.0039	<0.041	<0.04
Toxaphene	8001-35-2	mg/kg	<0.0056	<0.0059	<0.0061	<0.02	<0.045	<0.0043	<0.019	<0.022	<0.042	<0.044	<0.042	<0.042	<0.0044	<0.0045	<0.0049	<0.0046	<0.0048	<0.0044	<0.046	<0.045
Aroclor 1016	12674-11-2	mg/kg	<0.0028	<0.003	<0.003	<0.0025	<0.0028	<0.0027	<0.0024	<0.0027	<0.0027	<0.0028	<0.0027	<0.0027	<0.0028	<0.0028	<0.0031	<0.0029	<0.003	<0.0028	<0.0029	<0.0028
Aroclor 1221	11104-28-2	mg/kg	<0.0028	<0.003	<0.003	<0.0025	<0.0028	<0.0027	<0.0024	<0.0027	<0.0027	<0.0028	<0.0027	<0.0027	<0.0028	<0.0028	<0.0031	<0.0029	<0.003	<0.0028	<0.0029	<0.0028
Aroclor 1232	11141-16-5	mg/kg	<0.0028	<0.003	<0.003	<0.0025	<0.0028	<0.0027	<0.0024	<0.0027	<0.0027	<0.0028	<0.0027	<0.0027	<0.0028	<0.0028	<0.0031	<0.0029	<0.003	<0.0028	<0.0029	<0.0028
Aroclor 1242	53469-21-9	mg/kg	<0.0028	<0.003	<0.003	<0.0025	<0.0028	<0.0027	<0.0024	<0.0027	<0.0027	<0.0028	<0.0027	<0.0027	<0.0028	<0.0028	<0.0031	<0.0029	<0.003	<0.0028	<0.0029	<0.0028
Aroclor 1248	12672-29-6	mg/kg	<0.0028	<0.003	<0.003	<0.0025	<0.0028	<0.0027	<0.0024	<0.0027	<0.0027	<0.0028	<0.0027	<0.0027	<0.0028	<0.0028	<0.0031	<0.0029	<0.003	<0.0028	<0.0029	<0.0028
Aroclor 1254	11097-69-1	mg/kg	<0.0028	<0.003	<0.003	<0.0025	<0.0028	<0.0027	<0.0024	<0.0027	<0.0027	<0.0028	<0.0027	<0.0027	<0.0028	<0.0028	<0.0031	<0.0029	<0.003	<0.0028	<0.0029	<0.0028
Aroclor 1260	11096-82-5	mg/kg	<0.0021	<0.0022	<0.0023	<0.0019	0.014 J	0.021	0.011 J	<0.0021	<0.002	<0.0021	<0.002	<0.002	<0.0021	<0.0021	<0.0023	<0.0022	<0.0023	<0.0021	<0.0022	<0.0021
Total PCBs	TPCB	mg/kg	<0.00945	<0.0101	<0.01015	<0.00845	0.0224	0.0291	0.0182	<0.00915	<0.0091	<0.00945	<0.0091	<0.0091	<0.00945	<0.00945	<0.01045	<0.0098	<0.01015	<0.00945	<0.0098	<0.00945
VOLATILE ORGANIC COMPOUNDS																						
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.00069	<0.00074	<0.00071	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.0017	<0.0018	<0.0017	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.00049	<0.00053	<0.0005	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.0013	<0.0014	<0.0013	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.002	<0.0021	<0.002	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1 1-Dichloroethane	75-34-3	mg/kg	<0.00049	<0.00053	<0.0005	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1,1-Dichloroethene	75-35-4	mg/kg	<0.0015	<0.0016	<0.0015	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.00089	<0.00095	<0.00091	<0.00061	<0.00061	<0.00092 JL	<0.0006	<0.00063	<0.0008	<0.0011	<0.00064	<0.00059	<0.00051	<0.00055	<0.0006	<0.00056	<0.0006	<0.00064	<0.00059	<0.00055
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.00079	<0.00084	<0.00081	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1 2-Dibromoethane	106-93-4	mg/kg	<0.00069	<0.00074	<0.00071	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.00079	<0.00084	<0.00081	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1 2-Dichloroethane	107-06-2	mg/kg	<0.00059	<0.00063	<0.0006	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1 2-Dichloropropane	78-87-5	mg/kg	<0.00049	<0.00053	<0.0005	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.00079	<0.00084	<0.00081	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.00089	<0.00095	<0.00091	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.00069	<0.00074	<0.00071	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
2-Butanone	78-93-3	mg/kg	<0.0022	<0.0023	<0.0022	<0.0014	<0.0014	<0.0022	<0.0014	<0.0015	<0.0019	<0.0025	<0.0015	<0.0014	<0.0012	<0.0013	<0.0014	<0.0013	<0.0014	<0.0015	<0.0014	<0.0013
2-Hexanone	591-78-6	mg/kg	<0.0017	<0.0018	<0.0017	<0.001	<0.001	<0.0015	<0.001	<0.0011	<0.0013	<0.0018	<0.0011	<0.00098	<0.00085	<0.00091	<0.001	<0.00094	<0.001	<0.0011	<0.00098	<0.00092
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.00098	<0.0011	<0.001	<0.001	<0.001	<0.0015	<0.001	<0.0011	<0.0013	<0.0018	<0.0011	<0.00098	<0.00085	<0.00091	<0.001	<0.00094	<0.001	<0.0011	<0.00098	<0.00092
Acetone	67-64-1	mg/kg	<0.0045	<0.0048	0.014 J	<0.002	<0.002	<0.0031	<0.002	<0.0021	<0.0027	<0.0035	<0.0021	<0.002	<0.0017	<0.0018	0.014 U	<0.0019	<0.002	<0.0021	<0.002	<0.0018
Benzene	71-43-2	mg/kg	<0.00059	<0.00063	<0.0006	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Bromodichloromethane	75-27-4	mg/kg	<0.00059	<0.00063	<0.0006	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Bromoform	75-25-2	mg/kg	<0.00069	<0.00074	<0.00071	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Bromomethane	74-83-9	mg/kg	<0.00098	<0.0011	<0.001	<0.001	<0.001	<0.0015	<0.001	<0.0011	<0.0013	<0.0018	<0.0011	<0.00098	<0.00085	<0.00091	<0.001	<0.00094	<0.001	<0.0011	<0.00098	<0.00092
Carbon disulfide	75-15-0	mg/kg	<0.0016	<0.0017	<0.0016	<0.001	<0.001	<0.0015	<0.001	<0.0011	<0.0013	<0.0018	<0.0011	0.0022 J	<0.00085	<0.00091	0.001 J	<0.00094	<0.001	<0.0011	<0.00098	<0.00092
Carbon tetrachloride	56-23-5	mg/kg	<0.0012	<0.0013	<0.0012	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			NPSB12	NPSB12	NPSB12	NPSS01	NPSS02	NPSS03	NPSS04	NPSS05	NPSS06	NPSS07	NPSS08	NPSS08	WSB05	WSB05	WSB05	WSB06	WSB06	WSB06	WSB07	WSB07
Sample Date			4-5 ft	7-8 ft	7.5-8.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	4-5 ft	11-12 ft	1-2 ft	2-3 ft	10-11 ft	1-2 ft	4-5 ft
Sample Date			1/25/2012	1/25/2012	1/25/2012	10/12/2010	10/13/2010	10/12/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	11/3/2010	11/3/2010	11/3/2010	12/6/2010	12/6/2010	12/6/2010	11/2/2010	11/2/2010
Analyte	CAS No.	Units																				
Chlorobenzene	108-90-7	mg/kg	<0.00049	<0.00053	<0.0005	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Chloroethane	75-00-3	mg/kg	<0.00098	<0.0011	<0.001	<0.001	<0.001	<0.0015	<0.001	<0.0011	<0.0013	<0.0018	<0.0011	<0.00098	<0.00085	<0.00091	<0.001	<0.00094	<0.001	<0.0011	<0.00098	<0.00092
Chloroform	67-66-3	mg/kg	<0.0018	<0.0019	<0.0018	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Chloromethane	74-87-3	mg/kg	<0.00089	<0.00095	<0.00091	<0.001	<0.001	<0.0015	<0.001	<0.0011	<0.0013	<0.0018	<0.0011	<0.00098	<0.00085	<0.00091	<0.001	<0.00094	<0.001	<0.0011	<0.00098	<0.00092
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.0015	<0.0016	<0.0015	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.00049	<0.00053	<0.0005	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Cyclohexane	110-82-7	mg/kg	<0.0012	<0.0013	<0.0012	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Dibromochloromethane	124-48-1	mg/kg	<0.00049	<0.00053	<0.0005	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Dichlorodifluoromethane	75-71-8	mg/kg	<0.0018	<0.0019	<0.0018	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Ethylbenzene	100-41-4	mg/kg	<0.00089	<0.00095	<0.00091	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	0.011	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Isopropylbenzene	98-82-8	mg/kg	<0.00098	<0.0011	<0.001	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	0.13	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Methyl acetate	79-20-9	mg/kg	<0.00098	<0.0011	<0.001	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.0019	<0.002	<0.0019	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Methylcyclohexane	108-87-2	mg/kg	<0.0015	<0.0016	<0.0015	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Methylene chloride	75-09-2	mg/kg	<0.0025	<0.0026	<0.0025	<0.001	<0.001	0.0031 U	<0.001	<0.0011	<0.0013	<0.0018	0.0017 J	<0.00098	<0.00085	<0.00091	<0.001	<0.00094	<0.001	<0.0011	<0.00098	<0.00092
Naphthalene	91-20-3	mg/kg	<0.00079	<0.00084	<0.00081	0.00064 U	<0.00051	0.001 U	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	0.0042 J	<0.00047	<0.0005	<0.00053	0.0028 J	<0.00046
n-Butylbenzene	104-51-8	mg/kg	<0.00059	<0.00063	<0.0006	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
n-Propylbenzene	103-65-1	mg/kg	<0.00089	<0.00095	<0.00091	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	6.3	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
sec-Butylbenzene	135-98-8	mg/kg	<0.00059	<0.00063	<0.0006	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	0.045	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Styrene	100-42-5	mg/kg	<0.00059	<0.00063	<0.0006	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
tert-Butylbenzene	98-06-6	mg/kg	<0.00059	<0.00063	<0.0006	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Tetrachloroethene	127-18-4	mg/kg	<0.00098	<0.0011	<0.001	<0.00061	<0.00061	<0.00092 JL	<0.0006	<0.00063	<0.0008	<0.0011	<0.00064	<0.00059	<0.00051	<0.00055	<0.0006	<0.00056	<0.0006	<0.00064	<0.00059	<0.00055
Toluene	108-88-3	mg/kg	<0.00069	<0.00074	<0.00071	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.00089	<0.00095	<0.00091	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00049	<0.00053	<0.0005	<0.0005	<0.00051	<0.00077 JL	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Trichloroethene	79-01-6	mg/kg	<0.0016	<0.0017	<0.0016	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Trichlorofluoromethane	75-69-4	mg/kg	<0.00079	<0.00084	<0.00081	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Vinyl chloride	75-01-4	mg/kg	<0.00098	<0.0011	<0.001	<0.0005	<0.00051	<0.00077	<0.0005	<0.00053	<0.00067	<0.00089	<0.00053	<0.00049	<0.00042	<0.00045	<0.0005	<0.00047	<0.0005	<0.00053	<0.00049	<0.00046
Xylenes, Total	1330-20-7	mg/kg	<0.0026	<0.0027	<0.0026	<0.0015	<0.0015	<0.0023 JL	<0.0015	<0.0016	<0.002	<0.0027	<0.0016	<0.0015	<0.0013	<0.0014	<0.0015	<0.0014	<0.0015	<0.0016	<0.0015	<0.0014
SEMIVOLATILE ORGANIC COMPOUNDS																						
1,1´-Biphenyl	92-52-4	mg/kg	<0.0018	<0.002	<0.002	<0.031	<0.0034 JL	<0.0033	<0.0029 JL	<0.0033 JL	<0.0032 JL	<0.05	<0.16	<0.048 JL	<0.0034	<0.0034	0.0077 J	<0.0035	<0.0037	<0.0034	<0.0035	<0.0034
1-Methylnaphthalene	90-12-0	mg/kg	0.0022 J	<0.002	<0.002	<0.024	0.0041 JL	0.0033 J	<0.0023 JL	0.004 JL	<0.0026 JL	<0.04	<0.13	<0.038 JL	<0.0027	<0.0027	0.094	<0.0028	<0.0029	<0.0027	0.003 J	<0.0027
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0018	<0.002	<0.002	<0.03	<0.0033 JL	<0.0032	<0.0028 JL	<0.0032 JL	<0.0031 JL	<0.049 JL	<0.16	<0.047	<0.0033 JL	<0.0033	<0.0036	<0.0034	<0.0035	<0.0032	<0.0034	<0.0033
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.0018	<0.002	<0.002	<0.035	<0.0039 JL	<0.0038	<0.0033 JL	<0.0038 JL	<0.0037 JL	<0.057 JL	<0.18	<0.055	<0.0038 JL	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	<0.004	<0.0039
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0018	<0.002	<0.002	<0.023	<0.0026 JL	<0.0025	<0.0022 JL	<0.0025 JL	<0.0025 JL	<0.038 JL	<0.12	<0.037	<0.0026 JL	<0.0026	<0.0028	<0.0027	<0.0028	<0.0025	<0.0026	<0.0026
2 4-Dimethylphenol	105-67-9	mg/kg	<0.0018	<0.002	<0.002	<0.035 JL	<0.0039 JL	<0.0038 JL	<0.0033 JL	<0.0038 JL	<0.0037 JL	<0.057 JL	<0.18 JL	<0.055 JL	<0.0038 JL	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	<0.004	<0.0039
2 4-Dinitrophenol	51-28-5	mg/kg	<0.0038	<0.0041	<0.0042	<0.035 JL	<0.0039 JL	<0.0038 JL	<0.0033 JL	<0.0038 JL	<0.0037 JL	<0.057 JL	<0.18	<0.055	<0.0038 JL	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	<0.004	<0.0039
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.0018	<0.002	<0.002	<0.035	<0.0039 JL	<0.0038	<0.0033 JL	<0.0038 JL	<0.0037 JL	<0.057	<0.18	<0.055 JL	<0.0038	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	<0.004	<0.0039
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.0018	<0.002	<0.002	<0.034	<0.0038 JL	<0.0037	<0.0032 JL	<0.0036 JL	<0.0036 JL	<0.055	<0.18	<0.053 JL	<0.0037	<0.0038	<0.0041	<0.0039	<0.004	<0.0037	<0.0039	<0.0037
2-Chloronaphthalene	91-58-7	mg/kg	<0.0018	<0.002	<0.002	<0.043	<0.0048 JL	<0.0047	<0.0041 JL	<0.0047 JL	<0.0046 JL	<0.071	<0 23	<0.068 JL	<0.0048	<0.0048	<0.0053	<0.005	<0.0052	<0.0047	<0.0049	<0.0048
2-Chlorophenol	95-57-8	mg/kg	<0.0018	<0.002	<0.002	<0.034	<0.0038 JL	<0.0037	<0.0032 JL	<0.0036 JL	<0.0036 JL	<0.055 JL	<0.18	<0.053	<0.0037 JL	<0.0038	<0.0041	<0.0039	<0.004	<0.0037	<0.0039	<0.0037
2-Methylnaphthalene	91-57-6	mg/kg	0.0022 J	<0.002	<0.002	<0.028	0.012 JL	0.0062 J	<0.0027 JL	0.0052 JL	<0.003 JL	<0.047	<0.15	<0.045 JL	0.0033 J	<0.0032	0.0038 J	<0.0033	<0.0034	<0.0031	0.0063 J	<0.0032
2-Methylphenol	95-48-7	mg/kg	<0.0018	<0.002	<0.002	<0.031	<0.0034 JL	<0.0033	<0.0029 JL	<0.0033 JL	<0.0032 JL	<0.05 JL	<0.16	<0.048	<0.0034 JL	<0.0034	<0.0038	<0.0035	<0.0037	<0.0034	<0.0035	<0.0034
2-Nitroaniline	88-74-4	mg/kg	<0.0018	<0.002	<0.002	<0.035	<0.0039 JL	<0.0038	<0.0033 JL	<0.0038 JL	<0.0037 JL	<0.057	<0.18	<0.055 JL	<0.0038	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	<0.004	<0.0039
2-Nitrophenol	88-75-5	mg/kg	<0.0018	<0.002	<0.002	<0.048	<0.0054 JL	<0.0053	<0.0046 JL	<0.0052 JL	<0.0051 JL	<0.08 JL	<0 26	<0.076	<0.0054 JL	<0.0054	<0.006	<0.0056	<0.0058	<0.0053	<0.0055	<0.0054
3&4-Methylphenol	106-44-5	mg/kg	<0.0018	<0.002	<0.002	<0.03	<0.0033 JL	<0.0032	<0.0028 JL	<0.0032 JL	<0.0031 JL	<0.049 JL	<0.16	<0.047	<0.0033 JL	<0.0033	<0.0036	<0.0034	<0.0035	<0.0032	<0.0034	<0.0033
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0018 JL	<0.002 JL	<0.002 JL	<0.033	<0.0036 JL	<0.0035 R	<0.0031 JL	<0.0035 JL	<0.0035 JL	<0.054	<0.17	<0.051 JL	<0.0036	<0.0037	<0.004	<0.0038	<0.0039	<0.0036	<0.0037	<0.0036
3-Nitroaniline	99-09-2	mg/kg	<0.0018	<0.002	<0.002	<0.027	<0.0031 JL	<0.003 JL	<0.0026 JL	<0.003 JL	<0.0029 JL	<0.045	<0.14	<0.043 JL	<0.003	<0.0031	<0.0034	<0.0032	<0.0033	<0.003	<0.0031	<0.003
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.0018	<0.002	<0.002	<0.035	<0.0039 JL	<0.0038 JL	<0.0033 JL	<0.0038 JL	<0.0037 JL	<0.057 JL	<0.18	<0.055	<0.0038 JL	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	<0.004	<0.0039
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.0018	<0.002	<0.002	<0.035	<0.0039 JL	<0.0038	<0.0033 JL	<0.0038 JL	<0.0037 JL	<0.057	<0.18	<0.055 JL	<0.0038	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	<0.004	<0.0039
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.0018	<0.002	<0.002	<0.035	<0.0039 JL	<0.0038	<0.0033 JL	<0.0038 JL	<0.0037 JL	<0.057 JL	<0.18	<0.055	<0.0038 JL	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	<0.004	<0.0039
4-Chloroaniline	106-47-8	mg/kg	<0.0018	<0.002	<0.002	<0.023	<0.0026 JL	<0.0025 JL	<0.0022 JL	<0.0025 JL	<0.0025 JL	<0.038	<0.12	<0.037 JL	<0.0026	<0.0026	<0.0028	<0.0027	<0.0028	<0.0025	<0.0026	<0.0026
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0018	<0.002	<0.002	<0.023	<0.0026 JL	<0.0025	<0.0022 JL	<0.0025 JL	<0.0025 JL	<0.038	<0.12	<0.037 JL	<0.0026	<0.0026	<0.0028	<0.0027	<0.0028	<0.0025	<0.0026	<0.0026
4-Nitroaniline	100-01-6	mg/kg	<0.0018	<0.002	<0.002	<0.035	<0.0039 JL	<0.0038 JL	<0.0033 JL	<0.0038 JL	<0.0037 JL	<0.057	<0.18	<0.055 JL	<0.0038	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	<0.004	<0.0039
4-Nitrophenol	100-02-7	mg/kg	<0.0038	<0.0041	<0.0042	<0.04	<0.0045 JL	<0.0043	<0.0038 JL	<0.0043 JL	<0.0043 JL	<0.066 JL	<0 21	<0.063	<0.0044 JL	<0.0045	<0.0049	<0.0046	<0.0048	<0.0044	<0.0046	<0.0045
Acenaphthene	83-32-9	mg/kg	<0.0018	<0.002	0.0066 J	<0.023	0.011 JL	0.0096	<0.0022 JL	0.011 JL	<0.0025 JL	<0.038	<0.12	<0.037 JL	<0.0026	<0.0026	0.02	<0.0027	<0.0028	<0.0025	0.045	<0.0026
Acenaphthylene	208-96-8	mg/kg	<0.0018	<0.002	<0.002	0.062 J	0.035 JL	0.031	<0.0022 JL	0.022 JL	<0.0025 JL	<0.038	<0.12	<0.037 JL	<0.0026	<0.0026	0.0094	<0.0027	<0.0028	<0.0025	<0.0026	<0.0026
Acetophenone	98-86-2	mg/kg	0.0063 J	<0.002	<0.002	<0.025	0.023 JL	0.0069 J	<0.0024 JL	0.0045 JL	<0.0027 JL	<0.042	<0.13	<0.04 JL	<0.0028	<0.0028	<0.0031	<0.0029	<0.003	<0.0028	<0.0029	<0.0028
Anthracene	120-12-7	mg/kg	<0.0018	<0.002	<0.002	0.073	0.061 JL	0.066	0.0029 JL	0.089 JL	0.0048 JL	<0.038	<0.12	<0.037 JL	<0.0026	<0.0026	0.013	<0.0027	<0.0028	<0.0025	0.072	<0.0026
Benz(a)anthracene	56-55-3	mg/kg	0.0022 J	<0.002	<0.002	0.13	0.12 JL	0.18	0.0094 JL	0.21 JL	0.012 JL	0.12	<0.16	<0.047 JL	<0.0033	<0.0033	0.022	<0.0034	<0.0035	<0.0032	0.24	<0.0033
Benzaldehyde	100-52-7	mg/kg	<0.0018 JL	<0.002 JL	0.0028 JL	<0.048 JL	0.011 JL	0.0077 JL	<0.0046 JL	<0.0052 JL	<0.0051 JL	<0.08 JL	<0 26 JL	<0.076 JL	<0.0054 JL	<0.0054 JL	0.0067 JL	<0.0056	<0.0058	<0.0053	<0.0055 JL	<0.0054 JL
Benzo(a)pyrene	50-32-8	mg/kg	<0.0018	<0.002	<0.002	0.17	0.37 JL	0.18	0.03 JL	0.38 JL	0.024 JL	0.17	<0.13	0.062 JL	0.0039 J	<0.0027	0.013	<0.0028	<0.0029	<0.0027	0.22	<0.0027
Benzo(b)fluoranthene	205-99-2	mg/kg	<0.0018	<0.002	<0.002	0.31	0.19 JL	0.33	0.021 JL	0.17 JL	0.011 JL	0.15	<0.18	<0.055 JL	<0.0038	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	0.32	<0.0039
Benzo(g h i)perylene	191-24-2	mg/kg	<0.002	<0.0021	<0.0021	0.13	<0.0034 JL	0.16	<0.0029 JL	<0.0033 JL	<0.0032 JL	0.13	<0.16	0.084 JL	0.004 J	0.0067 J	0.0071 J	<0.0035	<0.0037	<0.0034	0.14	<0.0034
Benzo(k)fluoranthene	207-08-9	mg/kg	<0.0018	<0.002	<0.002	0.089	0.38 JL	0.12	0.026 JL	0.33 JL	0.03 JL	0.19	<0.18	<0.055 JL	<0.0038	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	0.12	<0.0039
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.0018	<0.002	<0.002	<0.025	<0.0028 JL	<0.0027	<0.0024 JL	<0.0027 JL	<0.0027 JL	<0.042	<0.13	<0.04 JL	<0.0028	<0.0028	<0.0031	<0.0029	<0.003	<0.0028	<0.0029	<0.0028
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0018	<0.002	<0.002	<0.03	<0.0033 JL	<0.0032	<0.0028 JL	<0.0032 JL	<0.0031 JL	<0.049	<0.16	<0.047 JL	<0.0033	<0.0033	<0.0036	<0.0034	<0.0035	<0.0032	<0.0034	<0.0033
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0018	<0.002	<0.002	<0.028	<0.0032 JL	<0.0031	<0.0027 JL	<0.0031 JL	<0.003 JL	<0.047	<0.15	<0.045 JL	<0.0031	<0.0032	<0.0035	<0.0033	<0.0034	<0.0031	<0.0032	<0.0032
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	0.0083 U	0.08 U	0.011	84	0.017 UJL	0.09	0.32 UJL	0.037 UJL	<0.0074 JL	0.19 U	<0 37	<0.11 JL	<0.0077	<0.0078	<0.0085	<0.008	<0.0083	<0.0076	0.011	<0.0077
Butyl benzyl phthalate	85-68-7	mg/kg	<0.0032	<0.0035	<0.0035	<0.026	0.031 JL	0.021	0.014 JL	<0.0028 JL	<0.0028 JL	0.076 J	<0.14	<0.042 JL	<0.0029	<0.003	<0.0032	<0.003	<0.0032	<0.0029	<0.003	<0.0029
Caprolactam	105-60-2	mg/kg	<0.0023	0.0067 J	<0.0025	<0.025	<0.0028 JL	<0.0027	<0.0024 JL	<0.0027 JL	<0.0027 JL	<0.042	<0.13	<0.04 JL	<0.0028	<0.0028	<0.0031	<0.0029	<0.003	<0.0028	<0.0029	<0.0028
Carbazole	86-74-8	mg/kg	<0.0018	<0.002	<0.002	0.065 J	0.06 JL	0.052	0.0028 JL	0.03 JL	0.0059 JL	<0.038	<0.12	<0.037 JL	<0.0026	<0.0026	<0.0028	<0.0027	<0.0028	<0.0025	0.055	<0.0026
Chrysene	218-01-9	mg/kg	0.002 J	<0.002	0.0039 J	0.23	0.38 JL	0.25	0.032 JL	0.55	0.036 JL	0.25	<0.16	0.067 JL	0.0042 J	<0.0034	0.043	<0.0035	<0.0037	<0.0034	0.23	<0.0034
Dibenz(a h)anthracene	53-70-3	mg/kg	<0.0023	<0.0025	<0.0025	<0.023	<0.0026 JL	0.056	<0.0022 JL	<0.0025 JL	<0.0025 JL	<0.038	<0.12	<0.037 JL	<0.0026	<0.0026	<0.0028	<0.0027	<0.0028	<0.0025	0.064	<0.0026
Dibenzofuran	132-64-9	mg/kg	<0.0018	<0.002	0.005 J	<0.023	0.0086 JL	0.0041 J	<0.0022 JL	0.0071 JL	<0.0025 JL	<0.038	<0.12	<0.037 JL	<0.0026	<0.0026	0.025	<0.0027	<0.0028	<0.0025	0.017	<0.0026
Diethyl phthalate	84-66-2	mg/kg	<0.0018	<0.002	<0.002	<0.035	<0.0039 JL	<0.0038	<0.0033 JL	<0.0038 JL	<0.0037 JL	<0.057	<0.18	<0.055 JL	<0.0038	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	<0.004	<0.0039
Dimethyl phthalate	131-11-3	mg/kg	<0.0023	<0.0025	<0.0025	<0.025	<0.0028 JL	<0.0027	<0.0024 JL	<0.0027 JL	<0.0027 JL	<0.042	<0.13	<0.04 JL	<0.0028	<0.0028	<0.0031	<0.0029	<0.003	<0.0028	<0.0029	<0.0028
Di-n-butyl phthalate	84-74-2	mg/kg	0.0032 U	0.0034 U	0.017	<0.026	0.0036 UJL	0.0096	0.0072 UJL	0.0046 UJL	<0.0028 JL	<0.043	<0.14	<0.042 JL	<0.0029	<0.003	<0.0032	<0.003	<0.0032	<0.0029	<0.003	<0.0029
Di-n-octyl phthalate	117-84-0	mg/kg	<0.0023	<0.0025	<0.0025	<0.031	<0.0034 JL	<0.0033	0.042 JL	<0.0033 JL	<0.0032 JL	<0.05	<0.16	<0.048 JL	<0.0034	<0.0034	<0.0038	<0.0035	<0.0037	<0.0034	<0.0035	<0.0034
Fluoranthene	206-44-0	mg/kg	0.0021 J	<0.002	0.0055 J	0.33	0.74	0.56	0.035 JL	0.74	0.061 JL	0.31	<0.12	0.085 JL	0.0051 J	0.003 J	0.02	0.0039 J	<0.0028	<0.0025	0.55	<0.0026
Fluorene	86-73-7	mg/kg	<0.0018	<0.002	<0.002	<0.023	0.012 JL	0.011	<0.0022 JL	0.012 JL	<0.0025 JL	<0.038	<0.12	<0.037 JL	<0.0026	<0.0026	0.0069 J	<0.0027	<0.0028	<0.0025	0.023	<0.0026

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			NPSB12	NPSB12	NPSB12	NPSS01	NPSS02	NPSS03	NPSS04	NPSS05	NPSS06	NPSS07	NPSS08	NPSS08	WSB05	WSB05	WSB05	WSB06	WSB06	WSB06	WSB07	WSB07
Sample Date			4-5 ft	7-8 ft	7.5-8.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	1-2 ft	4-5 ft	11-12 ft	1-2 ft	2-3 ft	10-11 ft	1-2 ft	4-5 ft
Sample Date			1/25/2012	1/25/2012	1/25/2012	10/12/2010	10/13/2010	10/12/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	11/3/2010	11/3/2010	11/3/2010	12/6/2010	12/6/2010	12/6/2010	11/2/2010	11/2/2010
Analyte	CAS No.	Units																				
Hexachlorobenzene	118-74-1	mg/kg	<0.0018	<0.002	<0.002	<0.027	<0.0031 JL	<0.003	<0.0026 JL	<0.003 JL	<0.0029 JL	<0.045	<0.14	<0.043 JL	<0.003	<0.0031	<0.0034	<0.0032	<0.0033	<0.003	<0.0031	<0.003
Hexachlorobutadiene	87-68-3	mg/kg	<0.0018	<0.002	<0.002	<0.046	<0.0052 JL	<0.005	<0.0044 JL	<0.005 JL	<0.0049 JL	<0.076	<0 24	<0.073 JL	<0.0051	<0.0052	<0.0057	<0.0054	<0.0055	<0.0051	<0.0053	<0.0052
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0018	<0.002	<0.002	<0.038	<0.0042 JL	<0.0041 JL	<0.0036 JL	<0.0041 JL	<0.004 JL	<0.062	<0.2	<0.06 JL	<0.0042	<0.0043	<0.0047	<0.0044	<0.0045	<0.0042	<0.0043	<0.0042
Hexachloroethane	67-72-1	mg/kg	<0.0018	<0.002	<0.002	<0.041	<0.0046 JL	<0.0045	<0.0039 JL	<0.0044 JL	<0.0044 JL	<0.068	<0 22	<0.065 JL	<0.0045	<0.0046	<0.005	<0.0047	<0.0049	<0.0045	<0.0047	<0.0046
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	<0.0018	<0.002	<0.002	0.15	<0.0041 JL	0.17	<0.0035 JL	<0.004 JL	<0.0039 JL	<0.061	<0.19	<0.058 JL	<0.0041	<0.0041	<0.0045	<0.0043	<0.0044	<0.004	0.15	<0.0041
Isophorone	78-59-1	mg/kg	<0.0018	<0.002	<0.002	<0.032	<0.0035 JL	<0.0034	<0.003 JL	<0.0034 JL	<0.0034 JL	<0.052	<0.17	<0.05 JL	<0.0035	<0.0035	<0.0039	<0.0037	<0.0038	<0.0035	<0.0036	<0.0035
Naphthalene	91-20-3	mg/kg	<0.0018	<0.002	<0.002	<0.035	0.019 JL	0.0043 J	<0.0033 JL	0.0044 JL	<0.0037 JL	<0.057	<0.18	<0.055 JL	<0.0038	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	0.012	<0.0039
Nitrobenzene	98-95-3	mg/kg	<0.0018	<0.002	<0.002	<0.035	<0.0039 JL	<0.0038	<0.0033 JL	<0.0038 JL	<0.0037 JL	<0.057	<0.18	<0.055 JL	<0.0038	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	<0.004	<0.0039
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0023	<0.0025	<0.0025	<0.042	<0.0047 JL	<0.0046	<0.004 JL	<0.0046 JL	<0.0045 JL	<0.069	<0 22	<0.066 JL	<0.0047	<0.0047	<0.0052	<0.0049	<0.005	<0.0046	<0.0048	<0.0047
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0023	<0.0025	<0.0025	<0.023	<0.0026 JL	<0.0025	<0.0022 JL	<0.0025 JL	<0.0025 JL	<0.038	<0.12	<0.037 JL	<0.0026	<0.0026	<0.0028	<0.0027	<0.0028	<0.0025	<0.0026	<0.0026
Pentachlorophenol	87-86-5	mg/kg	<0.0021	<0.0022	<0.0023	<0.03	<0.0033 JL	<0.0032	<0.0028 JL	<0.0032 JL	<0.0031 JL	<0.049 JL	<0.16	<0.047	<0.0033 JL	<0.0033	<0.0036	<0.0034	<0.0035	<0.0032	<0.0034	0.0046 J
Phenanthrene	85-01-8	mg/kg	0.01	<0.0031	0.0076 J	0.12	0.19 JL	0.18	0.011 JL	0.31 JL	0.016 JL	0.093 J	<0.17	<0.05 JL	0.0042 J	<0.0035	0.19	<0.0037	<0.0038	<0.0035	0.3	<0.0035
Phenol	108-95-2	mg/kg	<0.0023	<0.0025	<0.0025	<0.035	<0.0039 JL	<0.0038	<0.0033 JL	<0.0038 JL	<0.0037 JL	<0.057 JL	<0.18	<0.055	<0.0038 JL	<0.0039	<0.0043	<0.004	<0.0042	<0.0038	<0.004	<0.0039
Pyrene	129-00-0	mg/kg	0.0021 J	<0.002	0.0096	0.3	0.55	0.36	0.028 JL	0.7	0.054 JL	0.28	<0.12	0.08 JL	0.0052 J	0.0032 J	0.053	0.0053 J	<0.0028	<0.0025	0.29	<0.0026

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			WSB07	WSB08	WSB08	WSB08	WSB08	WSB10	WSB11	WSS05	WSS06	WSS07	WSS08	WSS10	WSS11	WSS11
Sample Date			10-11 ft	1-2 ft	1-2 ft	2-3 ft	9-10 ft	1-2 ft	1-2 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
Sample Date			11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	12/4/2012	12/4/2012	10/7/2010	10/8/2010	10/7/2010	10/8/2010	12/14/2011	12/14/2011	12/14/2011
Analyte	CAS No.	Units														
METALS																
Aluminum	7429-90-5	mg/kg	5360	4060	4120	8380	5230	---	---	17800	16900	7250	7840	---	---	---
Antimony	7440-36-0	mg/kg	<0.3	<0.26	<0.27	<0.26	<0.26	---	---	0.506 U	<0.27	0.428 U	<0.27	---	---	---
Arsenic	7440-38-2	mg/kg	2.52	2.38	1.41	4.38	2.4	4.7	2.96	3.77	4.67	3.65	4.12	4.96	3.06	4.47
Barium	7440-39-3	mg/kg	231	256	286	208	183	---	---	332	1110	490	689	---	---	---
Beryllium	7440-41-7	mg/kg	0.456 J	0.255 J	<0.27	0.543 J	0.456 J	---	---	0.797	0.76	0.429 J	0.399 J	---	---	---
Cadmium	7440-43-9	mg/kg	0.121 J	0.179 J	0.154 J	4.12	0.14 J	---	---	2.33	0.356 J	3.57	1.29	---	---	---
Chromium	7440-47-3	mg/kg	3.37	3.92	3.12	8.9	2.96	---	---	51	14.8	36	12.6	---	---	---
Cobalt	7440-48-4	mg/kg	1.99	1.94	1.81	4.95	2.71	---	---	4.05	4.66	2.51	2.93	---	---	---
Copper	7440-50-8	mg/kg	3	5.37	3.84	26.9	3.18	---	---	21.8 JH	6.73	18.7	10.8	---	---	---
Lead	7439-92-1	mg/kg	5.48	8.48	8.06	64.9	5.86	---	---	115	14	113	20.6	---	---	---
Manganese	7439-96-5	mg/kg	110	123	150	291	96.2	---	---	221	245	178	209	---	---	---
Nickel	7440-02-0	mg/kg	3.72 JH	3.37	3.11	6.01	3.7	---	---	11.6	8.29	15.4	7.72	---	---	---
Selenium	7782-49-2	mg/kg	0.556 J	0.446 J	0.861	1.09	<0.26	---	---	0.979	0.363 J	2.7	6.64	---	---	---
Silver	7440-22-4	mg/kg	<0.048	0.0548 J	<0.21	0.576 J	<0.041	---	---	0.215 J	<0.044	0.299 J	0.0563 J	---	---	---
Thallium	7440-28-0	mg/kg	0.112 J	0.116 J	0.0969 J	0.166 J	0.122 J	---	---	0.159 U	0.267 U	0.165 U	0.173 U	---	---	---
Vanadium	7440-62-2	mg/kg	9.59	10.9	9.48	12	9.61	---	---	25.4	23	17.7	19.2	---	---	---
Zinc	7440-66-6	mg/kg	13.5	68.9	61.9	561	9.97	---	---	887	68.1	794	259	---	---	---
Mercury	7439-97-6	mg/kg	0.00237 J	0.0461	0.0393	0.289	0.00322 J	0.00472	0.00914	1.2	0.0595	4	0.195	0.35	0.285	0.218
Cyanide	57-12-5	mg/kg	<0.73	<0.67	<0.67	<0.68	<0.7	---	---	0.941 J	<0.66	0.715 J	<0.64	---	---	---
PESTICIDES and PCBs																
4,4´-DDD	72-54-8	mg/kg	<0.00063	<0.00056	<0.0056	<0.00057	<0.00059	---	---	<0.00055	<0.00059	<0.0026	<0.0057	---	---	---
4,4´-DDE	72-55-9	mg/kg	<0.00063	<0.00056	<0.0056	<0.00057	<0.00059	---	---	<0.00055	<0.00059	<0.0026	<0.0057	---	---	---
4,4´-DDT	50-29-3	mg/kg	<0.00063	<0.00056	<0.0056	<0.00057	0.0013 U	---	---	0.0066	<0.00059	<0.0026	<0.0057	---	---	---
Aldrin	309-00-2	mg/kg	<0.00038	<0.00033	<0.0034	<0.00034	<0.00035	---	---	<0.00033	<0.00036	<0.0016	<0.0034	---	---	---
alpha-BHC	319-84-6	mg/kg	<0.00038	<0.00033	<0.0034	<0.00034	<0.00035	---	---	<0.00033	<0.00036	<0.0016	<0.0034	---	---	---
alpha-Chlordane	5103-71-9	mg/kg	<0.00025	<0.00022	<0.0022	<0.00023	<0.00024	---	---	<0.00022	<0.00024	<0.001	<0.0023	---	---	---
beta-BHC	319-85-7	mg/kg	<0.00038	<0.00033	<0.0034	<0.00034	<0.00035	---	---	0.0024 J	<0.00036	<0.0016	<0.0034	---	---	---
delta-BHC	319-86-8	mg/kg	<0.00025	<0.00022	<0.0022	<0.00023	<0.00024	---	---	<0.00022	<0.00024	<0.001	<0.0023	---	---	---
Dieldrin	60-57-1	mg/kg	<0.00063	<0.00056	<0.0056	<0.00057	<0.00059	---	---	<0.00055	<0.00059	<0.0026	<0.0057	---	---	---
Endosulfan I	959-98-8	mg/kg	<0.00038	<0.00033	<0.0034	<0.00034	<0.00035	---	---	<0.00033	<0.00036	<0.0016	<0.0034	---	---	---
Endosulfan II	33213-65-9	mg/kg	<0.00075	<0.00067	<0.0067	<0.00068	<0.00071	---	---	<0.00066	<0.00071	<0.0031	<0.0069	---	---	---
Endosulfan sulfate	1031-07-8	mg/kg	<0.00075	<0.00067	<0.0067	<0.00068	<0.00071	---	---	<0.00066	<0.00071	<0.0031	<0.0069	---	---	---
Endrin	72-20-8	mg/kg	<0.00075	<0.00067	<0.0067	<0.00068	<0.00071	---	---	<0.00066	<0.00071	<0.0031	<0.0069	---	---	---
Endrin aldehyde	7421-93-4	mg/kg	<0.00075	<0.00067	<0.0067	<0.00068	<0.00071	---	---	0.011 U	<0.00071	<0.0031	<0.0069	---	---	---
gamma-BHC	58-89-9	mg/kg	<0.00025	<0.00022	<0.0022	<0.00023	<0.00024	---	---	<0.00022	<0.00024	<0.001	<0.0023	---	---	---
gamma-Chlordane	5103-74-2	mg/kg	<0.00025	<0.00022	<0.0022	<0.00023	<0.00024	---	---	0.001 UJ	<0.00024	<0.001	<0.0023	---	---	---
Heptachlor	76-44-8	mg/kg	<0.00038	<0.00033	<0.0034	<0.00034	<0.00035	---	---	<0.00033	<0.00036	<0.0016	<0.0034	---	---	---
Heptachlor epoxide	1024-57-3	mg/kg	<0.00038	<0.00033	<0.0034	<0.00034	<0.00035	---	---	<0.00033	<0.00036	<0.0016	<0.0034	---	---	---
Methoxychlor	72-43-5	mg/kg	<0.0043	<0.0038	<0.038	<0.0039	<0.004	---	---	<0.0037	<0.004	<0.018	<0.039	---	---	---
Toxaphene	8001-35-2	mg/kg	<0.0048	<0.0042	<0.043	<0.0043	<0.0045	---	---	<0.0042	<0.0045	<0.02	<0.044	---	---	---
Aroclor 1016	12674-11-2	mg/kg	<0.003	<0.0027	<0.0027	<0.0027	<0.0028	---	---	<0.0026	<0.0028	<0.0025	<0.0028	---	---	---
Aroclor 1221	11104-28-2	mg/kg	<0.003	<0.0027	<0.0027	<0.0027	<0.0028	---	---	<0.0026	<0.0028	<0.0025	<0.0028	---	---	---
Aroclor 1232	11141-16-5	mg/kg	<0.003	<0.0027	<0.0027	<0.0027	<0.0028	---	---	<0.0026	<0.0028	<0.0025	<0.0028	---	---	---
Aroclor 1242	53469-21-9	mg/kg	<0.003	<0.0027	<0.0027	<0.0027	<0.0028	---	---	<0.0026	<0.0028	<0.0025	<0.0028	---	---	---
Aroclor 1248	12672-29-6	mg/kg	<0.003	<0.0027	<0.0027	<0.0027	<0.0028	---	---	<0.0026	<0.0028	<0.0025	<0.0028	---	---	---
Aroclor 1254	11097-69-1	mg/kg	<0.003	<0.0027	<0.0027	<0.0027	<0.0028	---	---	<0.0026	<0.0028	<0.0025	<0.0028	---	---	---
Aroclor 1260	11096-82-5	mg/kg	<0.0023	<0.002	<0.002	<0.002	<0.0021	---	---	0.013 J	<0.0021	0.025	<0.0021	---	---	---
Total PCBs	TPCB	mg/kg	<0.01015	<0.0091	<0.0091	<0.0091	<0.00945	---	---	0.0208	<0.00945	0.0325	<0.00945	---	---	---
VOLATILE ORGANIC COMPOUNDS																
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
1 1-Dichloroethane	75-34-3	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
1,1-Dichloroethene	75-35-4	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.00056	<0.00062	<0.00056	<0.00052	<0.00051	---	---	<0.0006 JL	<0.00064	<0.00066	<0.00087	---	---	---
1 2 4-Trimethylbenzene	95-63-6	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
1 2-Dibromoethane	106-93-4	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
1 2-Dichloroethane	107-06-2	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
1 2-Dichloropropane	78-87-5	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	0.0013 JH	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
2-Butanone	78-93-3	mg/kg	<0.0013	<0.0014	<0.0013	<0.0012	0.0083 JH	---	---	<0.0014 JL	<0.0015	<0.0015	<0.002	---	---	---
2-Hexanone	591-78-6	mg/kg	<0.00093	<0.001	<0.00093	<0.00086	<0.00086	---	---	<0.001	<0.0011	<0.0011	<0.0014	---	---	---
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.00093	<0.001	<0.00093	<0.00086	<0.00086	---	---	<0.001	<0.0011	<0.0011	<0.0014	---	---	---
Acetone	67-64-1	mg/kg	<0.0019	<0.0021	<0.0019	<0.0017	0.33 JH	---	---	<0.002	<0.0021	<0.0022	<0.0029	---	---	---
Benzene	71-43-2	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
Bromodichloromethane	75-27-4	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
Bromoform	75-25-2	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
Bromomethane	74-83-9	mg/kg	<0.00093	<0.001	<0.00093	<0.00086	<0.00086	---	---	<0.001 JL	<0.0011	<0.0011	<0.0014	---	---	---
Carbon disulfide	75-15-0	mg/kg	<0.00093	<0.001	<0.00093	<0.00086	0.0029 JH	---	---	<0.001 JL	<0.0011	<0.0011	<0.0014	---	---	---
Carbon tetrachloride	56-23-5	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			WSB07	WSB08	WSB08	WSB08	WSB08	WSB10	WSB11	WSS05	WSS06	WSS07	WSS08	WSS10	WSS11	WSS11
Sample Date			10-11 ft	1-2 ft	1-2 ft	2-3 ft	9-10 ft	1-2 ft	1-2 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
Sample Date			11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	12/4/2012	12/4/2012	10/7/2010	10/8/2010	10/7/2010	10/8/2010	12/14/2011	12/14/2011	12/14/2011
Analyte	CAS No.	Units														
Chlorobenzene	108-90-7	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
Chloroethane	75-00-3	mg/kg	<0.00093	<0.001	<0.00093	<0.00086	<0.00086	---	---	<0.001	<0.0011	<0.0011	<0.0014	---	---	---
Chloroform	67-66-3	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
Chloromethane	74-87-3	mg/kg	<0.00093	<0.001	<0.00093	<0.00086	<0.00086	---	---	<0.001	<0.0011	<0.0011	<0.0014	---	---	---
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
Cyclohexane	110-82-7	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
Dibromochloromethane	124-48-1	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
Dichlorodifluoromethane	75-71-8	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
Ethylbenzene	100-41-4	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
Isopropylbenzene	98-82-8	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	0.094 JH	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
Methyl acetate	79-20-9	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
Methylcyclohexane	108-87-2	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
Methylene chloride	75-09-2	mg/kg	<0.00093	0.0011 J	<0.00093	<0.00086	<0.00086	---	---	0.0034 JL	0.0021 J	0.0025 U	0.0017 J	---	---	---
Naphthalene	91-20-3	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	0.0076 JH	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
n-Butylbenzene	104-51-8	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	0.014	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
n-Propylbenzene	103-65-1	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	0.087 JH	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
sec-Butylbenzene	135-98-8	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	0.043 JH	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
Styrene	100-42-5	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
tert-Butylbenzene	98-06-6	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
Tetrachloroethene	127-18-4	mg/kg	<0.00056	<0.00062	<0.00056	<0.00052	<0.00051	---	---	<0.0006	<0.00064	<0.00066	<0.00087	---	---	---
Toluene	108-88-3	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	0.0015 JH	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
Trichloroethene	79-01-6	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005 JL	<0.00053	<0.00055	<0.00072	---	---	---
Trichlorofluoromethane	75-69-4	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
Vinyl chloride	75-01-4	mg/kg	<0.00046	<0.00051	<0.00047	<0.00043	<0.00043	---	---	<0.0005	<0.00053	<0.00055	<0.00072	---	---	---
Xylenes, Total	1330-20-7	mg/kg	<0.0014	<0.0015	<0.0014	<0.0013	<0.0013	---	---	<0.0015	<0.0016	<0.0016	<0.0022	---	---	---
SEMIVOLATILE ORGANIC COMPOUNDS																
1,1´-Biphenyl	92-52-4	mg/kg	<0.0036	<0.0032	<0.0033	<0.0033	<0.034	---	---	<0.0032	<0.034	<0.003	<0.033	---	---	---
1-Methylnaphthalene	90-12-0	mg/kg	<0.0029	0.0027 J	0.0028 J	<0.0026	0.92	---	---	<0.0025	<0.027	<0.0024	<0.026	---	---	---
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0035	<0.0031	<0.0031	<0.0032	<0.033 JL	---	---	<0.0031	<0.033	<0.0029	<0.032 JL	---	---	---
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.0041	<0.0037	<0.0037	<0.0038	<0.039 JL	---	---	<0.0036	<0.039	<0.0034	<0.038 JL	---	---	---
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0028	<0.0025	<0.0025	<0.0025	<0.026 JL	---	---	<0.0024	<0.026	<0.0023	<0.025 JL	---	---	---
2 4-Dimethylphenol	105-67-9	mg/kg	<0.0041	<0.0037	<0.0037	<0.0038	2.1 JL	---	---	<0.0036	<0.039	<0.0034	<0.038 JL	---	---	---
2 4-Dinitrophenol	51-28-5	mg/kg	<0.0041	<0.0037	<0.0037	<0.0038	<0.039 JL	---	---	<0.0036	<0.039	<0.0034	<0.038 JL	---	---	---
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.0041	<0.0037	<0.0037	<0.0038	<0.039	---	---	<0.0036	<0.039	<0.0034	<0.038	---	---	---
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.004	<0.0036	<0.0036	<0.0036	<0.038	---	---	<0.0035	<0.038	<0.0033	<0.037	---	---	---
2-Chloronaphthalene	91-58-7	mg/kg	<0.0051	<0.0046	<0.0046	<0.0047	<0.048	---	---	<0.0045	<0.049	<0.0043	<0.047	---	---	---
2-Chlorophenol	95-57-8	mg/kg	<0.004	<0.0036	<0.0036	<0.0036	<0.038 JL	---	---	<0.0035	<0.038	<0.0033	<0.037 JL	---	---	---
2-Methylnaphthalene	91-57-6	mg/kg	<0.0034	0.0036 J	0.0035 J	<0.0031	1.8	---	---	<0.003	<0.032	<0.0028	<0.031	---	---	---
2-Methylphenol	95-48-7	mg/kg	<0.0036	<0.0032	<0.0033	<0.0033	<0.034 JL	---	---	<0.0032	<0.034	<0.003	<0.033 JL	---	---	---
2-Nitroaniline	88-74-4	mg/kg	<0.0041	<0.0037	<0.0037	<0.0038	<0.039	---	---	<0.0036	<0.039	<0.0034	<0.038	---	---	---
2-Nitrophenol	88-75-5	mg/kg	<0.0058	<0.0051	<0.0052	<0.0052	<0.054 JL	---	---	<0.0051	<0.054	<0.0048	<0.053 JL	---	---	---
3&4-Methylphenol	106-44-5	mg/kg	<0.0035	<0.0031	<0.0031	<0.0032	<0.033 JL	---	---	<0.0031	<0.033	<0.0029	<0.032 JL	---	---	---
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0039	<0.0035	<0.0035	<0.0035	<0.037	---	---	<0.0034	<0.037	<0.0032	<0.036	---	---	---
3-Nitroaniline	99-09-2	mg/kg	<0.0033	<0.0029	<0.0029	<0.003	<0.031	---	---	<0.0029	<0.031	<0.0027	<0.03	---	---	---
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.0041	<0.0037	<0.0037	<0.0038	<0.039 JL	---	---	<0.0036	<0.039	<0.0034	<0.038 JL	---	---	---
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.0041	<0.0037	<0.0037	<0.0038	<0.039	---	---	<0.0036	<0.039	<0.0034	<0.038	---	---	---
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.0041	<0.0037	<0.0037	<0.0038	<0.039 JL	---	---	<0.0036	<0.039	<0.0034	<0.038 JL	---	---	---
4-Chloroaniline	106-47-8	mg/kg	<0.0028	<0.0025	<0.0025	<0.0025	<0.026	---	---	<0.0024	<0.026	<0.0023	<0.025	---	---	---
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0028	<0.0025	<0.0025	<0.0025	<0.026	---	---	<0.0024	<0.026	<0.0023	<0.025	---	---	---
4-Nitroaniline	100-01-6	mg/kg	<0.0041	<0.0037	<0.0037	<0.0038	<0.039	---	---	<0.0036	<0.039	<0.0034	<0.038	---	---	---
4-Nitrophenol	100-02-7	mg/kg	<0.0048	<0.0042	<0.0043	<0.0043	<0.045 JL	---	---	<0.0042	<0.045	<0.004	<0.044 JL	---	---	---
Acenaphthene	83-32-9	mg/kg	<0.0028	0.021	0.013	0.0031 J	0.063 J	---	---	<0.0024	<0.026	<0.0023	<0.025	---	---	---
Acenaphthylene	208-96-8	mg/kg	<0.0028	<0.0025	<0.0025	<0.0025	0.76	---	---	0.01	<0.026	<0.0023	<0.025	---	---	---
Acetophenone	98-86-2	mg/kg	<0.003	<0.0027	<0.0027	<0.0027	<0.028	---	---	0.0055 J	<0.028	<0.0025	<0.028	---	---	---
Anthracene	120-12-7	mg/kg	<0.0028	0.043	0.029	0.011	0.43	---	---	0.013	0.042 J	<0.0023	<0.025	---	---	---
Benz(a)anthracene	56-55-3	mg/kg	<0.0035	0.11	0.071	0.071	<0.033	---	---	0.061	0.19	0.011	0.051 J	---	---	---
Benzaldehyde	100-52-7	mg/kg	<0.0058 JL	<0.0051 JL	<0.0052 JL	<0.0052 JL	<0.054 JL	---	---	<0.0051 JL	<0.054 JL	<0.0048 JL	<0.053 JL	---	---	---
Benzo(a)pyrene	50-32-8	mg/kg	<0.0029	0.096	0.061	0.083	<0.027	---	---	0.067	0.15	0.012	0.062 J	---	---	---
Benzo(b)fluoranthene	205-99-2	mg/kg	<0.0041	0.13	0.081	0.12	<0.039	---	---	0.11	0.32	0.019	0.11	---	---	---
Benzo(g h i)perylene	191-24-2	mg/kg	<0.0036	0.057	0.038	0.061	<0.034	---	---	0.061	0.11	0.0099	0.065 J	---	---	---
Benzo(k)fluoranthene	207-08-9	mg/kg	<0.0041	0.056	0.039	0.042	<0.039	---	---	0.039	0.15	0.0059 J	0.05 J	---	---	---
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.003	<0.0027	<0.0027	<0.0027	<0.028	---	---	<0.0026	<0.028	<0.0025	<0.028	---	---	---
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0035	<0.0031	<0.0031	<0.0032	<0.033	---	---	<0.0031	<0.033	<0.0029	<0.032	---	---	---
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0034	<0.003	<0.003	<0.0031	<0.032	---	---	<0.003	<0.032	<0.0028	<0.031	---	---	---
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	<0.0083	0.016	0.013	0.008	<0.078	---	---	0.011	<0.078	<0.0069	<0.076	---	---	---
Butyl benzyl phthalate	85-68-7	mg/kg	<0.0031	<0.0028	<0.0028	<0.0028	<0.029	---	---	0.0066 J	<0.03	<0.0026	<0.029	---	---	---
Caprolactam	105-60-2	mg/kg	<0.003	<0.0027	<0.0027	<0.0027	<0.028	---	---	<0.0026	<0.028	<0.0025	<0.028	---	---	---
Carbazole	86-74-8	mg/kg	<0.0028	0.026	0.014	0.0079	<0.026	---	---	0.0096	<0.026	<0.0023	<0.025	---	---	---
Chrysene	218-01-9	mg/kg	<0.0036	0.1	0.067	0.079	0.18	---	---	0.081	0.39	0.014	0.11	---	---	---
Dibenz(a h)anthracene	53-70-3	mg/kg	<0.0028	0.018	0.017	0.02	<0.026	---	---	0.013	<0.026	<0.0023	<0.025	---	---	---
Dibenzofuran	132-64-9	mg/kg	<0.0028	0.0088	0.0065 J	<0.0025	0.58	---	---	<0.0024	<0.026	<0.0023	<0.025	---	---	---
Diethyl phthalate	84-66-2	mg/kg	<0.0041	<0.0037	<0.0037	<0.0038	<0.039	---	---	<0.0036	<0.039	<0.0034	<0.038	---	---	---
Dimethyl phthalate	131-11-3	mg/kg	<0.003	<0.0027	<0.0027	<0.0027	<0.028	---	---	<0.0026	<0.028	<0.0025	<0.028	---	---	---
Di-n-butyl phthalate	84-74-2	mg/kg	<0.0031	<0.0028	0.0037 U	<0.0028	0.54 U	---	---	0.011	<0.03	<0.0026	<0.029	---	---	---
Di-n-octyl phthalate	117-84-0	mg/kg	<0.0036	<0.0032	<0.0033	<0.0033	<0.034	---	---	<0.0032	<0.034	<0.003	<0.033	---	---	---
Fluoranthene	206-44-0	mg/kg	<0.0028	0.25	0.15	0.14	0.26	---	---	0.16	0.51	0.024	0.15	---	---	---
Fluorene	86-73-7	mg/kg	<0.0028	0.02	0.013	<0.0025	1.4	---	---	0.0026 J	<0.026	<0.0023	<0.025	---	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
North Pit Area
Brine Services Company Superfund Site

Sample Location			WSB07	WSB08	WSB08	WSB08	WSB08	WSB10	WSB11	WSS05	WSS06	WSS07	WSS08	WSS10	WSS11	WSS11
Sample Date			10-11 ft	1-2 ft	1-2 ft	2-3 ft	9-10 ft	1-2 ft	1-2 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
Sample Date			11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	12/4/2012	12/4/2012	10/7/2010	10/8/2010	10/7/2010	10/8/2010	12/14/2011	12/14/2011	12/14/2011
Analyte	CAS No.	Units														
Hexachlorobenzene	118-74-1	mg/kg	<0.0033	<0.0029	<0.0029	<0.003	<0.031	---	---	<0.0029	<0.031	<0.0027	<0.03	---	---	---
Hexachlorobutadiene	87-68-3	mg/kg	<0.0055	<0.0049	<0.0049	<0.005	<0.052	---	---	<0.0048	<0.052	<0.0046	<0.051	---	---	---
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0045	<0.004	<0.004	<0.0041	<0.042	---	---	<0.004 JL	<0.043	<0.0037	<0.041	---	---	---
Hexachloroethane	67-72-1	mg/kg	<0.0049	<0.0043	<0.0044	<0.0044	<0.046	---	---	<0.0043	<0.046	<0.0041	<0.045	---	---	---
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	<0.0044	0.065	0.043	0.064	<0.041	---	---	0.061	0.15	0.01	0.071 J	---	---	---
Isophorone	78-59-1	mg/kg	<0.0038	<0.0033	<0.0034	<0.0034	<0.035	---	---	<0.0033	<0.036	<0.0031	<0.035	---	---	---
Naphthalene	91-20-3	mg/kg	<0.0041	0.0051 J	0.0045 J	<0.0038	<0.039	---	---	<0.0036	<0.039	<0.0034	<0.038	---	---	---
Nitrobenzene	98-95-3	mg/kg	<0.0041	<0.0037	<0.0037	<0.0038	<0.039	---	---	<0.0036	<0.039	<0.0034	<0.038	---	---	---
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.005	<0.0045	<0.0045	<0.0046	<0.047	---	---	<0.0044	<0.047	<0.0042	<0.046	---	---	---
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0028	<0.0025	<0.0025	<0.0025	<0.026	---	---	<0.0024	<0.026	<0.0023	<0.025	---	---	---
Pentachlorophenol	87-86-5	mg/kg	<0.0035	<0.0031	<0.0031	<0.0032	<0.033 JL	---	---	<0.0031	<0.033	<0.0029	<0.032 JL	---	---	---
Phenanthrene	85-01-8	mg/kg	<0.0038	0.18	0.11	0.055	2.3	---	---	0.044	0.079	0.0066 J	0.043 J	---	---	---
Phenol	108-95-2	mg/kg	<0.0041	<0.0037	<0.0037	<0.0038	<0.039 JL	---	---	<0.0036	<0.039	<0.0034	<0.038 JL	---	---	---
Pyrene	129-00-0	mg/kg	<0.0028	0.19 J	0.11 J	0.1	0.18	---	---	0.13	0.47	0.02	0.13	---	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
Off-Site Samples
Brine Services Company Superfund Site

Sample Location			ENSB04	ENSB04	ENSB04	ENSB05	ENSB05	ENSB05	ENSB05	ENSB08	ENSB08	ENSB08	ENSB10	ENSB10	ENSB10	ENSB11	ENSB11	ENSB11	ENSB12	ENSB13	ENSB14	ENSB15
Sample Date			1-2 ft	3-4 ft	9-10 ft	1-2 ft	2-3 ft	7-8 ft	7-8 ft	1-2 ft	2-3 ft	9-10 ft	1-2 ft	3-4 ft	9-10 ft	1-2 ft	3-4 ft	7-8 ft	1-2 ft	1-2 ft	1-2 ft	1-2 ft
Sample Date			12/9/2010	12/9/2010	12/9/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/9/2010	11/9/2010	11/9/2010	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012
Analyte	CAS No.	Units																				
METALS																						
Aluminum	7429-90-5	mg/kg	11400	17400	11000	6750	8200	5770	4770	3720	5770	4720	---	---	---	---	---	---	---	---	---	---
Antimony	7440-36-0	mg/kg	<1.3	<1.4	<1.3	<0.26	<0.29	<0.29	<0.27	<0.26	<0.3	<0.28	---	---	---	---	---	---	---	---	---	---
Arsenic	7440-38-2	mg/kg	5.95	52.5	1.58 J	9.85	7.37	1.52	1.84	2.41	2.21	3.78	4.25	5.12	1.38	4.98	1.56	2.82	5.22	6.79	4.98	2.65
Barium	7440-39-3	mg/kg	941	188	386	619	599	454	410	107	137	226	---	---	---	---	---	---	---	---	---	---
Beryllium	7440-41-7	mg/kg	0.466 J	0.711 J	0.489 J	0.506 J	0.66	0.417 J	0.4 J	0.321 J	0.5 J	0.453 J	---	---	---	---	---	---	---	---	---	---
Cadmium	7440-43-9	mg/kg	1.13 J	0.638 J	<0.21	1.5	0.118 J	0.102 J	0.13 J	0.126 J	0.149 J	0.189 J	---	---	---	---	---	---	---	---	---	---
Chromium	7440-47-3	mg/kg	14.5	11.2	7.56	6.69	4.78	2.75	2.8	2.67	3.49	3.11	---	---	---	---	---	---	---	---	---	---
Cobalt	7440-48-4	mg/kg	3.33	6.1	3.23	3.85	3.19	1.75	1.81	2.76	3.65	3.44	---	---	---	---	---	---	---	---	---	---
Copper	7440-50-8	mg/kg	11.4	18	4.58	10.4	6.28	2.63	3.09	3.13	6.56	4.44	---	---	---	---	---	---	---	---	---	---
Lead	7439-92-1	mg/kg	55	13.8	6.7	22.1	9.56	10	12.2	11.5	8.1	10.3	---	---	---	---	---	---	---	---	---	---
Manganese	7439-96-5	mg/kg	168	259	130	207	77.9	106	95.4	138	253	213	---	---	---	---	---	---	---	---	---	---
Nickel	7440-02-0	mg/kg	6.52	9.17	5.73	5.8	6.46	2.91	2.9	3.25	5.28	4.18	---	---	---	---	---	---	---	---	---	---
Selenium	7782-49-2	mg/kg	<1.3	<1.4	<1.3	1.42	0.941	0.677	0.541 J	0.625	0.881	0.918	---	---	---	---	---	---	---	---	---	---
Silver	7440-22-4	mg/kg	<0.22	<0.22	<0.21	0.103 J	0.0581 J	<0.046	<0.044	<0.042	0.0473 J	<0.045	---	---	---	---	---	---	---	---	---	---
Thallium	7440-28-0	mg/kg	<0.38	<0.39	<0.37	<0.074	<0.081	<0.081	<0.077	0.177 J	0.0912 J	0.104 J	---	---	---	---	---	---	---	---	---	---
Vanadium	7440-62-2	mg/kg	18.9	28.3	25.3	9.05	7.33	8.43	7.78	7.71	9.03	16	---	---	---	---	---	---	---	---	---	---
Zinc	7440-66-6	mg/kg	145	218	28	160	15.4	9.82	9.19	10.9	11.1	11.4	---	---	---	---	---	---	---	---	---	---
Mercury	7439-97-6	mg/kg	21.9	2.37	0.0043 U	23.1	0.00865	0.00268 J	0.00324 J	0.00585	0.00896	0.00225 J	0.0167	0.00791	0.00154 J	0.0133	0.0162	0.00229 J	3.47	0.0365	0.00414	0.00226 J
Cyanide	57-12-5	mg/kg	<0.64	<0.65	<0.61	<0.69	<0.71	<0.72	<0.72	<0.7	2.18 J	<0.74	---	---	---	---	---	---	---	---	---	---
PESTICIDES and PCBs																						
4,4´-DDD	72-54-8	mg/kg	<0.00056	<0.00057	<0.00061	<0.003	<0.0031	<0.00062	<0.00061	<0.00059	<0.00063	<0.00062	---	---	---	---	---	---	---	---	---	---
4,4´-DDE	72-55-9	mg/kg	<0.00056	<0.00057	<0.00061	<0.003	<0.0031	<0.00062	<0.00061	<0.00059	<0.00063	<0.00062	---	---	---	---	---	---	---	---	---	---
4,4´-DDT	50-29-3	mg/kg	<0.00056	<0.00057	<0.00061	<0.003	<0.0031	<0.00062	<0.00061	0.003 J	<0.00063	<0.00062	---	---	---	---	---	---	---	---	---	---
Aldrin	309-00-2	mg/kg	<0.00034	<0.00034	<0.00036	<0.0018	<0.0018	<0.00037	<0.00036	<0.00035	<0.00038	<0.00037	---	---	---	---	---	---	---	---	---	---
alpha-BHC	319-84-6	mg/kg	<0.00034	<0.00034	<0.00036	<0.0018	<0.0018	<0.00037	<0.00036	<0.00035	<0.00038	<0.00037	---	---	---	---	---	---	---	---	---	---
alpha-Chlordane	5103-71-9	mg/kg	<0.00023	0.0018 J	<0.00024	<0.0012	<0.0012	<0.00025	<0.00024	<0.00024	<0.00025	<0.00025	---	---	---	---	---	---	---	---	---	---
beta-BHC	319-85-7	mg/kg	<0.00034	<0.00034	<0.00036	<0.0018	<0.0018	<0.00037	<0.00036	<0.00035	<0.00038	<0.00037	---	---	---	---	---	---	---	---	---	---
delta-BHC	319-86-8	mg/kg	<0.00023	<0.00023	<0.00024	<0.0012	<0.0012	0.0013 J	0.0012 J	<0.00024	<0.00025	<0.00025	---	---	---	---	---	---	---	---	---	---
Dieldrin	60-57-1	mg/kg	<0.00056	<0.00057	<0.00061	<0.003	<0.0031	<0.00062	<0.00061	<0.00059	<0.00063	<0.00062	---	---	---	---	---	---	---	---	---	---
Endosulfan I	959-98-8	mg/kg	<0.00034	<0.00034	<0.00036	<0.0018	<0.0018	<0.00037	<0.00036	<0.00035	<0.00038	<0.00037	---	---	---	---	---	---	---	---	---	---
Endosulfan II	33213-65-9	mg/kg	<0.00068	<0.00069	<0.00073	<0.0036	<0.0037	<0.00074	<0.00073	<0.00071	<0.00076	<0.00075	---	---	---	---	---	---	---	---	---	---
Endosulfan sulfate	1031-07-8	mg/kg	<0.00068	<0.00069	<0.00073	<0.0036	<0.0037	<0.00074	<0.00073	0.003 J	<0.00076	<0.00075	---	---	---	---	---	---	---	---	---	---
Endrin	72-20-8	mg/kg	<0.00068	<0.00069	<0.00073	<0.0036	<0.0037	<0.00074	<0.00073	<0.00071	<0.00076	<0.00075	---	---	---	---	---	---	---	---	---	---
Endrin aldehyde	7421-93-4	mg/kg	<0.00068	<0.00069	<0.00073	<0.0036	<0.0037	<0.00074	<0.00073	<0.00071	<0.00076	<0.00075	---	---	---	---	---	---	---	---	---	---
gamma-BHC	58-89-9	mg/kg	<0.00023	<0.00023	<0.00024	<0.0012	<0.0012	<0.00025	<0.00024	<0.00024	<0.00025	<0.00025	---	---	---	---	---	---	---	---	---	---
gamma-Chlordane	5103-74-2	mg/kg	<0.00023	<0.00023	<0.00024	<0.0012	<0.0012	<0.00025	<0.00024	<0.00024	<0.00025	<0.00025	---	---	---	---	---	---	---	---	---	---
Heptachlor	76-44-8	mg/kg	<0.00034	<0.00034	<0.00036	<0.0018	<0.0018	<0.00037	<0.00036	<0.00035	<0.00038	<0.00037	---	---	---	---	---	---	---	---	---	---
Heptachlor epoxide	1024-57-3	mg/kg	<0.00034	<0.00034	<0.00036	<0.0018	<0.0018	<0.00037	<0.00036	<0.00035	<0.00038	<0.00037	---	---	---	---	---	---	---	---	---	---
Methoxychlor	72-43-5	mg/kg	<0.0038	<0.0039	<0.0041	<0.02	<0.021	<0.0042	<0.0041	<0.004	<0.0043	<0.0042	---	---	---	---	---	---	---	---	---	---
Toxaphene	8001-35-2	mg/kg	<0.0043	<0.0044	<0.0046	<0.023	<0.023	<0.0047	<0.0046	<0.0045	<0.0048	<0.0047	---	---	---	---	---	---	---	---	---	---
Aroclor 1016	12674-11-2	mg/kg	<0.0027	<0.0028	<0.0029	<0.0029	<0.003	<0.003	<0.0029	<0.0028	<0.003	<0.003	---	---	---	---	---	---	---	---	---	---
Aroclor 1221	11104-28-2	mg/kg	<0.0027	<0.0028	<0.0029	<0.0029	<0.003	<0.003	<0.0029	<0.0028	<0.003	<0.003	---	---	---	---	---	---	---	---	---	---
Aroclor 1232	11141-16-5	mg/kg	<0.0027	<0.0028	<0.0029	<0.0029	<0.003	<0.003	<0.0029	<0.0028	<0.003	<0.003	---	---	---	---	---	---	---	---	---	---
Aroclor 1242	53469-21-9	mg/kg	<0.0027	<0.0028	<0.0029	<0.0029	<0.003	<0.003	<0.0029	<0.0028	<0.003	<0.003	---	---	---	---	---	---	---	---	---	---
Aroclor 1248	12672-29-6	mg/kg	<0.0027	<0.0028	<0.0029	<0.0029	<0.003	<0.003	<0.0029	<0.0028	<0.003	<0.003	---	---	---	---	---	---	---	---	---	---
Aroclor 1254	11097-69-1	mg/kg	<0.0027	<0.0028	<0.0029	<0.0029	<0.003	<0.003	<0.0029	<0.0028	<0.003	<0.003	---	---	---	---	---	---	---	---	---	---
Aroclor 1260	11096-82-5	mg/kg	0.01 J	<0.0021	<0.0022	<0.0021	<0.0022	<0.0022	<0.0022	0.028	<0.0023	<0.0022	---	---	---	---	---	---	---	---	---	---
Total PCBs	TPCB	mg/kg	0.0181	<0.00945	<0.0098	<0.00975	<0.0101	<0.0101	<0.0098	0.0364	<0.01015	<0.0101	---	---	---	---	---	---	---	---	---	---
VOLATILE ORGANIC COMPOUNDS																						
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<0.00047 JL	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1,1,1-Trichloroethane	71-55-6	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1,1,2-Trichloroethane	79-00-5	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1 1-Dichloroethane	75-34-3	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1,1-Dichloroethene	75-35-4	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1,2,4-Trichlorobenzene	120-82-1	mg/kg	<0.00057 JL	<0.00057	<0.0005	<0.00054	<0.00056	<0.14	<0.13	<0.00055	<0.00055	<0.00055	---	---	---	---	---	---	---	---	---	---
1 2 4-Trimethylbenzene	95-63-6	mg/kg	0.0016 JL	<0.00047	<0.00042	<0.00045	0.0066	26	25	0.13	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1 2-Dibromoethane	106-93-4	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1,2-Dichlorobenzene	95-50-1	mg/kg	<0.00047 JL	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1 2-Dichloroethane	107-06-2	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1 2-Dichloropropane	78-87-5	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	108-67-8	mg/kg	<0.00047 JL	<0.00047	<0.00042	<0.00045	0.0038 J	38	36	0.041	0.11	1	---	---	---	---	---	---	---	---	---	---
1 3-Dichlorobenzene	541-73-1	mg/kg	<0.00047 JL	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
1 4-Dichlorobenzene	106-46-7	mg/kg	<0.00047 JL	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
2-Butanone	78-93-3	mg/kg	<0.0013	<0.0013	<0.0012	<0.0013	0.0074 J	<0.32	<0.31	0.0058 J	0.013	<0.0013	---	---	---	---	---	---	---	---	---	---
2-Hexanone	591-78-6	mg/kg	<0.00095	<0.00094	<0.00083	<0.0009	<0.00094	<0.23	<0.22	<0.00091	<0.00092	<0.00091	---	---	---	---	---	---	---	---	---	---
4-Methyl-2-pentanone	108-10-1	mg/kg	<0.00095 J	<0.00094	<0.00083	<0.0009	<0.00094	<0.23	<0.22	<0.00091	<0.00092	<0.00091	---	---	---	---	---	---	---	---	---	---
Acetone	67-64-1	mg/kg	<0.0019	<0.0019	0.0057 U	<0.0018	0.072 U	40 J	<0.44 J	0.035 U	0.065 U	<0.0018	---	---	---	---	---	---	---	---	---	---
Benzene	71-43-2	mg/kg	0.0006 U	<0.00047	<0.00042	<0.00045	0.18	22	18	0.03	0.18	4.8	<0.00061	<0.00056	6.8	<0.0006	<0.0006	<0.00055	---	---	---	---
Bromodichloromethane	75-27-4	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Bromoform	75-25-2	mg/kg	<0.00047 JL	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Bromomethane	74-83-9	mg/kg	<0.00095 J	<0.00094	<0.00083	<0.0009	<0.00094	<0.23	<0.22	<0.00091	<0.00092	<0.00091	---	---	---	---	---	---	---	---	---	---
Carbon disulfide	75-15-0	mg/kg	<0.00095	<0.00094	0.0042 J	<0.0009	<0.00094	<0.23	<0.22	<0.00091	0.0045 J	<0.00091	---	---	---	---	---	---	---	---	---	---
Carbon tetrachloride	56-23-5	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
Off-Site Samples
Brine Services Company Superfund Site

Sample Location			ENSB04	ENSB04	ENSB04	ENSB05	ENSB05	ENSB05	ENSB05	ENSB08	ENSB08	ENSB08	ENSB10	ENSB10	ENSB10	ENSB11	ENSB11	ENSB11	ENSB12	ENSB13	ENSB14	ENSB15
Sample Date			1-2 ft	3-4 ft	9-10 ft	1-2 ft	2-3 ft	7-8 ft	7-8 ft	1-2 ft	2-3 ft	9-10 ft	1-2 ft	3-4 ft	9-10 ft	1-2 ft	3-4 ft	7-8 ft	1-2 ft	1-2 ft	1-2 ft	1-2 ft
Sample Date			12/9/2010	12/9/2010	12/9/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/9/2010	11/9/2010	11/9/2010	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012
Analyte	CAS No.	Units																				
Chlorobenzene	108-90-7	mg/kg	<0.00047 JL	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Chloroethane	75-00-3	mg/kg	<0.00095	<0.00094	<0.00083	<0.0009	<0.00094	<0.23	<0.22	<0.00091	<0.00092	<0.00091	---	---	---	---	---	---	---	---	---	---
Chloroform	67-66-3	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Chloromethane	74-87-3	mg/kg	<0.00095	<0.00094	<0.00083	<0.0009	<0.00094	<0.23	<0.22	<0.00091	<0.00092	<0.00091	---	---	---	---	---	---	---	---	---	---
cis-1 2-Dichloroethene	156-59-2	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
cis-1,3-Dichloropropene	10061-01-5	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Cyclohexane	110-82-7	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	0.036	29 J	<0.11 J	0.022	0.16	<0.00046	---	---	---	---	---	---	---	---	---	---
Dibromochloromethane	124-48-1	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Dichlorodifluoromethane	75-71-8	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Ethylbenzene	100-41-4	mg/kg	0.0022 JL	0.0019 J	<0.00042	<0.00045	0.082	74	74	0.17	5	11	<0.00092	<0.00084	4	<0.00091	<0.0009	<0.00083	---	---	---	---
Isopropylbenzene	98-82-8	mg/kg	<0.00047 JL	<0.00047	0.015	<0.00045	0.0025 J	6.8	6.2	0.013	0.049	0.95	---	---	---	---	---	---	---	---	---	---
Methyl acetate	79-20-9	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Methylcyclohexane	108-87-2	mg/kg	<0.00047 JL	<0.00047	0.021	<0.00045	0.039	28	34	0.047	1.4	9.8	---	---	---	---	---	---	---	---	---	---
Methylene chloride	75-09-2	mg/kg	<0.00095	<0.00094	<0.00083	<0.0009	<0.00094	2.1 J	<0.22	<0.00091	<0.00092	<0.00091	---	---	---	---	---	---	---	---	---	---
Naphthalene	91-20-3	mg/kg	<0.00047 JL	<0.00047	0.083	0.0012 U	0.0013 U	19	17	<0.00046	0.005 U	3.1	---	---	---	---	---	---	---	---	---	---
n-Butylbenzene	104-51-8	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	12	12	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
n-Propylbenzene	103-65-1	mg/kg	0.00072 JL	0.00054 J	0.017	<0.00045	0.004 J	25	23	0.039	0.16	3.7	---	---	---	---	---	---	---	---	---	---
sec-Butylbenzene	135-98-8	mg/kg	<0.00047 JL	<0.00047	<0.00042	<0.00045	<0.00047	2.8	2.7	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Styrene	100-42-5	mg/kg	<0.00047 JL	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
tert-Butylbenzene	98-06-6	mg/kg	<0.00047 JL	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Tetrachloroethene	127-18-4	mg/kg	<0.00057	<0.00057	<0.0005	<0.00054	<0.00056	<0.14	<0.13	<0.00055	<0.00055	<0.00055	---	---	---	---	---	---	---	---	---	---
Toluene	108-88-3	mg/kg	0.0036 U	0.0023 U	0.0029 U	<0.00045	<0.00047	1.7	1.3	0.00084 J	0.0034 J	0.12	---	---	---	---	---	---	---	---	---	---
trans-1 2-Dichloroethene	156-60-5	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Trichloroethene	79-01-6	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Trichlorofluoromethane	75-69-4	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Vinyl chloride	75-01-4	mg/kg	<0.00047	<0.00047	<0.00042	<0.00045	<0.00047	<0.11	<0.11	<0.00046	<0.00046	<0.00046	---	---	---	---	---	---	---	---	---	---
Xylenes, Total	1330-20-7	mg/kg	0.0048 JL	0.0041 J	<0.0012	<0.0013	0.0061 J	240	240	0.15	0.3	0.23	---	---	---	---	---	---	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUNDS																						
1,1´-Biphenyl	92-52-4	mg/kg	<0.0033	<0.0033	<0.0035	<0.0035	<0.0036	0.17	0.17	<0.0034	<0.0037	0.077	---	---	---	---	---	---	---	---	---	---
1-Methylnaphthalene	90-12-0	mg/kg	<0.0026	<0.0026	0.11	0.0029 J	<0.0028	5.4	4.9	0.0029 J	<0.0029	0.68	---	---	---	---	---	---	---	---	---	---
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0032	<0.0032 JL	<0.0034	<0.0033 JL	<0.0035	<0.0034 JL	<0.0034 JL	<0.0033	<0.0035	<0.0035	---	---	---	---	---	---	---	---	---	---
2 4 6-Trichlorophenol	88-06-2	mg/kg	<0.0037	<0.0038 JL	<0.004	<0.0039 JL	<0.0041	<0.0041 JL	<0.004 JL	<0.0039	<0.0042	<0.0041	---	---	---	---	---	---	---	---	---	---
2,4-Dichlorophenol	120-83-2	mg/kg	<0.0025	<0.0025 JL	<0.0027	<0.0026 JL	<0.0027	<0.0027 JL	<0.0027 JL	<0.0026	<0.0028	<0.0027	---	---	---	---	---	---	---	---	---	---
2 4-Dimethylphenol	105-67-9	mg/kg	<0.0037	<0.0038 JL	<0.004	<0.0039 JL	<0.0041 JL	<0.0041 JL	<0.004 JL	0.0042 J	0.0046 J	<0.0041	---	---	---	---	---	---	---	---	---	---
2 4-Dinitrophenol	51-28-5	mg/kg	<0.0037	<0.0038 JL	<0.004	<0.0039 JL	<0.0041 JL	<0.0041 JL	<0.004 JL	<0.0039	<0.0042	<0.0041	---	---	---	---	---	---	---	---	---	---
2,4-Dinitrotoluene	121-14-2	mg/kg	<0.0037	<0.0038	<0.004	<0.0039	<0.0041	<0.0041	<0.004	<0.0039	<0.0042	<0.0041	---	---	---	---	---	---	---	---	---	---
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.0036	<0.0037	<0.0039	<0.0038	<0.004	<0.0039	<0.0039	<0.0038	<0.004	<0.004	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	91-58-7	mg/kg	<0.0046	<0.0047	<0.005	<0.0049	<0.0051	<0.005	<0.005	<0.0048	<0.0052	<0.0051	---	---	---	---	---	---	---	---	---	---
2-Chlorophenol	95-57-8	mg/kg	<0.0036	<0.0037 JL	<0.0039	<0.0038 JL	<0.004	<0.0039 JL	<0.0039 JL	<0.0038	<0.004	<0.004	---	---	---	---	---	---	---	---	---	---
2-Methylnaphthalene	91-57-6	mg/kg	0.0043 J	<0.0031	0.066	0.004 U	<0.0033	9.2	8.8	0.005 J	<0.0034	1	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	95-48-7	mg/kg	<0.0033	<0.0033 JL	<0.0035	<0.0035 JL	<0.0036	<0.0036 JL	<0.0035 JL	<0.0034	<0.0037	<0.0036	---	---	---	---	---	---	---	---	---	---
2-Nitroaniline	88-74-4	mg/kg	<0.0037	<0.0038	<0.004	<0.0039	<0.0041	<0.0041	<0.004	<0.0039	<0.0042	<0.0041	---	---	---	---	---	---	---	---	---	---
2-Nitrophenol	88-75-5	mg/kg	<0.0052	<0.0053 JL	<0.0056	<0.0055 JL	<0.0057	<0.0057 JL	<0.0056 JL	<0.0054	<0.0058	<0.0057	---	---	---	---	---	---	---	---	---	---
3&4-Methylphenol	106-44-5	mg/kg	<0.0032	<0.0032 JL	<0.0034	<0.0033 JL	<0.0035	<0.0034 JL	<0.0034 JL	<0.0033	<0.0035	<0.0035	---	---	---	---	---	---	---	---	---	---
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0035	<0.0035	<0.0038	<0.0037	<0.0038	<0.0038	<0.0038	<0.0036	<0.0039	<0.0039	---	---	---	---	---	---	---	---	---	---
3-Nitroaniline	99-09-2	mg/kg	<0.0029 JL	<0.003 JL	<0.0032 JL	<0.0031	<0.0032	<0.0032	<0.0032	<0.0031	<0.0033	<0.0032	---	---	---	---	---	---	---	---	---	---
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.0037 JL	<0.0038 JL	<0.004	<0.0039 JL	<0.0041	<0.0041 JL	<0.004 JL	<0.0039	<0.0042	<0.0041	---	---	---	---	---	---	---	---	---	---
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.0037 JL	<0.0038	<0.004	<0.0039	<0.0041	0.079 J	<0.004 J	<0.0039	<0.0042	<0.0041	---	---	---	---	---	---	---	---	---	---
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.0037	<0.0038 JL	<0.004	<0.0039 JL	<0.0041	<0.0041 JL	<0.004 JL	<0.0039	<0.0042	<0.0041	---	---	---	---	---	---	---	---	---	---
4-Chloroaniline	106-47-8	mg/kg	<0.0025	<0.0025	<0.0027	<0.0026	<0.0027	<0.0027	<0.0027	<0.0026	<0.0028	<0.0027	---	---	---	---	---	---	---	---	---	---
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0025	<0.0025	<0.0027	<0.0026	<0.0027	<0.0027	<0.0027	<0.0026	<0.0028	<0.0027	---	---	---	---	---	---	---	---	---	---
4-Nitroaniline	100-01-6	mg/kg	<0.0037	<0.0038	<0.004	<0.0039	<0.0041	<0.0041	<0.004	<0.0039	<0.0042	<0.0041	---	---	---	---	---	---	---	---	---	---
4-Nitrophenol	100-02-7	mg/kg	<0.0043	<0.0044 JL	<0.0046	<0.0045 JL	<0.0047	<0.0047 JL	<0.0046 JL	<0.0045	<0.0048	<0.0047	---	---	---	---	---	---	---	---	---	---
Acenaphthene	83-32-9	mg/kg	<0.0025	<0.0025	0.022	<0.0026	<0.0027	0.13 J	0.026 J	<0.0026	<0.0028	<0.0027	---	---	---	---	---	---	---	---	---	---
Acenaphthylene	208-96-8	mg/kg	0.0034 J	<0.0025	0.05	<0.0026	<0.0027	0.12	0.12	0.0096	<0.0028	<0.0027	---	---	---	---	---	---	---	---	---	---
Acetophenone	98-86-2	mg/kg	0.0047 U	0.0038 U	<0.0029	0.0031 U	<0.003	<0.003	<0.0029	<0.0028	<0.003	<0.003	---	---	---	---	---	---	---	---	---	---
Anthracene	120-12-7	mg/kg	0.0057 J	<0.0025	0.015	0.012	<0.0027	0.23	0.17	0.038	<0.0028	0.017	---	---	---	---	---	---	---	---	---	---
Benz(a)anthracene	56-55-3	mg/kg	0.024	<0.0032	<0.0034	0.037	<0.0035	<0.0034	<0.0034	0.34	<0.0035	<0.0035	---	---	---	---	---	---	---	---	---	---
Benzaldehyde	100-52-7	mg/kg	<0.0052 JL	<0.0053 JL	<0.0056 JL	<0.0055 JL	<0.0057 JL	<0.0057 JL	<0.0056 JL	<0.0054 JL	<0.0058 JL	<0.0057 JL	---	---	---	---	---	---	---	---	---	---
Benzo(a)pyrene	50-32-8	mg/kg	0.024	0.0031 J	<0.0028	0.18	<0.0028	<0.0028	<0.0028	0.5	<0.0029	<0.0029	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	205-99-2	mg/kg	0.044	0.0044 J	<0.004	0.082	<0.0041	<0.0041	<0.004	0.67	<0.0042	<0.0041	---	---	---	---	---	---	---	---	---	---
Benzo(g h i)perylene	191-24-2	mg/kg	0.024	<0.0033	<0.0035	0.064	<0.0036	<0.0036	<0.0035	0.36	<0.0037	<0.0036	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	207-08-9	mg/kg	0.016	<0.0038	<0.004	0.084	<0.0041	<0.0041	<0.004	0.28	<0.0042	<0.0041	---	---	---	---	---	---	---	---	---	---
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.0027	<0.0027	<0.0029	<0.0029	<0.003	<0.003	<0.0029	<0.0028	<0.003	<0.003	---	---	---	---	---	---	---	---	---	---
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0032	<0.0032	<0.0034	<0.0033	<0.0035	<0.0034	<0.0034	<0.0033	<0.0035	<0.0035	---	---	---	---	---	---	---	---	---	---
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0031	<0.0031	<0.0033	<0.0032	<0.0033	<0.0033	<0.0033	<0.0032	<0.0034	<0.0034	---	---	---	---	---	---	---	---	---	---
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	0.017 U	0.014 U	<0.008	<0.0079	<0.0082	<0.0081	<0.008	0.0091	<0.0083	0.11	---	---	---	---	---	---	---	---	---	---
Butyl benzyl phthalate	85-68-7	mg/kg	<0.0028	<0.0029	<0.003	<0.003	<0.0031	<0.0031	<0.003	<0.0029	<0.0032	<0.0031	---	---	---	---	---	---	---	---	---	---
Caprolactam	105-60-2	mg/kg	<0.0027	0.0057 J	<0.0029	<0.0029	<0.003	<0.003	<0.0029	<0.0028	<0.003	<0.003	---	---	---	---	---	---	---	---	---	---
Carbazole	86-74-8	mg/kg	0.0048 JL	<0.0025 JL	<0.0027 JL	<0.0026	<0.0027	<0.0027	<0.0027	0.032	<0.0028	<0.0027	---	---	---	---	---	---	---	---	---	---
Chrysene	218-01-9	mg/kg	0.037	0.0043 J	<0.0035	0.061	<0.0036	<0.0036	<0.0035	0.45	<0.0037	<0.0036	---	---	---	---	---	---	---	---	---	---
Dibenz(a h)anthracene	53-70-3	mg/kg	0.0059 J	<0.0025	<0.0027	<0.0026	<0.0027	<0.0027	<0.0027	0.14	<0.0028	<0.0027	---	---	---	---	---	---	---	---	---	---
Dibenzofuran	132-64-9	mg/kg	<0.0025	<0.0025	0.033	<0.0026	<0.0027	0.071 J	<0.0027 J	0.0082	<0.0028	0.068	---	---	---	---	---	---	---	---	---	---
Diethyl phthalate	84-66-2	mg/kg	<0.0037	<0.0038	<0.004	<0.0039	<0.0041	<0.0041	<0.004	<0.0039	<0.0042	<0.0041	---	---	---	---	---	---	---	---	---	---
Dimethyl phthalate	131-11-3	mg/kg	<0.0027	<0.0027	<0.0029	<0.0029	<0.003	<0.003	<0.0029	<0.0028	<0.003	<0.003	---	---	---	---	---	---	---	---	---	---
Di-n-butyl phthalate	84-74-2	mg/kg	0.007 J	<0.0029	0.028	<0.003	<0.0031	0.064 U	0.065 U	0.0068 U	<0.0032	<0.0031	---	---	---	---	---	---	---	---	---	---
Di-n-octyl phthalate	117-84-0	mg/kg	0.0075	<0.0033	<0.0035	<0.0035	<0.0036	<0.0036	<0.0035	<0.0034	<0.0037	<0.0036	---	---	---	---	---	---	---	---	---	---
Fluoranthene	206-44-0	mg/kg	0.063	0.0072 J	<0.0027	0.035	<0.0027	0.05	0.036	0.81	<0.0028	0.015	---	---	---	---	---	---	---	---	---	---
Fluorene	86-73-7	mg/kg	<0.0025	<0.0025	0.016	<0.0026	<0.0027	0.2	0.2	0.0093	<0.0028	0.039	---	---	---	---	---	---	---	---	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
Off-Site Samples
Brine Services Company Superfund Site

Sample Location			ENSB04	ENSB04	ENSB04	ENSB05	ENSB05	ENSB05	ENSB05	ENSB08	ENSB08	ENSB08	ENSB10	ENSB10	ENSB10	ENSB11	ENSB11	ENSB11	ENSB12	ENSB13	ENSB14	ENSB15
Sample Date			1-2 ft	3-4 ft	9-10 ft	1-2 ft	2-3 ft	7-8 ft	7-8 ft	1-2 ft	2-3 ft	9-10 ft	1-2 ft	3-4 ft	9-10 ft	1-2 ft	3-4 ft	7-8 ft	1-2 ft	1-2 ft	1-2 ft	1-2 ft
Sample Date			12/9/2010	12/9/2010	12/9/2010	11/8/2010	11/8/2010	11/8/2010	11/8/2010	11/9/2010	11/9/2010	11/9/2010	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012
Analyte	CAS No.	Units																				
Hexachlorobenzene	118-74-1	mg/kg	<0.0029	<0.003	<0.0032	<0.0031	<0.0032	<0.0032	<0.0032	<0.0031	<0.0033	<0.0032	---	---	---	---	---	---	---	---	---	---
Hexachlorobutadiene	87-68-3	mg/kg	<0.005	<0.005	<0.0053	<0.0052	<0.0054	<0.0054	<0.0053	<0.0052	<0.0056	<0.0055	---	---	---	---	---	---	---	---	---	---
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0041	<0.0041	<0.0044	<0.0043	<0.0044	<0.0044	<0.0044	<0.0042	<0.0045	<0.0045	---	---	---	---	---	---	---	---	---	---
Hexachloroethane	67-72-1	mg/kg	<0.0044	<0.0045	<0.0047	<0.0046	<0.0048	<0.0048	<0.0047	<0.0046	<0.0049	<0.0049	---	---	---	---	---	---	---	---	---	---
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	0.02	<0.004	<0.0042	0.067	<0.0043	<0.0043	<0.0042	0.44	<0.0044	<0.0044	---	---	---	---	---	---	---	---	---	---
Isophorone	78-59-1	mg/kg	<0.0034	<0.0034	<0.0036	<0.0036	<0.0037	<0.0037	<0.0036	<0.0035	<0.0038	<0.0037	---	---	---	---	---	---	---	---	---	---
Naphthalene	91-20-3	mg/kg	<0.0037	<0.0038	0.0059 J	<0.0039	<0.0041	7.9	7.2	0.0089	0.0069 J	0.46	---	---	---	---	---	---	---	---	---	---
Nitrobenzene	98-95-3	mg/kg	<0.0037	<0.0038	<0.004	<0.0039	<0.0041	<0.0041	<0.004	<0.0039	<0.0042	<0.0041	---	---	---	---	---	---	---	---	---	---
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0045	<0.0046	<0.0049	<0.0048	<0.0049	<0.0049	<0.0049	<0.0047	<0.0051	<0.005	---	---	---	---	---	---	---	---	---	---
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0025	<0.0025	<0.0027	<0.0026	<0.0027	<0.0027	<0.0027	<0.0026	<0.0028	<0.0027	---	---	---	---	---	---	---	---	---	---
Pentachlorophenol	87-86-5	mg/kg	0.012	<0.0032 JL	<0.0034	<0.0033 JL	<0.0035 JL	<0.0034 JL	<0.0034 JL	<0.0033 JL	<0.0035 JL	<0.0035 JL	---	---	---	---	---	---	---	---	---	---
Phenanthrene	85-01-8	mg/kg	0.017	0.0057 J	0.032	0.02	<0.0037	0.63 J	0.27 J	0.13	0.0041 J	0.12	---	---	---	---	---	---	---	---	---	---
Phenol	108-95-2	mg/kg	0.0052 J	0.0045 JL	<0.004	<0.0039 JL	<0.0041	<0.0041 JL	<0.004 JL	0.0062 J	0.02	0.052	---	---	---	---	---	---	---	---	---	---
Pyrene	129-00-0	mg/kg	0.057	0.0055 J	0.008 J	0.057	<0.0027	0.055	0.039	0.71	<0.0028	0.0078 J	---	---	---	---	---	---	---	---	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
Off-Site Samples
Brine Services Company Superfund Site

Sample Location			ENSB16	ENSB16	ENSB16	ENSB17	ENSS10	ENSS11	ENSS11
Sample Date			1-2 ft	1-2 ft	3-4 ft	1-2 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
Sample Date			12/3/2012	12/3/2012	12/3/2012	12/3/2012	1/4/2012	1/4/2012	1/4/2012
Analyte	CAS No.	Units							
METALS									
Aluminum	7429-90-5	mg/kg	---	---	---	---	---	---	---
Antimony	7440-36-0	mg/kg	---	---	---	---	---	---	---
Arsenic	7440-38-2	mg/kg	5.23	6.55	4.98	6	---	---	---
Barium	7440-39-3	mg/kg	---	---	---	---	---	---	---
Beryllium	7440-41-7	mg/kg	---	---	---	---	---	---	---
Cadmium	7440-43-9	mg/kg	---	---	---	---	---	---	---
Chromium	7440-47-3	mg/kg	---	---	---	---	---	---	---
Cobalt	7440-48-4	mg/kg	---	---	---	---	---	---	---
Copper	7440-50-8	mg/kg	---	---	---	---	---	---	---
Lead	7439-92-1	mg/kg	---	---	---	---	---	---	---
Manganese	7439-96-5	mg/kg	---	---	---	---	---	---	---
Nickel	7440-02-0	mg/kg	---	---	---	---	---	---	---
Selenium	7782-49-2	mg/kg	---	---	---	---	---	---	---
Silver	7440-22-4	mg/kg	---	---	---	---	---	---	---
Thallium	7440-28-0	mg/kg	---	---	---	---	---	---	---
Vanadium	7440-62-2	mg/kg	---	---	---	---	---	---	---
Zinc	7440-66-6	mg/kg	---	---	---	---	---	---	---
Mercury	7439-97-6	mg/kg	0.0243 J	0.00985 J	0.00182 J	0.0265	0.526	0.58	0.451
Cyanide	57-12-5	mg/kg	---	---	---	---	---	---	---
PESTICIDES and PCBs									
4,4´-DDD	72-54-8	mg/kg	---	---	---	---	---	---	---
4,4´-DDE	72-55-9	mg/kg	---	---	---	---	---	---	---
4,4´-DDT	50-29-3	mg/kg	---	---	---	---	---	---	---
Aldrin	309-00-2	mg/kg	---	---	---	---	---	---	---
alpha-BHC	319-84-6	mg/kg	---	---	---	---	---	---	---
alpha-Chlordane	5103-71-9	mg/kg	---	---	---	---	---	---	---
beta-BHC	319-85-7	mg/kg	---	---	---	---	---	---	---
delta-BHC	319-86-8	mg/kg	---	---	---	---	---	---	---
Dieldrin	60-57-1	mg/kg	---	---	---	---	---	---	---
Endosulfan I	959-98-8	mg/kg	---	---	---	---	---	---	---
Endosulfan II	33213-65-9	mg/kg	---	---	---	---	---	---	---
Endosulfan sulfate	1031-07-8	mg/kg	---	---	---	---	---	---	---
Endrin	72-20-8	mg/kg	---	---	---	---	---	---	---
Endrin aldehyde	7421-93-4	mg/kg	---	---	---	---	---	---	---
gamma-BHC	58-89-9	mg/kg	---	---	---	---	---	---	---
gamma-Chlordane	5103-74-2	mg/kg	---	---	---	---	---	---	---
Heptachlor	76-44-8	mg/kg	---	---	---	---	---	---	---
Heptachlor epoxide	1024-57-3	mg/kg	---	---	---	---	---	---	---
Methoxychlor	72-43-5	mg/kg	---	---	---	---	---	---	---
Toxaphene	8001-35-2	mg/kg	---	---	---	---	---	---	---
Aroclor 1016	12674-11-2	mg/kg	---	---	---	---	---	---	---
Aroclor 1221	11104-28-2	mg/kg	---	---	---	---	---	---	---
Aroclor 1232	11141-16-5	mg/kg	---	---	---	---	---	---	---
Aroclor 1242	53469-21-9	mg/kg	---	---	---	---	---	---	---
Aroclor 1248	12672-29-6	mg/kg	---	---	---	---	---	---	---
Aroclor 1254	11097-69-1	mg/kg	---	---	---	---	---	---	---
Aroclor 1260	11096-82-5	mg/kg	---	---	---	---	---	---	---
Total PCBs	TPCB	mg/kg	---	---	---	---	---	---	---
VOLATILE ORGANIC COMPOUNDS									
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	---	---	---	---	---	---	---
1,1,1-Trichloroethane	71-55-6	mg/kg	---	---	---	---	---	---	---
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg	---	---	---	---	---	---	---
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg	---	---	---	---	---	---	---
1,1,2-Trichloroethane	79-00-5	mg/kg	---	---	---	---	---	---	---
1 1-Dichloroethane	75-34-3	mg/kg	---	---	---	---	---	---	---
1,1-Dichloroethene	75-35-4	mg/kg	---	---	---	---	---	---	---
1,2,4-Trichlorobenzene	120-82-1	mg/kg	---	---	---	---	---	---	---
1 2 4-Trimethylbenzene	95-63-6	mg/kg	---	---	---	---	---	---	---
1 2-Dibromoethane	106-93-4	mg/kg	---	---	---	---	---	---	---
1,2-Dichlorobenzene	95-50-1	mg/kg	---	---	---	---	---	---	---
1 2-Dichloroethane	107-06-2	mg/kg	---	---	---	---	---	---	---
1 2-Dichloropropane	78-87-5	mg/kg	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	108-67-8	mg/kg	---	---	---	---	---	---	---
1 3-Dichlorobenzene	541-73-1	mg/kg	---	---	---	---	---	---	---
1 4-Dichlorobenzene	106-46-7	mg/kg	---	---	---	---	---	---	---
2-Butanone	78-93-3	mg/kg	---	---	---	---	---	---	---
2-Hexanone	591-78-6	mg/kg	---	---	---	---	---	---	---
4-Methyl-2-pentanone	108-10-1	mg/kg	---	---	---	---	---	---	---
Acetone	67-64-1	mg/kg	---	---	---	---	---	---	---
Benzene	71-43-2	mg/kg	---	---	---	---	---	---	---
Bromodichloromethane	75-27-4	mg/kg	---	---	---	---	---	---	---
Bromoform	75-25-2	mg/kg	---	---	---	---	---	---	---
Bromomethane	74-83-9	mg/kg	---	---	---	---	---	---	---
Carbon disulfide	75-15-0	mg/kg	---	---	---	---	---	---	---
Carbon tetrachloride	56-23-5	mg/kg	---	---	---	---	---	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
Off-Site Samples
Brine Services Company Superfund Site

Sample Location			ENSB16	ENSB16	ENSB16	ENSB17	ENSS10	ENSS11	ENSS11
Sample Date			1-2 ft	1-2 ft	3-4 ft	1-2 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
Sample Date			12/3/2012	12/3/2012	12/3/2012	12/3/2012	1/4/2012	1/4/2012	1/4/2012
Analyte	CAS No.	Units							
Chlorobenzene	108-90-7	mg/kg	---	---	---	---	---	---	---
Chloroethane	75-00-3	mg/kg	---	---	---	---	---	---	---
Chloroform	67-66-3	mg/kg	---	---	---	---	---	---	---
Chloromethane	74-87-3	mg/kg	---	---	---	---	---	---	---
cis-1 2-Dichloroethene	156-59-2	mg/kg	---	---	---	---	---	---	---
cis-1,3-Dichloropropene	10061-01-5	mg/kg	---	---	---	---	---	---	---
Cyclohexane	110-82-7	mg/kg	---	---	---	---	---	---	---
Dibromochloromethane	124-48-1	mg/kg	---	---	---	---	---	---	---
Dichlorodifluoromethane	75-71-8	mg/kg	---	---	---	---	---	---	---
Ethylbenzene	100-41-4	mg/kg	---	---	---	---	---	---	---
Isopropylbenzene	98-82-8	mg/kg	---	---	---	---	---	---	---
Methyl acetate	79-20-9	mg/kg	---	---	---	---	---	---	---
Methyl tert-butyl ether	1634-04-4	mg/kg	---	---	---	---	---	---	---
Methylcyclohexane	108-87-2	mg/kg	---	---	---	---	---	---	---
Methylene chloride	75-09-2	mg/kg	---	---	---	---	---	---	---
Naphthalene	91-20-3	mg/kg	---	---	---	---	---	---	---
n-Butylbenzene	104-51-8	mg/kg	---	---	---	---	---	---	---
n-Propylbenzene	103-65-1	mg/kg	---	---	---	---	---	---	---
sec-Butylbenzene	135-98-8	mg/kg	---	---	---	---	---	---	---
Styrene	100-42-5	mg/kg	---	---	---	---	---	---	---
tert-Butylbenzene	98-06-6	mg/kg	---	---	---	---	---	---	---
Tetrachloroethene	127-18-4	mg/kg	---	---	---	---	---	---	---
Toluene	108-88-3	mg/kg	---	---	---	---	---	---	---
trans-1 2-Dichloroethene	156-60-5	mg/kg	---	---	---	---	---	---	---
trans-1,3-Dichloropropene	10061-02-6	mg/kg	---	---	---	---	---	---	---
Trichloroethene	79-01-6	mg/kg	---	---	---	---	---	---	---
Trichlorofluoromethane	75-69-4	mg/kg	---	---	---	---	---	---	---
Vinyl chloride	75-01-4	mg/kg	---	---	---	---	---	---	---
Xylenes, Total	1330-20-7	mg/kg	---	---	---	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUNDS									
1,1´-Biphenyl	92-52-4	mg/kg	---	---	---	---	---	---	---
1-Methylnaphthalene	90-12-0	mg/kg	---	---	---	---	---	---	---
2 4 5-Trichlorophenol	95-95-4	mg/kg	---	---	---	---	---	---	---
2 4 6-Trichlorophenol	88-06-2	mg/kg	---	---	---	---	---	---	---
2,4-Dichlorophenol	120-83-2	mg/kg	---	---	---	---	---	---	---
2 4-Dimethylphenol	105-67-9	mg/kg	---	---	---	---	---	---	---
2 4-Dinitrophenol	51-28-5	mg/kg	---	---	---	---	---	---	---
2,4-Dinitrotoluene	121-14-2	mg/kg	---	---	---	---	---	---	---
2 6-Dinitrotoluene	606-20-2	mg/kg	---	---	---	---	---	---	---
2-Chloronaphthalene	91-58-7	mg/kg	---	---	---	---	---	---	---
2-Chlorophenol	95-57-8	mg/kg	---	---	---	---	---	---	---
2-Methylnaphthalene	91-57-6	mg/kg	---	---	---	---	---	---	---
2-Methylphenol	95-48-7	mg/kg	---	---	---	---	---	---	---
2-Nitroaniline	88-74-4	mg/kg	---	---	---	---	---	---	---
2-Nitrophenol	88-75-5	mg/kg	---	---	---	---	---	---	---
3&4-Methylphenol	106-44-5	mg/kg	---	---	---	---	---	---	---
3,3´-Dichlorobenzidine	91-94-1	mg/kg	---	---	---	---	---	---	---
3-Nitroaniline	99-09-2	mg/kg	---	---	---	---	---	---	---
4 6-Dinitro-2-methylphenol	534-52-1	mg/kg	---	---	---	---	---	---	---
4-Bromophenyl phenyl ether	101-55-3	mg/kg	---	---	---	---	---	---	---
4-Chloro-3-methylphenol	59-50-7	mg/kg	---	---	---	---	---	---	---
4-Chloroaniline	106-47-8	mg/kg	---	---	---	---	---	---	---
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	---	---	---	---	---	---	---
4-Nitroaniline	100-01-6	mg/kg	---	---	---	---	---	---	---
4-Nitrophenol	100-02-7	mg/kg	---	---	---	---	---	---	---
Acenaphthene	83-32-9	mg/kg	---	---	---	---	---	---	---
Acenaphthylene	208-96-8	mg/kg	---	---	---	---	---	---	---
Acetophenone	98-86-2	mg/kg	---	---	---	---	---	---	---
Anthracene	120-12-7	mg/kg	---	---	---	---	---	---	---
Benz(a)anthracene	56-55-3	mg/kg	---	---	---	---	---	---	---
Benzaldehyde	100-52-7	mg/kg	---	---	---	---	---	---	---
Benzo(a)pyrene	50-32-8	mg/kg	---	---	---	---	---	---	---
Benzo(b)fluoranthene	205-99-2	mg/kg	---	---	---	---	---	---	---
Benzo(g h i)perylene	191-24-2	mg/kg	---	---	---	---	---	---	---
Benzo(k)fluoranthene	207-08-9	mg/kg	---	---	---	---	---	---	---
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	---	---	---	---	---	---	---
Bis(2-chloroethyl)ether	111-44-4	mg/kg	---	---	---	---	---	---	---
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	---	---	---	---	---	---	---
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	---	---	---	---	---	---	---
Butyl benzyl phthalate	85-68-7	mg/kg	---	---	---	---	---	---	---
Caprolactam	105-60-2	mg/kg	---	---	---	---	---	---	---
Carbazole	86-74-8	mg/kg	---	---	---	---	---	---	---
Chrysene	218-01-9	mg/kg	---	---	---	---	---	---	---
Dibenz(a h)anthracene	53-70-3	mg/kg	---	---	---	---	---	---	---
Dibenzofuran	132-64-9	mg/kg	---	---	---	---	---	---	---
Diethyl phthalate	84-66-2	mg/kg	---	---	---	---	---	---	---
Dimethyl phthalate	131-11-3	mg/kg	---	---	---	---	---	---	---
Di-n-butyl phthalate	84-74-2	mg/kg	---	---	---	---	---	---	---
Di-n-octyl phthalate	117-84-0	mg/kg	---	---	---	---	---	---	---
Fluoranthene	206-44-0	mg/kg	---	---	---	---	---	---	---
Fluorene	86-73-7	mg/kg	---	---	---	---	---	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Soil Analytical Data Summary
Off-Site Samples
Brine Services Company Superfund Site

Sample Location			ENSB16	ENSB16	ENSB16	ENSB17	ENSS10	ENSS11	ENSS11
Sample Date			1-2 ft	1-2 ft	3-4 ft	1-2 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
Sample Date			12/3/2012	12/3/2012	12/3/2012	12/3/2012	1/4/2012	1/4/2012	1/4/2012
Analyte	CAS No.	Units							
Hexachlorobenzene	118-74-1	mg/kg	---	---	---	---	---	---	---
Hexachlorobutadiene	87-68-3	mg/kg	---	---	---	---	---	---	---
Hexachlorocyclopentadiene	77-47-4	mg/kg	---	---	---	---	---	---	---
Hexachloroethane	67-72-1	mg/kg	---	---	---	---	---	---	---
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	---	---	---	---	---	---	---
Isophorone	78-59-1	mg/kg	---	---	---	---	---	---	---
Naphthalene	91-20-3	mg/kg	---	---	---	---	---	---	---
Nitrobenzene	98-95-3	mg/kg	---	---	---	---	---	---	---
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	---	---	---	---	---	---	---
N-Nitrosodiphenylamine	86-30-6	mg/kg	---	---	---	---	---	---	---
Pentachlorophenol	87-86-5	mg/kg	---	---	---	---	---	---	---
Phenanthrene	85-01-8	mg/kg	---	---	---	---	---	---	---
Phenol	108-95-2	mg/kg	---	---	---	---	---	---	---
Pyrene	129-00-0	mg/kg	---	---	---	---	---	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Surface Water Data Summary
Background/Upstream East Ditch
Brine Service Company Superfund Site

		Sample Location		EDBSW01	EDBSW02	EDBSW02	EDBSW03	EDBSW04
		Sample Date		10/5/2010	10/6/2010	10/6/2010	10/6/2010	11/15/2010
Analyte	CAS No.	T/D	Units					
METALS								
Aluminum#	7429-90-5	T	mg/l	0.687	0.375	0.376	0.174	1.38
Antimony	7440-36-0	T	mg/l	<0.0005	0.0011 J	0.00112 J	0.00109 J	<0.0005
Arsenic	7440-38-2	T	mg/l	0.0221	0.0232	0.0247	0.024	0.00436 J
Barium	7440-39-3	T	mg/l	0.208	0.194	0.213	0.209	0.253
Beryllium	7440-41-7	T	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cadmium	7440-43-9	D	mg/l	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Chromium	7440-47-3	D	mg/l	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Cobalt	7440-48-4	T	mg/l	0.00156 J	0.00222 J	0.00232 J	0.00286 J	<0.0005
Copper	7440-50-8	D	mg/l	<0.0005	0.00149 U	0.00167 U	0.0012 U	0.00315 J
Lead	7439-92-1	D	mg/l	0.000842 J	0.000488 J	0.000537 J	0.00055 J	0.00131 J
Manganese#	7439-96-5	T	mg/l	0.332	0.145	0.139	0.295	0.0685
Nickel	7440-02-0	D	mg/l	0.00336 J	0.00421 J	0.00472 J	0.0046 J	0.00187 J
Selenium	7782-49-2	T	mg/l	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Silver	7440-22-4	D	mg/l	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007
Thallium	7440-28-0	T	mg/l	<0.0008	0.000825 J	<0.0008	<0.0008	<0.0008
Vanadium	7440-62-2	T	mg/l	0.00195 J	0.0102	0.0107	0.00728	0.00907
Zinc	7440-66-6	D	mg/l	0.00624	0.00328 U	0.00529 U	0.00353 U	0.00652
Mercury	7439-97-6	T	mg/l	<4.2e-005	<4.2e-005	<4.2e-005	<4.2e-005	<4.2e-005
Cyanide#	57-12-5	T	mg/l	<0.004	0.029	<0.004	<0.004	<0.004
PESTICIDES AND PCBS								
4,4´-DDD#	72-54-8	N	mg/l	1.3e-005 J	<2.5e-006	<2.5e-005	<2.5e-006	<2.5e-006 JL
4 4´-DDE	72-55-9	N	mg/l	2.8e-006 J	<2.5e-006	<2.5e-005	<2.5e-006	<2.5e-006 JL
4,4´-DDT#	50-29-3	N	mg/l	5.10E-06	<2.5e-006 J	5.4e-005 J	<2.5e-006	<2.5e-006 JL
Aldrin	309-00-2	N	mg/l	<1.2e-006	<1.2e-006	<1.2e-005	<1.2e-006	<1.2e-006 JL
alpha-BHC	319-84-6	N	mg/l	<1.2e-006	<1.2e-006	<1.2e-005	<1.2e-006	<1.2e-006 JL
alpha-Chlordane#	5103-71-9	N	mg/l	<2.5e-006	<2.5e-006	3.60E-05	1.2e-005 J	<2.5e-006 JL
beta-BHC	319-85-7	N	mg/l	0.000011	<1.2e-006	<1.2e-005	<1.2e-006	<1.2e-006 JL
delta-BHC	319-86-8	N	mg/l	8.3e-006 JL	<1.2e-006 JL	<1.2e-005 JL	3.2e-006 JL	<1.2e-006 JL
Dieldrin#	60-57-1	N	mg/l	8.5e-006 J	<2.5e-006	<2.5e-005	5.6e-006 J	<2.5e-006 JL
Endosulfan I	959-98-8	N	mg/l	3.7e-006 J	<1.2e-006	<1.2e-005	<1.2e-006	<1.2e-006 JL
Endosulfan II	33213-65-9	N	mg/l	<2.5e-006	<2.5e-006	<2.5e-005	<2.5e-006	<2.5e-006 JL
Endosulfan sulfate	1031-07-8	N	mg/l	4.4e-006 J	<2.5e-006	<2.5e-005	<2.5e-006	<2.5e-006 JL
Endrin#	72-20-8	N	mg/l	<2.5e-006	<2.5e-006	<2.5e-005	9.6e-006 J	<2.5e-006 JL
Endrin aldehyde	7421-93-4	N	mg/l	1e-005 J	<2.5e-006	<2.5e-005	<2.5e-006	<2.5e-006 JL
gamma-BHC	58-89-9	N	mg/l	0.0000077	<1.2e-006	<1.2e-005	0.0000056	<1.2e-006 JL
gamma-Chlordane#	5103-74-2	N	mg/l	7e-005 J	1e-005 J	<2.5e-005	2.80E-05	<2.5e-006 JL
Heptachlor	76-44-8	N	mg/l	<1.2e-006	<1.2e-006	<1.2e-005	<1.2e-006	1.8e-006 JL
Heptachlor epoxide#	1024-57-3	N	mg/l	2.50E-05	<1.2e-006	1.8e-005 J	<1.2e-006	<1.2e-006 JL
Methoxychlor	72-43-5	N	mg/l	<1.2e-005	<1.2e-005	<0.00012	<1.2e-005	<1.2e-005 JL
Toxaphene	8001-35-2	N	mg/l	<2.5e-005	<2.5e-005	<0.00025	<2.5e-005	<2.5e-005 JL
Aroclor 1016	12674-11-2	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1221	11104-28-2	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1232	11141-16-5	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1242	53469-21-9	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1248	12672-29-6	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1254	11097-69-1	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1260	11096-82-5	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
VOLATILE ORGANIC COMPOUNDS								
1,1,1,2-Tetrachloroethane	630-20-6	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1 1 1-Trichloroethane	71-55-6	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1,1,2,2-Tetrachloroethane	79-34-5	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1 1 2-Trichloroethane	79-00-5	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1,1-Dichloroethane	75-34-3	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1,1-Dichloroethene	75-35-4	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1 2 4-Trichlorobenzene	120-82-1	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1,2,4-Trimethylbenzene	95-63-6	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1,2-Dibromoethane	106-93-4	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1 2-Dichlorobenzene	95-50-1	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1 2-Dichloroethane	107-06-2	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1,2-Dichloropropane	78-87-5	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1 3 5-Trimethylbenzene	108-67-8	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1 3-Dichlorobenzene	541-73-1	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1,4-Dichlorobenzene	106-46-7	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
2-Butanone	78-93-3	N	mg/l	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
2-Hexanone	591-78-6	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
4-Methyl-2-pentanone	108-10-1	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Acetone	67-64-1	N	mg/l	0.0034 U	0.0028	0.0024	0.0071	0.0021
Benzene	71-43-2	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bromodichloromethane	75-27-4	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bromoform	75-25-2	N	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Bromomethane	74-83-9	N	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Carbon disulfide	75-15-0	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Carbon tetrachloride	56-23-5	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Chlorobenzene	108-90-7	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chloroethane	75-00-3	N	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Chloroform	67-66-3	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chloromethane	74-87-3	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
cis-1,2-Dichloroethene	156-59-2	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
cis-1,3-Dichloropropene	10061-01-5	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cyclohexane	110-82-7	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibromochloromethane	124-48-1	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dichlorodifluoromethane	75-71-8	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	100-41-4	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect

Surface Water Data Summary
Background/Upstream East Ditch
Brine Service Company Superfund Site

		Sample Location		EDBSW01	EDBSW02	EDBSW02	EDBSW03	EDBSW04
		Sample Date		10/5/2010	10/6/2010	10/6/2010	10/6/2010	11/15/2010
Analyte	CAS No.	T/D	Units					
Isopropylbenzene	98-82-8	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Methyl acetate	79-20-9	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Methyl tert-butyl ether	1634-04-4	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Methylcyclohexane	108-87-2	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Methylene chloride	75-09-2	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Naphthalene	91-20-3	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
n-Propylbenzene	103-65-1	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
sec-Butylbenzene	135-98-8	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Styrene	100-42-5	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tetrachloroethene	127-18-4	N	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	108-88-3	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
trans-1,2-Dichloroethene	156-60-5	N	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
trans-1 3-Dichloropropene	10061-02-6	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Trichloroethene	79-01-6	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Trichlorofluoromethane	75-69-4	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Vinyl chloride	75-01-4	N	mg/l	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Xylenes Total	1330-20-7	N	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
SEMIVOLATILE ORGANIC COMPOUNDS								
1 1´-Biphenyl	92-52-4	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
1-Methylnaphthalene	90-12-0	N	mg/l	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL
2,4,5-Trichlorophenol	95-95-4	N	mg/l	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL
2,4,6-Trichlorophenol	88-06-2	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
2 4-Dichlorophenol	120-83-2	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
2,4-Dimethylphenol	105-67-9	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
2,4-Dinitrophenol	51-28-5	N	mg/l	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
2 4-Dinitrotoluene	121-14-2	N	mg/l	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL
2,6-Dinitrotoluene	606-20-2	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
2-Chloronaphthalene	91-58-7	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
2-Chlorophenol	95-57-8	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
2-Methylnaphthalene	91-57-6	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
2-Methylphenol	95-48-7	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
2-Nitroaniline	88-74-4	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
2-Nitrophenol	88-75-5	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
3&4-Methylphenol	106-44-5	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
3 3´-Dichlorobenzidine	91-94-1	N	mg/l	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
3-Nitroaniline	99-09-2	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
4,6-Dinitro-2-methylphenol	534-52-1	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
4-Bromophenyl phenyl ether	101-55-3	N	mg/l	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL
4-Chloro-3-methylphenol	59-50-7	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
4-Chloroaniline	106-47-8	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
4-Chlorophenyl phenyl ether	7005-72-3	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
4-Nitroaniline	100-01-6	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
4-Nitrophenol	100-02-7	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Acenaphthene	83-32-9	N	mg/l	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL
Acenaphthylene	208-96-8	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Acetophenone	98-86-2	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
Anthracene	120-12-7	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Benz(a)anthracene	56-55-3	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Benzaldehyde	100-52-7	N	mg/l	<0.00012 JL	<0.00012 JL	<0.00012 JL	<0.00012 JL	<0.00012 JL
Benzo(a)pyrene	50-32-8	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
Benzo(b)fluoranthene	205-99-2	N	mg/l	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL
Benzo(g,h,i)perylene	191-24-2	N	mg/l	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL
Benzo(k)fluoranthene	207-08-9	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
Bis(2-chloroethoxy)methane	111-91-1	N	mg/l	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL
Bis(2-chloroethyl)ether	111-44-4	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Bis(2-chloroisopropyl)ether	108-60-1	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Bis(2-ethylhexyl)phthalate	117-81-7	N	mg/l	0.0014 UJL	0.0011 UJL	0.0011 UJL	0.00096 UJL	<0.0002 JL
Butyl benzyl phthalate	85-68-7	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
Caprolactam	105-60-2	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
Carbazole	86-74-8	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Chrysene	218-01-9	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Dibenz(a,h)anthracene	53-70-3	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
Dibenzofuran	132-64-9	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
Diethyl phthalate	84-66-2	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Dimethyl phthalate	131-11-3	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
Di-n-butyl phthalate	84-74-2	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Di-n-octyl phthalate	117-84-0	N	mg/l	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL
Fluoranthene	206-44-0	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Fluorene	86-73-7	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Hexachlorobenzene	118-74-1	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
Hexachlorobutadiene	87-68-3	N	mg/l	<0.00015	<0.00015 JL	<0.00015 JL	<0.00015 JL	<0.00015 JL
Hexachlorocyclopentadiene	77-47-4	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
Hexachloroethane	67-72-1	N	mg/l	<0.00017	<0.00017 JL	<0.00017 JL	<0.00017 JL	<0.00017 JL
Indeno(1,2,3-cd)pyrene	193-39-5	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
Isophorone	78-59-1	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Naphthalene	91-20-3	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
Nitrobenzene	98-95-3	N	mg/l	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL
N-Nitrosodi-n-propylamine	621-64-7	N	mg/l	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL
N-Nitrosodiphenylamine	86-30-6	N	mg/l	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL
Pentachlorophenol	87-86-5	N	mg/l	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL
Phenanthrene	85-01-8	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Phenol	108-95-2	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Pyrene	129-00-0	N	mg/l	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL
Total PAHs	TPAH	N	mg/l	<0.000725	<0.000725	<0.000725	<0.000725	<0.000725

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect

Surface Water Data Summary
East Ditch
Brine Service Company Superfund Site

			Sample Location	EDSW01	EDSW01	EDSW02	EDSW03	EDSW04	EDSW05	EDSW06	EDSW07	EDSW08	EDSW09	EDSW10	EDSW10	EDSW11
			Sample Date	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/17/2010	11/17/2010	11/17/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	1/31/2012	1/31/2012
Analyte	CAS No.	T/D	Units													
METALS																
Aluminum#	7429-90-5	T	mg/l	1.32	1.38	3.37	6.95	2.11	0.165	0.253 JL	0.157	0.306	0.095	0.0911	0.283	0.0617
Antimony	7440-36-0	T	mg/l	0.000853 J	0.000607 J	0.000819 J	0.000874 J	0.000789 J	0.00083 J	0.000826 J	<0.0005	<0.0005	<0.0025	<0.0005	<0.0008	<0.0008
Arsenic	7440-38-2	T	mg/l	0.00505	0.00514	0.0091	0.00619	0.0104	0.00878	0.00922	0.00872	0.0105	0.0156 J	0.00977	0.00881	0.0148
Barium	7440-39-3	T	mg/l	0.236	0.256	0.253	0.254	0.639	0.159	0.214	0.279	0.278	0.19	0.219	0.193	0.0966
Beryllium	7440-41-7	T	mg/l	<0.0003	0.000507 J	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0015	0.000317 J	<0.0007	<0.0007
Cadmium	7440-43-9	D	mg/l	<0.0006	<0.0006	<0.0006	<0.0006	<0.003	<0.003	<0.003	<0.0012	<0.0012	<0.003	<0.0012	<0.0008	<0.0008
Chromium	7440-47-3	D	mg/l	0.000759 J	0.000936 J	0.00116 J	0.000911 J	<0.003	<0.003	<0.003	<0.0006	<0.0006	0.000641 J	<0.0006	<0.0012	<0.0012
Cobalt	7440-48-4	T	mg/l	0.000733 J	0.000672 J	0.00126 J	0.00244 J	0.00243 J	0.00623	0.00239 J	<0.0005	<0.0005	0.00353 J	<0.0005	0.00101 J	0.00662
Copper	7440-50-8	D	mg/l	0.00316 J	0.00354 J	0.00479 J	0.0036 J	<0.0025	<0.0025	<0.0025	0.000873 J	0.000609 J	0.000566 J	0.000704 J	0.00344 J	<0.0015
Lead	7439-92-1	D	mg/l	0.00122 J	0.00125 J	0.00133 J	0.000612 J	0.00238 J	<0.002	<0.002	<0.0008	<0.0008	<0.002	<0.0008	0.000871 J	<0.0007
Manganese#	7439-96-5	T	mg/l	0.0507	0.0558	0.0669	0.187	0.909	1.03	0.742	0.308	0.352	1.95	0.536	0.677	2.7
Nickel	7440-02-0	D	mg/l	0.00229 J	0.00252 J	0.00286 J	0.00293 J	<0.007	0.00775 J	<0.007	0.00319 J	0.00296 J	0.0039 J	0.00299 J	0.00778	0.0122
Selenium	7782-49-2	T	mg/l	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.00391 J	0.00476 J	<0.0025	0.00294 J	<0.012	0.0028 J	0.00156 J	0.00121 J
Silver	7440-22-4	D	mg/l	<0.0007	<0.0007	<0.0007	<0.0007	<0.0035	<0.0035	<0.0035	<0.0007	<0.0007	<0.0007	<0.0007	<0.0008	<0.0008
Thallium	7440-28-0	T	mg/l	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.004	<0.0008	<0.001	<0.002
Vanadium	7440-62-2	T	mg/l	0.00744	0.00902	0.00994	0.0103	0.00735	0.00498 J	0.00637	0.00322 J	0.0022 J	<0.0035	0.00164 J	0.00265 J	<0.0009
Zinc	7440-66-6	D	mg/l	0.0041 J	0.00806	0.00943	0.00254 J	<0.012	0.0542	0.0455	0.00829	0.00456 J	0.0081	0.0113	0.0225	0.0104
Mercury	7439-97-6	T	mg/l	<4.2e-005	<4.2e-005	<4 2e-005	<4.2e-005	6e-005 J	5.6e-005 J	7.4e-005 J	4.2e-005 J	5.2e-005 J	<4 2e-005	4.4e-005 J	<4.2e-005	<4 2e-005
Cyanide	57-12-5	T	mg/l	0.005 J	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	---	---
PESTICIDES AND PCBS																
4,4´-DDD	72-54-8	N	mg/l	0.0000027	<2.5e-006	0.0000042	<2.5e-006	<2.5e-005	<2.5e-005	5.6e-006 JL	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006 JL	<2.5e-006	<2 5e-006
4 4´-DDE	72-55-9	N	mg/l	0.0000066	0.0000055	6e-006 J	<2.5e-006	<2.5e-005	<2.5e-005	1e-005 JL	0.0000034	<2.5e-006	<2 5e-006	<2.5e-006 JL	<2.5e-006	<2 5e-006
4,4´-DDT#	50-29-3	N	mg/l	<2.5e-006	<2.5e-006	1.1e-005 J	<2 5e-006 J	<2.5e-005	4.8e-005 J	1.6e-005 JL	9.30E-06	2.8e-006 J	<2 5e-006	<2.5e-006 J	<2.5e-006	<2 5e-006
Aldrin	309-00-2	N	mg/l	5.5e-006 J	2.1e-006 J	2.2e-006 J	2.5e-006 J	<1.2e-005	0.000029	<1.2e-006 JL	<1.2e-006	<1.2e-006	<1 2e-006	<1.2e-006 JL	<1.2e-006	<1 2e-006
alpha-BHC	319-84-6	N	mg/l	<1.2e-006 J	<1.2e-006	<1 2e-006	<1.2e-006	<1.2e-005	<1.2e-005 J	<1.2e-006 JL	<1.2e-006	0.0000038	<1 2e-006	<1.2e-006 JL	<1.2e-006	<1 2e-006
alpha-Chlordane	5103-71-9	N	mg/l	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006	<2.5e-005	<2.5e-005	7.5e-006 JL	<2.5e-006	<2.5e-006 J	<2 5e-006	<2.5e-006 JL	<2.5e-006	<2 5e-006
beta-BHC	319-85-7	N	mg/l	<1.2e-006	<1.2e-006	<1 2e-006	<1.2e-006	<1.2e-005	6.1e-005 J	3.1e-005 JH	0.000015	8e-006 J	<1 2e-006	2.6e-006 J	2e-006 J	<1 2e-006
delta-BHC	319-86-8	N	mg/l	<1.2e-006	<1.2e-006	<1 2e-006	<1.2e-006	<1.2e-005	1.6e-005 J	9.8e-006 JL	1.5e-006 J	1.6e-006 J	<1 2e-006	<1.2e-006 JL	<1.2e-006	<1 2e-006
Dieldrin	60-57-1	N	mg/l	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006	<2.5e-005	<2.5e-005	<2.5e-006 JL	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006 JL	<2.5e-006	<2 5e-006
Endosulfan I	959-98-8	N	mg/l	2.9e-006 J	2.4e-006 J	4.7e-006 J	3.3e-006 J	<1.2e-005	<1.2e-005	<1.2e-006 JL	<1.2e-006	<1.2e-006	<1 2e-006	<1.2e-006 JL	<1.2e-006	<1 2e-006
Endosulfan II	33213-65-9	N	mg/l	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006	<2.5e-005	<2.5e-005	<2.5e-006 JL	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006 JL	<2.5e-006	<2 5e-006
Endosulfan sulfate	1031-07-8	N	mg/l	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006	<2.5e-005	<2.5e-005	6.1e-006 JL	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006 JL	<2.5e-006	<2 5e-006
Endrin	72-20-8	N	mg/l	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006	<2.5e-005	<2.5e-005	<2.5e-006 JL	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006 J	<2.5e-006	<2 5e-006
Endrin aldehyde	7421-93-4	N	mg/l	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006	<2.5e-005	<2.5e-005	1.4e-005 JL	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006 JL	<2.5e-006	<2 5e-006
gamma-BHC	58-89-9	N	mg/l	<1.2e-006	<1.2e-006	<1 2e-006	<1 2e-006 J	<1.2e-005	<1.2e-005	3.1e-006 JL	6.2e-006 J	0.0000046	<1 2e-006	1.8e-006 J	<1.2e-006	<1 2e-006
gamma-Chlordane#	5103-74-2	N	mg/l	7.50E-06	8.30E-06	7.70E-06	<2 5e-006 J	<2.5e-005	<2.5e-005	3.9e-006 JL	<2.5e-006	<2.5e-006	<2 5e-006	<2.5e-006 JL	<2.5e-006	<2 5e-006
Heptachlor#	76-44-8	N	mg/l	0.0000033	0.0000025	2.3e-006 J	4.1e-006 J	1.4e-005 J	<1.2e-005	8.1e-006 JL	2e-006 J	1.6e-006 J	<1 2e-006	1.7e-006 J	<1.2e-006	<1 2e-006
Heptachlor epoxide	1024-57-3	N	mg/l	<1.2e-006	<1.2e-006	<1 2e-006	<1.2e-006	<1.2e-005 J	1.6e-005 J	5e-006 JL	3.2e-006 J	3.6e-006 J	<1 2e-006	<1.2e-006 JL	<1.2e-006	<1 2e-006
Methoxychlor	72-43-5	N	mg/l	<1.2e-005	<1.2e-005	<1 2e-005	<1.2e-005	<0.00012	<0.00012	<1.2e-005 JL	<1.2e-005	<1.2e-005	<1 2e-005	5.6e-005 J	<1.2e-005	<1 2e-005
Toxaphene	8001-35-2	N	mg/l	<2.5e-005	<2.5e-005	<2 5e-005	<2.5e-005	<0.00025	<0.00025	<2.5e-005 JL	<2.5e-005	<2.5e-005	<2 5e-005	<2.5e-005 JL	---	<2 5e-005
Aroclor 1016	12674-11-2	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1221	11104-28-2	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1232	11141-16-5	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1242	53469-21-9	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1248	12672-29-6	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1254	11097-69-1	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1260	11096-82-5	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
VOLATILE ORGANIC COMPOUNDS																
1,1,1,2-Tetrachloroethane	630-20-6	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
1 1 1-Trichloroethane	71-55-6	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
1,1,2,2-Tetrachloroethane	79-34-5	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
1 1 2-Trichloroethane	79-00-5	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
1,1-Dichloroethane	75-34-3	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
1,1-Dichloroethene	75-35-4	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
1 2 4-Trichlorobenzene	120-82-1	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
1,2,4-Trimethylbenzene	95-63-6	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
1,2-Dibromoethane	106-93-4	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
1 2-Dichlorobenzene	95-50-1	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
1 2-Dichloroethane	107-06-2	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
1,2-Dichloropropane	78-87-5	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
1 3 5-Trimethylbenzene	108-67-8	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
1 3-Dichlorobenzene	541-73-1	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
1,4-Dichlorobenzene	106-46-7	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
2-Butanone	78-93-3	N	mg/l	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	---	---
2-Hexanone	591-78-6	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
4-Methyl-2-pentanone	108-10-1	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
Acetone	67-64-1	N	mg/l	0.0016 J	0.0016 J	0.0028	<0.001	<0.001	<0.001	<0.001	0.0018 U	<0.001	0.0011 U	<0.001	---	---
Benzene	71-43-2	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
Bromodichloromethane	75-27-4	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
Bromoform	75-25-2	N	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	---	---
Bromomethane	74-83-9	N	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	---	---
Carbon disulfide	75-15-0	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
Carbon tetrachloride	56-23-5	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
Chlorobenzene	108-90-7	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
Chloroethane	75-00-3	N	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	---	---
Chloroform	67-66-3	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
Chloromethane	74-87-3	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
cis-1,2-Dichloroethene	156-59-2	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
cis-1,3-Dichloropropene	10061-01-5	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
Cyclohexane	110-82-7	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
Dibromochloromethane	124-48-1	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
Dichlorodifluoromethane	75-71-8	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
Ethylbenzene	100-41-4	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not Analyzed

Surface Water Data Summary
East Ditch
Brine Service Company Superfund Site

			Sample Location	EDSW01	EDSW01	EDSW02	EDSW03	EDSW04	EDSW05	EDSW06	EDSW07	EDSW08	EDSW09	EDSW10	EDSW10	EDSW11
			Sample Date	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/17/2010	11/17/2010	11/17/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	1/31/2012	1/31/2012
Analyte	CAS No.	T/D	Units													
Isopropylbenzene	98-82-8	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
Methyl acetate	79-20-9	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
Methyl tert-butyl ether	1634-04-4	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
Methylcyclohexane	108-87-2	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
Methylene chloride	75-09-2	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
Naphthalene	91-20-3	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
n-Propylbenzene	103-65-1	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
sec-Butylbenzene	135-98-8	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
Styrene	100-42-5	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
Tetrachloroethene	127-18-4	N	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	---	---
Toluene	108-88-3	N	mg/l	0.00025 J	0.00023 J	0.00025 J	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
trans-1,2-Dichloroethene	156-60-5	N	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	---	---
trans-1 3-Dichloropropene	10061-02-6	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	---	---
Trichloroethene	79-01-6	N	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00035 J	<0.0001	---	---
Trichlorofluoromethane	75-69-4	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
Vinyl chloride	75-01-4	N	mg/l	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	---	---
Xylenes Total	1330-20-7	N	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	---	---
SEMIVOLATILE ORGANIC COMPOUNDS																
1 1´-Biphenyl	92-52-4	N	mg/l	<0.0001 JL	<0.0001	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001	<0.0001	<5e-005	<5e-005 JL
1-Methylnaphthalene	90-12-0	N	mg/l	<9e-005 JL	<9e-005	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005	<9e-005 JL	<9e-005	<9e-005	<5e-005	<5e-005 JL
2,4,5-Trichlorophenol	95-95-4	N	mg/l	<9e-005 JL	<9e-005 JL	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<5e-005	<5e-005 JL
2,4,6-Trichlorophenol	88-06-2	N	mg/l	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<5e-005	<5e-005 JL
2 4-Dichlorophenol	120-83-2	N	mg/l	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<5e-005	<5e-005 JL
2,4-Dimethylphenol	105-67-9	N	mg/l	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<5e-005	<5e-005 JL
2,4-Dinitrophenol	51-28-5	N	mg/l	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL
2 4-Dinitrotoluene	121-14-2	N	mg/l	<9e-005 JL	<9e-005	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005	<9e-005 JL	<9e-005	<9e-005	<5e-005	<5e-005 JL
2,6-Dinitrotoluene	606-20-2	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<6e-005	<6e-005 JL
2-Chloronaphthalene	91-58-7	N	mg/l	<0.0001 JL	<0.0001	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001	<0.0001	<5e-005	<5e-005 JL
2-Chlorophenol	95-57-8	N	mg/l	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<6e-005	<6e-005 JL
2-Methylnaphthalene	91-57-6	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
2-Methylphenol	95-48-7	N	mg/l	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<5e-005	<5e-005 JL
2-Nitroaniline	88-74-4	N	mg/l	<0.0001 JL	<0.0001	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001	<0.0001	<5e-005	<5e-005 JL
2-Nitrophenol	88-75-5	N	mg/l	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<5e-005	<5e-005 JL
3&4-Methylphenol	106-44-5	N	mg/l	<0.0001 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<5e-005	<5e-005 JL
3 3´-Dichlorobenzidine	91-94-1	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
3-Nitroaniline	99-09-2	N	mg/l	<8e-005 JL	<8e-005	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL	<8e-005	<8e-005	<5e-005	<5e-005 JL
4,6-Dinitro-2-methylphenol	534-52-1	N	mg/l	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL
4-Bromophenyl phenyl ether	101-55-3	N	mg/l	<9e-005 JL	<9e-005	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005	<9e-005 JL	<9e-005	<9e-005	<5e-005	<5e-005 JL
4-Chloro-3-methylphenol	59-50-7	N	mg/l	<0.0001 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<5e-005	<5e-005 JL
4-Chloroaniline	106-47-8	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
4-Chlorophenyl phenyl ether	7005-72-3	N	mg/l	<8e-005 JL	<8e-005	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL	<8e-005	<8e-005	<5e-005	<5e-005 JL
4-Nitroaniline	100-01-6	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
4-Nitrophenol	100-02-7	N	mg/l	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<5e-005	<5e-005 JL
Acenaphthene	83-32-9	N	mg/l	<9e-005 JL	<9e-005	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005	<9e-005 JL	<9e-005	<9e-005	<5e-005	<5e-005 JL
Acenaphthylene	208-96-8	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
Acetophenone	98-86-2	N	mg/l	<0.0001 JL	<0.0001	0.00021	<0.0001 JL	0.0001 JL	0.00011 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001	<0.0001	<0.0001	<0.0001 JL
Anthracene	120-12-7	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
Benz(a)anthracene	56-55-3	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	6.7e-005 JL
Benzaldehyde	100-52-7	N	mg/l	<0.00012 JL	<0.00012	<0.00012	<0.00012 JL	<0.00012 JL	<0.00012 JL	<0.00012 JL	<0.00012	<0.00012 JL	<0.00012	<0.00012	<5e-005 JL	<5e-005 JL
Benzo(a)pyrene	50-32-8	N	mg/l	<8e-005 JL	<8e-005	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL	<8e-005	<8e-005	<5e-005	<5e-005 JL
Benzo(b)fluoranthene	205-99-2	N	mg/l	<9e-005 JL	<9e-005	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005	<9e-005 JL	<9e-005	<9e-005	<6e-005	<6e-005 JL
Benzo(g,h,i)perylene	191-24-2	N	mg/l	<9e-005 JL	<9e-005	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005	<9e-005 JL	<9e-005	<9e-005	<5e-005	<5e-005 JL
Benzo(k)fluoranthene	207-08-9	N	mg/l	<0.0001 JL	<0.0001	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001	<0.0001	<5e-005	<5e-005 JL
Bis(2-chloroethoxy)methane	111-91-1	N	mg/l	<9e-005 JL	<9e-005	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005	<9e-005 JL	<9e-005	<9e-005	<5e-005	<5e-005 JL
Bis(2-chloroethyl)ether	111-44-4	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
Bis(2-chloroisopropyl)ether	108-60-1	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
Bis(2-ethylhexyl)phthalate	117-81-7	N	mg/l	0.0026 JL	<0.0002 J	<0.0002	0.00075 JL	<0.0002 JL	0.0011 JL	0.00031 JL	0.00033	<0.0002 JL	<0.0002	0.00027	<0.0001	0.00052 JL
Butyl benzyl phthalate	85-68-7	N	mg/l	<0.0001 JL	<0.0001	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001	<0.0001	<5e-005	<5e-005 JL
Caprolactam	105-60-2	N	mg/l	<8e-005 JL	<8e-005	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL	<8e-005	<8e-005	<5e-005	<5e-005 JL
Carbazole	86-74-8	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
Chrysene	218-01-9	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
Dibenz(a,h)anthracene	53-70-3	N	mg/l	<8e-005 JL	<8e-005	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL	<8e-005	<8e-005	<5e-005	<5e-005 JL
Dibenzofuran	132-64-9	N	mg/l	<8e-005 JL	<8e-005	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005 JL	<8e-005	<8e-005	<5e-005	<5e-005 JL
Diethyl phthalate	84-66-2	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
Dimethyl phthalate	131-11-3	N	mg/l	<0.0001 JL	<0.0001	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001	<0.0001	<5e-005	<5e-005 JL
Di-n-butyl phthalate	84-74-2	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
Di-n-octyl phthalate	117-84-0	N	mg/l	<9e-005 JL	<9e-005	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005	<9e-005 JL	<9e-005	<9e-005	<5e-005	<5e-005 JL
Fluoranthene	206-44-0	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	5.6e-005 J	<5e-005 JL
Fluorene	86-73-7	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
Hexachlorobenzene	118-74-1	N	mg/l	<0.0001 JL	<0.0001	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001	<0.0001	<6e-005	<6e-005 JL
Hexachlorobutadiene	87-68-3	N	mg/l	<0.00015 JL	<0.00015	<0.00015	<0.00015 JL	<0.00015 JL	<0.00015 JL	<0.00015 JL	<0.00015	<0.00015 JL	<0.00015	<0.00015	<6e-005	<6e-005 JL
Hexachlorocyclopentadiene	77-47-4	N	mg/l	<8e-005 JL	<8e-005	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005 JL	R	<8e-005	<8e-005 JL	<8e-005	<8e-005	<6e-005	<6e-005 JL
Hexachloroethane	67-72-1	N	mg/l	<0.00017 JL	<0.00017	<0.00017	<0.00017 JL	<0.00017 JL	<0.00017 JL	<0.00017 JL	<0.00017	<0.00017 JL	<0.00017	<0.00017	<5e-005	<5e-005 JL
Indeno(1,2,3-cd)pyrene	193-39-5	N	mg/l	<0.0001 JL	<0.0001	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001	<0.0001	<5e-005	<5e-005 JL
Isophorone	78-59-1	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
Naphthalene	91-20-3	N	mg/l	<0.0001 JL	<0.0001	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001	<0.0001	<5e-005	<5e-005 JL
Nitrobenzene	98-95-3	N	mg/l	<9e-005 JL	<9e-005	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005	<9e-005 JL	<9e-005	<9e-005	<5e-005	<5e-005 JL
N-Nitrosodi-n-propylamine	621-64-7	N	mg/l	<0.0001 JL	<0.0001	<0.0001	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001 JL	<0.0001	<0.0001 JL	<0.0001	<0.0001	<8e-005	<8e-005 JL
N-Nitrosodiphenylamine	86-30-6	N	mg/l	<9e-005 JL	<9e-005	<9e-005	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005 JL	<9e-005	<9e-005 JL	<9e-005	<9e-005	<5e-005	<5e-005 JL
Pentachlorophenol	87-86-5	N	mg/l	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<8e-005 JL	<5e-005	<5e-005 JL
Phenanthrene	85-01-8	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
Phenol	108-95-2	N	mg/l	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<5e-005	<5e-005 JL
Pyrene	129-00-0	N	mg/l	<7e-005 JL	<7e-005	<7e-005	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005 JL	<7e-005	<7e-005 JL	<7e-005	<7e-005	<5e-005	<5e-005 JL
Total PAHs	TPAH	N	mg/l	<0.00075	<7e-005	<7e-005	<7e-005 JL	<0.000725	<0.000725	<0.000725	<0.000725	<0.000725	<0.000725	<0.000725	0.000486	0.000497

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not Analyzed

Surface Water Data Summary
East Ditch
Brine Service Company Superfund Site

			Sample Location	UPSW02	UPSW04	UPSW06	UPSW06	UPSW07
			Sample Date	2/1/2012	2/1/2012	1/31/2012	1/31/2012	2/1/2012
Analyte	CAS No.	T/D	Units					
METALS								
Aluminum#	7429-90-5	T	mg/l	0.121	0.695	0.22	0.258	0.106
Antimony	7440-36-0	T	mg/l	0.00104 J	0.00205 J	<0.0008	<0.0008	<0.0008
Arsenic	7440-38-2	T	mg/l	0.00651	0.00898	0.019	0.0198	0.00234 J
Barium	7440-39-3	T	mg/l	0.182	0.107	0.112	0.121	0.134
Beryllium	7440-41-7	T	mg/l	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007
Cadmium	7440-43-9	D	mg/l	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008
Chromium	7440-47-3	D	mg/l	0.00176 J	0.00131 J	<0.0012	<0.0012	<0.0012
Cobalt#	7440-48-4	T	mg/l	<0.0008	<0.0008	0.0013 J	0.0014 J	<0.0008
Copper#	7440-50-8	D	mg/l	0.00454 J	0.0126	0.00382 J	0.00299 J	0.00175 J
Lead	7439-92-1	D	mg/l	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007
Manganese#	7439-96-5	T	mg/l	0.0503	0.0275	1.34	1.37	0.243
Nickel	7440-02-0	D	mg/l	0.00178 J	0.00332 J	0.00692	0.00655	0.00192 J
Selenium	7782-49-2	T	mg/l	0.00114 J	0.00125 J	0.00113 J	<0.001	<0.001
Silver	7440-22-4	D	mg/l	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008
Thallium	7440-28-0	T	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	7440-62-2	T	mg/l	0.00822	0.0273	0.00201 J	0.0021 J	0.00362 J
Zinc	7440-66-6	D	mg/l	0.0215	0.00757 U	0.00986	0.00739	0.00697 U
Mercury	7439-97-6	T	mg/l	<4.2e-005	<4.2e-005	<4.2e-005	<4.2e-005	<4.2e-005
PESTICIDES AND PCBS								
4,4´-DDD	72-54-8	N	mg/l	3.9e-006 J	0.0000047	<2.5e-006 JL	<2.5e-006 JL	3.3e-006 J
4,4´-DDE	72-55-9	N	mg/l	<2.5e-006	<2.5e-006	<2.5e-006 JL	<2.5e-006 JL	<2.5e-006
4 4´-DDT#	50-29-3	N	mg/l	9.4e-006 J	<2.5e-006	<2.5e-006	<2.5e-006	5.80E-06
Aldrin	309-00-2	N	mg/l	0.0000023	<1.2e-006	<1.2e-006 JL	<1.2e-006 JL	0.0000025
alpha-BHC	319-84-6	N	mg/l	2.9e-006 J	1.5e-006 J	7.4e-006 JL	9.2e-006 JL	0.0000027
alpha-Chlordane	5103-71-9	N	mg/l	<2.5e-006 J	<2.5e-006	<2.5e-006 JL	<2.5e-006 JL	<2.5e-006
beta-BHC	319-85-7	N	mg/l	1.3e-006 J	<1.2e-006	5.1e-006 J	7.4e-006 J	<1.2e-006
delta-BHC	319-86-8	N	mg/l	<1.2e-006	0.0000043	<1.2e-006 JL	<1.2e-006 JL	0.0000038
Dieldrin	60-57-1	N	mg/l	<2.5e-006	<2.5e-006	<2.5e-006 JL	<2.5e-006 JL	<2.5e-006
Endosulfan I#	959-98-8	N	mg/l	<1.2e-006	<1.2e-006	<1.2e-006 JL	<1.2e-006 JL	3e-005 J
Endosulfan II	33213-65-9	N	mg/l	<2.5e-006 J	<2.5e-006	<2.5e-006 JL	<2.5e-006 JL	<2.5e-006
Endosulfan sulfate	1031-07-8	N	mg/l	<2.5e-006	<2.5e-006	<2.5e-006	<2.5e-006	<2.5e-006
Endrin#	72-20-8	N	mg/l	4.2e-006 J	<2.5e-006	<2.5e-006 JL	<2.5e-006 JL	4.40E-06
Endrin aldehyde	7421-93-4	N	mg/l	<2.5e-006 J	<2.5e-006	<2.5e-006 JL	2.7e-006 JL	<2.5e-006
gamma-BHC	58-89-9	N	mg/l	7.8e-006 J	<1.2e-006 J	<1.2e-006	<1.2e-006	<1.2e-006 J
gamma-Chlordane	5103-74-2	N	mg/l	<2.5e-006	<2.5e-006 J	<2.5e-006 JL	<2.5e-006 JL	<2.5e-006
Heptachlor	76-44-8	N	mg/l	<1.2e-006	<1.2e-006	1.3e-006 JL	3.2e-006 JL	2e-006 J
Heptachlor epoxide	1024-57-3	N	mg/l	<1.2e-006	<1.2e-006	<1.2e-006 JL	<1.2e-006 JL	<1.2e-006
Methoxychlor	72-43-5	N	mg/l	<1.2e-005	<1.2e-005	<1.2e-005	<1.2e-005	<1.2e-005
Toxaphene	8001-35-2	N	mg/l	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005
Aroclor 1016	12674-11-2	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1221	11104-28-2	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1232	11141-16-5	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1242	53469-21-9	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1248	12672-29-6	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1254	11097-69-1	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Aroclor 1260	11096-82-5	N	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
SEMIVOLATILE ORGANIC COMPOUNDS								
1,1´-Biphenyl	92-52-4	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
1-Methylnaphthalene	90-12-0	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
2 4 5-Trichlorophenol	95-95-4	N	mg/l	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005	<5e-005
2,4,6-Trichlorophenol	88-06-2	N	mg/l	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005 JL	<5e-005
2,4-Dichlorophenol	120-83-2	N	mg/l	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005 JL	<5e-005
2 4-Dimethylphenol	105-67-9	N	mg/l	0.00036	<5e-005 JL	<5e-005 JL	<5e-005 JL	<5e-005
2,4-Dinitrophenol	51-28-5	N	mg/l	<8e-005	<8e-005 JL	<8e-005	<8e-005	<8e-005
2,4-Dinitrotoluene	121-14-2	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
2 6-Dinitrotoluene	606-20-2	N	mg/l	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005
2-Chloronaphthalene	91-58-7	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
2-Chlorophenol	95-57-8	N	mg/l	<6e-005	<6e-005 JL	<6e-005 JL	<6e-005 JL	<6e-005
2-Methylnaphthalene	91-57-6	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
2-Methylphenol	95-48-7	N	mg/l	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005 JL	9e-005 J
2-Nitroaniline	88-74-4	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
2-Nitrophenol	88-75-5	N	mg/l	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005	<5e-005
3&4-Methylphenol	106-44-5	N	mg/l	9.8e-005 J	<5e-005 JL	<5e-005 JL	<5e-005 JL	<5e-005
3,3´-Dichlorobenzidine	91-94-1	N	mg/l	<5e-005	<5e-005	R	R	<5e-005
3-Nitroaniline	99-09-2	N	mg/l	<5e-005	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005
4 6-Dinitro-2-methylphenol	534-52-1	N	mg/l	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005	<8e-005
4-Bromophenyl phenyl ether	101-55-3	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
4-Chloro-3-methylphenol	59-50-7	N	mg/l	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005 JL	<5e-005
4-Chloroaniline	106-47-8	N	mg/l	<5e-005	<5e-005	R	R	<5e-005
4-Chlorophenyl phenyl ether	7005-72-3	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
4-Nitroaniline	100-01-6	N	mg/l	<5e-005 JL	<5e-005 JL	<5e-005 JL	<5e-005 JL	<5e-005 JL
4-Nitrophenol	100-02-7	N	mg/l	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005	<5e-005
Acenaphthene	83-32-9	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Acenaphthylene	208-96-8	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Acetophenone	98-86-2	N	mg/l	0.0001 J	<0.0001	<0.0001	<0.0001	<0.0001
Anthracene	120-12-7	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Benz(a)anthracene	56-55-3	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Benzaldehyde	100-52-7	N	mg/l	<5e-005 JL	<5e-005 JL	<5e-005 JL	<5e-005 JL	<5e-005 JL
Benzo(a)pyrene	50-32-8	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Benzo(b)fluoranthene	205-99-2	N	mg/l	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005
Benzo(g h i)perylene	191-24-2	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Benzo(k)fluoranthene	207-08-9	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Bis(2-chloroethoxy)methane	111-91-1	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Bis(2-chloroethyl)ether	111-44-4	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not Analyzed

Surface Water Data Summary
East Ditch
Brine Service Company Superfund Site

			Sample Location	UPSW02	UPSW04	UPSW06	UPSW06	UPSW07
			Sample Date	2/1/2012	2/1/2012	1/31/2012	1/31/2012	2/1/2012
Analyte	CAS No.	T/D	Units					
Bis(2-chloroisopropyl)ether	108-60-1	N	mg/l	<5e-005	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005
Bis(2-ethylhexyl)phthalate	117-81-7	N	mg/l	0.00015 J	<0.0001	0.0001 J	0.00046	<0.0001
Butyl benzyl phthalate	85-68-7	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Caprolactam	105-60-2	N	mg/l	<5e-005	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005
Carbazole	86-74-8	N	mg/l	7.4e-005 J	<5e-005	<5e-005	<5e-005	<5e-005
Chrysene	218-01-9	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Dibenz(a h)anthracene	53-70-3	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Dibenzofuran	132-64-9	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Diethyl phthalate	84-66-2	N	mg/l	<5e-005	<5e-005	7.1e-005 J	6.1e-005 J	<5e-005
Dimethyl phthalate	131-11-3	N	mg/l	<5e-005	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005
Di-n-butyl phthalate	84-74-2	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Di-n-octyl phthalate	117-84-0	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Fluoranthene	206-44-0	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Fluorene	86-73-7	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Hexachlorobenzene	118-74-1	N	mg/l	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005
Hexachlorobutadiene	87-68-3	N	mg/l	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005
Hexachlorocyclopentadiene	77-47-4	N	mg/l	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005
Hexachloroethane	67-72-1	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Indeno(1 2 3-cd)pyrene	193-39-5	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Isophorone	78-59-1	N	mg/l	<5e-005	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005
Naphthalene	91-20-3	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Nitrobenzene	98-95-3	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
N-Nitrosodi-n-propylamine	621-64-7	N	mg/l	<8e-005	<8e-005	<8e-005 JL	<8e-005 JL	<8e-005
N-Nitrosodiphenylamine	86-30-6	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Pentachlorophenol	87-86-5	N	mg/l	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005	<5e-005
Phenanthrene	85-01-8	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Phenol	108-95-2	N	mg/l	<5e-005	<5e-005 JL	<5e-005 JL	<5e-005 JL	6.5e-005 J
Pyrene	129-00-0	N	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Total PAHs	TPAH	N	mg/l	<0.000455	<0.000455	<0.000455	<0.000455	<0.000455

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not Analyzed

Sediment Analytical Data Summary
East Ditch Background/Upstream
Brine Service Company Superfund Site

Analyte	CAS No.	Units	Sample Location	EDBSS01	EDBSS01	EDBSS02	EDBSD03	EDBSS04	EDBSD05	EDBSD06	EDBSD06	EDBSD07	EDBSD08	EDBSD09	EDBSD10	EDBSD11
			Depth Interval	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
			Sample Date	10/5/2010	10/5/2010	10/5/2010	10/5/2010	10/5/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010	11/15/2010	11/15/2010	11/15/2010	11/15/2010
METALS																
Aluminum	7429-90-5	mg/kg		16300	15100	13000	10700	12300	8250	4550	4580	6960	6320	10500	10500	9240
Antimony	7440-36-0	mg/kg		<0.3	<0.31	<0.31	<0.34	<0.33	<0.31	<0.28	<0.3	<0.29	<0.31	<0.36	<0.35	<0.32
Arsenic	7440-38-2	mg/kg		3.08	3.03	4.15	2.81	3.99	2.73	2.17	1.97	2.21	2.47	2.53	2.72	2.88
Barium	7440-39-3	mg/kg		168	174	205	454	118	131	97	97.7	123	465	150	200	350
Beryllium	7440-41-7	mg/kg		0.912	0.886	0.813	0.671 J	0.664	0.472 J	0.297 J	0.283 J	0.4 J	0.318 J	0.545 J	0.527 J	0.506 J
Cadmium	7440-43-9	mg/kg		0.353 J	0.351 J	0.449 J	0.445 J	0.2 J	0.178 J	0.119 J	0.117 J	0.135 J	0.166 J	0.153 J	0.181 J	0.224 J
Chromium	7440-47-3	mg/kg		11.7	10.5	11.2	7.75	8.06	5.65	3.35	3.23	4.73	4.21	5.9	5.69	5.92
Cobalt	7440-48-4	mg/kg		6.23	7.21	8.33	6.89	4.88	3.83	2.28	1.99	2.79	3.55	3.73	3.91	5.19
Copper	7440-50-8	mg/kg		14.1	13.1	18.7	10.9	8.04	4.94	2.91	2.78	4	5.23	5.7	5.59	7.15
Lead	7439-92-1	mg/kg		21.5	20.1	27.7	21.1	16.2	7.76	4.54	3.96	5.8	14.2	7.95	8.44	14.5
Manganese	7439-96-5	mg/kg		294	407	616	505	309	265	121	112	159	258	236	247	336
Nickel	7440-02-0	mg/kg		10.2	10.1	13.1	8.02	7.98	4.82	2.95	2.88	4.08	4.23	5.8	7.02	6.73
Selenium	7782-49-2	mg/kg		0.614	0.427 J	0.522 J	0.528 J	0.445 J	0.347 J	<0.28	<0.3	<0.29	0.489 J	0.68 J	0.523 J	0.65
Silver	7440-22-4	mg/kg		0.0841 J	0.0851 J	0.0821 J	0.0663 J	0.0581 J	<0.05	<0.045	<0.049	<0.047	<0.05	<0.057	<0.055	<0.051
Thallium	7440-28-0	mg/kg		0.433 J	0.308 J	0.281 J	0.228 J	0.247 J	0.257 J	0.274 J	0.163 J	0.168 J	<0.087	0.159 J	0.136 J	0.106 J
Vanadium	7440-62-2	mg/kg		14.8	13.3	12.3	10.9	13.1	13.2	9.19	8.4	10.7	11.9	12.3	12.5	14
Zinc	7440-66-6	mg/kg		72.1	62.3	63.3	51.6	30.7	22.7	11.5	11.2	18	25.5	21.4	24.4	33.7
Mercury	7439-97-6	mg/kg		0.0323	0.0308	0.0635	0.0614	0.0182	0.004 J	0.00176 J	0.00256 J	0.00689	0.0105	0.00391 J	0.0102	0.0293
Cyanide	57-12-5	mg/kg		<0.76	<0.75	<0.8	<0.89	<0.79	<0.8	<0.71	<0.69	<0.73	<0.8	<0.88	<0.89	<0.86
PESTICIDES AND PCBS																
4,4´-DDD	72-54-8	mg/kg		<0.00068	<0.00068	<0.0007	<0.00076	<0.00067	<0.00071	<0.00062	<0.00061	<0.00065	<0.00067	<0.00074	<0.00075	<0.00072
4,4´-DDE	72-55-9	mg/kg		<0.00068	<0.00068	<0.0007	<0.00076	<0.00067	<0.00071	<0.00062	<0.00061	<0.00065	<0.00067	<0.00074	<0.00075	<0.00072
4 4´-DDT	50-29-3	mg/kg		<0.00068	<0.00068	<0.0007	<0.00076	<0.00067	<0.00071	<0.00062	<0.00061	<0.00065	<0.00067	<0.00074	<0.00075	<0.00072
Aldrin	309-00-2	mg/kg		<0.00041	<0.00041	<0.00042	<0.00046	<0.0004	<0.00043	<0.00037	<0.00037	<0.00039	<0.0004	<0.00045	<0.00045	<0.00043
alpha-BHC	319-84-6	mg/kg		<0.00041	<0.00041	<0.00042	<0.00046	<0.0004	<0.00043	<0.00037	<0.00037	<0.00039	<0.0004	<0.00045	<0.00045	<0.00043
alpha-Chlordane	5103-71-9	mg/kg		<0.00027	<0.00027	<0.00028	<0.0003	<0.00027	<0.00028	<0.00025	<0.00024	<0.00026	<0.00027	<0.0003	<0.0003	<0.00029
beta-BHC	319-85-7	mg/kg		<0.00041	<0.00041	<0.00042	<0.00046	<0.0004	<0.00043	<0.00037	<0.00037	<0.00039	<0.0004	<0.00045	<0.00045	<0.00043
delta-BHC	319-86-8	mg/kg		<0.00027	<0.00027	<0.00028	<0.0003	<0.00027	<0.00028	<0.00025	<0.00024	<0.00026	<0.00027	<0.0003	<0.0003	<0.00029
Dieldrin	60-57-1	mg/kg		<0.00068	<0.00068	<0.0007	<0.00076	<0.00067	<0.00071	<0.00062	<0.00061	<0.00065	<0.00067	<0.00074	<0.00075	<0.00072
Endosulfan I	959-98-8	mg/kg		<0.00041	<0.00041	<0.00042	<0.00046	<0.0004	<0.00043	<0.00037	<0.00037	<0.00039	<0.0004	<0.00045	<0.00045	<0.00043
Endosulfan II	33213-65-9	mg/kg		<0.00082	<0.00082	<0.00084	<0.00091	<0.0008	<0.00085	<0.00075	<0.00073	<0.00078	<0.00081	<0.00089	<0.0009	<0.00087
Endosulfan sulfate	1031-07-8	mg/kg		<0.00082	<0.00082	<0.00084	<0.00091	<0.0008	<0.00085	<0.00075	<0.00073	<0.00078	<0.00081	<0.00089	<0.0009	<0.00087
Endrin	72-20-8	mg/kg		<0.00082	<0.00082	<0.00084	<0.00091	<0.0008	<0.00085	<0.00075	<0.00073	<0.00078	<0.00081	<0.00089	<0.0009	<0.00087
Endrin aldehyde	7421-93-4	mg/kg		<0.00082	<0.00082	<0.00084	<0.00091	<0.0008	<0.00085	<0.00075	<0.00073	<0.00078	<0.00081	<0.00089	<0.0009	<0.00087
gamma-BHC	58-89-9	mg/kg		<0.00027	<0.00027	<0.00028	<0.0003	<0.00027	<0.00028	<0.00025	<0.00024	<0.00026	<0.00027	<0.0003	<0.0003	<0.00029
gamma-Chlordane	5103-74-2	mg/kg		<0.00027	<0.00027	<0.00028	<0.0003	<0.00027	<0.00028	<0.00025	<0.00024	<0.00026	<0.00027	<0.0003	<0.0003	<0.00029
Heptachlor	76-44-8	mg/kg		<0.00041	<0.00041	<0.00042	<0.00046	<0.0004	<0.00043	<0.00037	<0.00037	<0.00039	<0.0004	<0.00045	<0.00045	<0.00043
Heptachlor epoxide	1024-57-3	mg/kg		<0.00041	<0.00041	<0.00042	<0.00046	<0.0004	<0.00043	<0.00037	<0.00037	<0.00039	<0.0004	<0.00045	<0.00045	<0.00043
Methoxychlor	72-43-5	mg/kg		<0.0046	<0.0046	<0.0048	<0.0052	<0.0045	<0.0048	<0.0042	<0.0042	<0.0044	<0.0046	<0.0051	<0.0051	<0.0049
Toxaphene	8001-35-2	mg/kg		<0.0052	<0.0052	<0.0053	<0.0058	<0.0051	<0.0054	<0.0047	<0.0046	<0.0049	<0.0051	<0.0057	<0.0057	<0.0055
Aroclor 1016	12674-11-2	mg/kg		<0.0033	<0.0033	<0.0034	<0.0036	<0.0032	<0.0034	<0.003	<0.0029	<0.0031	<0.0032	<0.0036	<0.0036	<0.0035
Aroclor 1221	11104-28-2	mg/kg		<0.0033	<0.0033	<0.0034	<0.0036	<0.0032	<0.0034	<0.003	<0.0029	<0.0031	<0.0032	<0.0036	<0.0036	<0.0035
Aroclor 1232	11141-16-5	mg/kg		<0.0033	<0.0033	<0.0034	<0.0036	<0.0032	<0.0034	<0.003	<0.0029	<0.0031	<0.0032	<0.0036	<0.0036	<0.0035
Aroclor 1242	53469-21-9	mg/kg		<0.0033	<0.0033	<0.0034	<0.0036	<0.0032	<0.0034	<0.003	<0.0029	<0.0031	<0.0032	<0.0036	<0.0036	<0.0035
Aroclor 1248	12672-29-6	mg/kg		<0.0033	<0.0033	<0.0034	<0.0036	<0.0032	<0.0034	<0.003	<0.0029	<0.0031	<0.0032	<0.0036	<0.0036	<0.0035
Aroclor 1254	11097-69-1	mg/kg		<0.0033	<0.0033	<0.0034	<0.0036	<0.0032	<0.0034	<0.003	<0.0029	<0.0031	<0.0032	<0.0036	<0.0036	<0.0035
Aroclor 1260	11096-82-5	mg/kg		<0.0024	<0.0024	<0.0025	<0.0027	<0.0024	<0.0026	<0.0022	<0.0022	<0.0023	<0.0024	<0.0027	<0.0027	<0.0026
Total PCBs	N/A	mg/kg		All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND
VOCS																
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1 1 1-Trichloroethane	71-55-6	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1 1 2-Trichloroethane	79-00-5	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1 1-Dichloroethane	75-34-3	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1,1-Dichloroethene	75-35-4	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1 2 4-Trichlorobenzene	120-82-1	mg/kg		<0.00078	<0.00078	<0.00089	<0.00091	<0.00073	<0.00085	<0.00075	<0.00074	<0.00078	<0.00081	<0.00089	<0.00091	<0.00087
1 2 4-Trimethylbenzene	95-63-6	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1,2-Dibromoethane	106-93-4	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1,2-Dichlorobenzene	95-50-1	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1 2-Dichloroethane	107-06-2	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1,2-Dichloropropane	78-87-5	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1,3,5-Trimethylbenzene	108-67-8	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1 3-Dichlorobenzene	541-73-1	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
1,4-Dichlorobenzene	106-46-7	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
2-Butanone	78-93-3	mg/kg		<0.0018	<0.0018	<0.0021	<0.0021	<0.0017	<0.002	<0.0018	<0.0017	<0.0018	0.0061 J	<0.0021	<0.0021	<0.002
2-Hexanone	591-78-6	mg/kg		<0.0013	<0.0013	<0.0015	<0.0015	<0.0012	<0.0014	<0.0013	<0.0012	<0.0013	<0.0013	<0.0015	<0.0015	<0.0014
4-Methyl-2-pentanone	108-10-1	mg/kg		<0.0013	<0.0013	<0.0015	<0.0015	<0.0012	<0.0014	<0.0013	<0.0012	<0.0013	<0.0013	<0.0015	<0.0015	<0.0014
Acetone	67-64-1	mg/kg		<0.0026	<0.0026	<0.003 U	<0.003	<0.0024 U	<0.0028	<0.0025	<0.0025	0.023 J	0.027	<0.003	<0.003	<0.0029
Benzene	71-43-2	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Bromodichloromethane	75-27-4	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Bromoform	75-25-2	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Bromomethane	74-83-9	mg/kg		<0.0013	<0.0013	<0.0015	<0.0015	<0.0012	<0.0014	<0.0013	<0.0012	<0.0013	<0.0013	<0.0015	<0.0015	<0.0014
Carbon disulfide	75-15-0	mg/kg		<0.0013	<0.0013	<0.0015	<0.0015	<0.0012	<0.0014	<0.0013	<0.0012	<0.0013	<0.0013	<0.0015	<0.0015	<0.0014
Carbon tetrachloride	56-23-5	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Chlorobenzene	108-90-7	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Chloroethane	75-00-3	mg/kg		<0.0013	<0.0013	<0.0015	<0.0015	<0.0012	<0.0014	<0.0013	<0.0012	<0.0013	<0.0013	<0.0015	<0.0015	<0.0014
Chloroform	67-66-3	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Chloromethane	74-87-3	mg/kg		<0.0013	<0.0013	<0.0015	<0.0015	<0.0012	<0.0014	<0.0013	<0.0012	<0.0013	<0.0013	<0.0015	<0.0015	<0.0014
cis-1 2-Dichloroethene	156-59-2	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
cis-1,3-Dichloropropene	10061-01-5	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Cyclohexane	110-82-7	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect

Sediment Analytical Data Summary
East Ditch Background/Upstream
Brine Service Company Superfund Site

Analyte	CAS No.	Units	Sample Location	EDBSS01	EDBSS01	EDBSS02	EDBSD03	EDBSS04	EDBSD05	EDBSD06	EDBSD06	EDBSD07	EDBSD08	EDBSD09	EDBSD10	EDBSD11
			Depth Interval	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
			Sample Date	10/5/2010	10/5/2010	10/5/2010	10/5/2010	10/5/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010	11/15/2010	11/15/2010	11/15/2010	11/15/2010
Dibromochloromethane	124-48-1	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Dichlorodifluoromethane	75-71-8	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Ethylbenzene	100-41-4	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Isopropylbenzene	98-82-8	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Methyl acetate	79-20-9	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Methyl tert-butyl ether	1634-04-4	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Methylcyclohexane	108-87-2	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Methylene chloride	75-09-2	mg/kg		0.0015 J	0.0019 J	0.0016 J	<0.0015	0.002 J	0.0016 J	0.0017 J	0.0013 J	0.0014 J	<0.0013	<0.0015	<0.0015	<0.0014
Naphthalene	91-20-3	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
n-Propylbenzene	103-65-1	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
sec-Butylbenzene	135-98-8	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Styrene	100-42-5	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
tert-Butylbenzene	98-06-6	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Tetrachloroethene	127-18-4	mg/kg		<0.00078	<0.00078	<0.00089	<0.00091	<0.00073	<0.00085	<0.00075	<0.00074	<0.00078	<0.00081	<0.00089	<0.00091	<0.00087
Toluene	108-88-3	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	0.0077	<0.00075	<0.00076	<0.00072
trans-1,2-Dichloroethene	156-60-5	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
trans-1,3-Dichloropropene	10061-02-6	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Trichloroethene	79-01-6	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Trichlorofluoromethane	75-69-4	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Vinyl chloride	75-01-4	mg/kg		<0.00065	<0.00065	<0.00074	<0.00076	<0.00061	<0.00071	<0.00063	<0.00061	<0.00065	<0.00067	<0.00075	<0.00076	<0.00072
Xylenes Total	1330-20-7	mg/kg		<0.002	<0.0019	<0.0022	<0.0023	<0.0018	<0.0021	<0.0019	<0.0018	<0.0019	<0.002	<0.0022	<0.0023	<0.0022
SVOCS																
1,1´-Biphenyl	92-52-4	mg/kg		<0.0039	<0.004	<0.0041	<0.0044	<0.0039	<0.0041	<0.0036	<0.0035	<0.0038	<0.0039	<0.0043 JL	<0.0044 JL	<0.0042 JL
1-Methylnaphthalene	90-12-0	mg/kg		<0.0031	<0.0031	<0.0032	<0.0035	<0.0031	<0.0033	<0.0029	<0.0028	<0.003	<0.0031	<0.0034 JL	<0.0035 JL	<0.0033 JL
2 4 5-Trichlorophenol	95-95-4	mg/kg		<0.0038	<0.0038	<0.0039	<0.0043	<0.0037	<0.004 JL	<0.0035 JL	<0.0034	<0.0036	<0.0038	<0.0042 JL	<0.0042 JL	<0.004 JL
2,4,6-Trichlorophenol	88-06-2	mg/kg		<0.0045	<0.0045	<0.0046	<0.005	<0.0044	<0.0047 JL	<0.0041 JL	<0.004	<0.0043	<0.0044	<0.0049 JL	<0.005 JL	<0.0048 JL
2 4-Dichlorophenol	120-83-2	mg/kg		<0.003	<0.003	<0.0031	<0.0033	<0.0029	<0.0031 JL	<0.0028 JL	<0.0027	<0.0029	<0.003	<0.0033 JL	<0.0033 JL	<0.0032 JL
2 4-Dimethylphenol	105-67-9	mg/kg		<0.0045	<0.0045	<0.0046	<0.005	<0.0044	<0.0047 JL	<0.0041 JL	<0.004	<0.0043	<0.0044	<0.0049 JL	<0.005 JL	<0.0048 JL
2,4-Dinitrophenol	51-28-5	mg/kg		<0.0045	<0.0045	<0.0046	<0.005	<0.0044	<0.0047 JL	<0.0041 JL	<0.004	<0.0043	<0.0044 JL	<0.0049 JL	<0.005 JL	<0.0048 JL
2 4-Dinitrotoluene	121-14-2	mg/kg		<0.0045	<0.0045	<0.0046	<0.005	<0.0044	<0.0047	<0.0041	<0.004	<0.0043	<0.0044	<0.0049 JL	<0.005 JL	<0.0048 JL
2 6-Dinitrotoluene	606-20-2	mg/kg		<0.0043	<0.0044	<0.0045	<0.0049	<0.0043	<0.0046	<0.004	<0.0039	<0.0042	<0.0043	<0.0048 JL	<0.0048 JL	<0.0046 JL
2-Chloronaphthalene	91-58-7	mg/kg		<0.0056	<0.0056	<0.0057	<0.0062	<0.0055	<0.0058	<0.0051	<0.005	<0.0053	<0.0055	<0.0061 JL	<0.0062 JL	<0.0059 JL
2-Chlorophenol	95-57-8	mg/kg		<0.0043	<0.0044	<0.0045	<0.0049	<0.0043	<0.0046 JL	<0.004 JL	<0.0039	<0.0042	<0.0043	<0.0048 JL	<0.0048 JL	<0.0046 JL
2-Methylnaphthalene	91-57-6	mg/kg		<0.0037	<0.0037	<0.0038	<0.0041	<0.0036	<0.0038	<0.0034	<0.0033	<0.0035	<0.0036	<0.004 JL	<0.0041 JL	<0.0039 JL
2-Methylphenol	95-48-7	mg/kg		<0.0039	<0.004	0.0068 J	<0.0044	0.0083 J	<0.0041 JL	<0.0036 JL	<0.0035	<0.0038	<0.0039	<0.0043 JL	<0.0044 JL	<0.0042 JL
2-Nitroaniline	88-74-4	mg/kg		<0.0045	<0.0045	<0.0046	<0.005	<0.0044	<0.0047	<0.0041	<0.004	<0.0043	<0.0044	<0.0049 JL	<0.005 JL	<0.0048 JL
2-Nitrophenol	88-75-5	mg/kg		<0.0062	<0.0063	<0.0064	<0.007	<0.0061	<0.0065 JL	<0.0058 JL	<0.0056	<0.006	<0.0062	<0.0069 JL	<0.0069 JL	<0.0066 JL
3&4-Methylphenol	106-44-5	mg/kg		<0.0038	<0.0038	<0.0039	<0.0043	<0.0037	0.059 JL	<0.0035 JL	<0.0034	0.0082 J	0.076	<0.0042 JL	<0.0042 JL	0.0073 JL
3,3´-Dichlorobenzidine	91-94-1	mg/kg		<0.0042	<0.0042	<0.0043	<0.0047	<0.0041	<0.0044	<0.0039 JL	<0.0038 JL	<0.004	<0.0042	<0.0046 JL	<0.0047 JL	<0.0045 JL
3-Nitroaniline	99-09-2	mg/kg		<0.0035	<0.0035	<0.0036	<0.004	<0.0035	<0.0037	<0.0033	<0.0032	<0.0034	<0.0035	<0.0039 JL	<0.0039 JL	<0.0038 JL
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg		<0.0045	<0.0045	<0.0046	<0.005	<0.0044	<0.0047 JL	<0.0041 JL	<0.004	<0.0043	<0.0044	<0.0049 JL	<0.005 JL	<0.0048 JL
4-Bromophenyl phenyl ether	101-55-3	mg/kg		<0.0045	<0.0045	<0.0046	<0.005	<0.0044	<0.0047	<0.0041	<0.004	<0.0043	<0.0044	<0.0049 JL	<0.005 JL	<0.0048 JL
4-Chloro-3-methylphenol	59-50-7	mg/kg		<0.0045	<0.0045	<0.0046	<0.005	<0.0044	<0.0047 JL	<0.0041 JL	<0.004	<0.0043	<0.0044	<0.0049 JL	<0.005 JL	<0.0048 JL
4-Chloroaniline	106-47-8	mg/kg		<0.003	<0.003	<0.0031	<0.0033	<0.0029	<0.0031	<0.0028	<0.0027	<0.0029	<0.003	<0.0033 JL	<0.0033 JL	<0.0032 JL
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg		<0.003	<0.003	<0.0031	<0.0033	<0.0029	<0.0031	<0.0028	<0.0027	<0.0029	<0.003	<0.0033 JL	<0.0033 JL	<0.0032 JL
4-Nitroaniline	100-01-6	mg/kg		<0.0045	<0.0045	<0.0046	<0.005	<0.0044	<0.0047	<0.0041	<0.004	<0.0043	<0.0044	<0.0049 JL	<0.005 JL	<0.0048 JL
4-Nitrophenol	100-02-7	mg/kg		<0.0052	<0.0052	<0.0053	<0.0058	<0.0051	<0.0054 JL	<0.0048 JL	<0.0047	<0.0049	<0.0051	<0.0057 JL	<0.0057 JL	<0.0055 JL
Acenaphthene	83-32-9	mg/kg		<0.003	<0.003	0.026	<0.0033	<0.0029	<0.0031	<0.0028	<0.0027	<0.0029	<0.003	<0.0033 JL	<0.0033 JL	<0.0032 JL
Acenaphthylene	208-96-8	mg/kg		<0.003	<0.003	<0.0031	<0.0033	<0.0029	<0.0031	<0.0028	<0.0027	<0.0029	<0.003	<0.0033 JL	<0.0033 JL	<0.0032 JL
Acetophenone	98-86-2	mg/kg		<0.0033	<0.0033	<0.0034	<0.0037	<0.0032	<0.0034	<0.003	<0.0029	<0.0031	<0.0032	<0.0036 JL	<0.0036 JL	<0.0035 JL
Anthracene	120-12-7	mg/kg		<0.003	<0.003	0.072	<0.0033	<0.0029	<0.0031	<0.0028	<0.0027	<0.0029	<0.003	<0.0033 JL	<0.0033 JL	0.0036 JL
Benz(a)anthracene	56-55-3	mg/kg		<0.0038	0.011	0.4	<0.0043	<0.0037	<0.004	<0.0035	<0.0034	<0.0036	0.0058 J	0.0063 JL	<0.0042 JL	0.025 JL
Benzaldehyde	100-52-7	mg/kg		<0.0062 JL	<0.0063 JL	<0.0064 JL	<0.007 JL	<0.0061 JL	<0.0065 JL	<0.0058 JL	<0.0056 JL	<0.006 JL	<0.0062 JL	<0.0069 JL	<0.0069 JL	<0.0066 JL
Benzo(a)pyrene	50-32-8	mg/kg		<0.0031	0.0089 J	0.37	<0.0035	<0.0031	<0.0033	<0.0029	<0.0028	<0.003	0.0062 J	<0.0034 JL	<0.0035 JL	0.023 JL
Benzo(b)fluoranthene	205-99-2	mg/kg		<0.0045	0.017	0.6	<0.005	<0.0044	<0.0047	<0.0041	<0.004	<0.0043	0.0081 J	0.0054 JL	<0.005 JL	0.021 JL
Benzo(g h i)perylene	191-24-2	mg/kg		<0.0039	0.0046 J	0.22	<0.0044	<0.0039	<0.0041	<0.0036	<0.0035	<0.0038	0.0059 J	<0.0043 JL	<0.0044 JL	0.018 JL
Benzo(k)fluoranthene	207-08-9	mg/kg		<0.0045	0.0068 J	0.2	<0.005	<0.0044	<0.0047	<0.0041	<0.004	<0.0043	<0.0044	<0.0049 JL	<0.005 JL	0.026 JL
Bis(2-chloroethoxy)methane	111-91-1	mg/kg		<0.0033	<0.0033	<0.0034	<0.0037	<0.0032	<0.0034	<0.003	<0.0029	<0.0031	<0.0032	<0.0036 JL	<0.0036 JL	<0.0035 JL
Bis(2-chloroethyl)ether	111-44-4	mg/kg		<0.0038	<0.0038	<0.0039	<0.0043	<0.0037	<0.004	<0.0035	<0.0034	<0.0036	<0.0038	<0.0042 JL	<0.0042 JL	<0.004 JL
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg		<0.0037	<0.0037	<0.0038	<0.0041	<0.0036	<0.0038	<0.0034	<0.0033	<0.0035	<0.0036	<0.004 JL	<0.0041 JL	<0.0039 JL
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg		<0.009 U JL	<0.009 U JL	<0.0092 U JL	<0.01	<0.0088	<0.0094	<0.0083	<0.0081	<0.0086	<0.0089	0.013 JL	<0.0099 JL	0.021 JL
Butyl benzyl phthalate	85-68-7	mg/kg		<0.0034	<0.0034	<0.0035	<0.0038	<0.0033	<0.0036	<0.0031	<0.0031	<0.0032	<0.0034	<0.0037 JL	<0.0038 JL	<0.0036 JL
Caprolactam	105-60-2	mg/kg		0.013	0.014	<0.0034	<0.0037	<0.0032	<0.0034	<0.003	<0.0029	<0.0031	<0.0032	<0.0036 JL	<0.0036 JL	<0.0035 JL
Carbazole	86-74-8	mg/kg		<0.003	<0.003	0.072	<0.0033	<0.0029	<0.0031	<0.0028	<0.0027	<0.0029	<0.003	<0.0033 JL	<0.0033 JL	0.0045 JL
Chrysene	218-01-9	mg/kg		<0.0039	0.014	0.45	<0.0044	<0.0039	<0.0041	<0.0036	<0.0035	<0.0038	0.0074 J	0.0062 JL	<0.0044 JL	0.031 JL
Dibenz(a,h)anthracene	53-70-3	mg/kg		<0.003	<0.003	0.062	<0.0033	<0.0029	<0.0031	<0.0028	<0.0027	<0.0029	<0.003	<0.0033 JL	<0.0033 JL	<0.0032 JL
Dibenzofuran	132-64-9	mg/kg		<0.003	<0.003	0.011	<0.0033	<0.0029	<0.0031	<0.0028	<0.0027	<0.0029	<0.003	<0.0033 JL	<0.0033 JL	<0.0032 JL
Diethyl phthalate	84-66-2	mg/kg		<0.0045	<0.0045	<0.0046	<0.005	<0.0044	<0.0047	<0.0041	<0.004	<0.0043	<0.0044	0.0064 JL	<0.005 JL	0.0065 JL
Dimethyl phthalate	131-11-3	mg/kg		<0.0033	<0.0033	<0.0034	<0.0037	<0.0032	<0.0034	<0.003	<0.0029	<0.0031	<0.0032	<0.0036 JL	<0.0036 JL	<0.0035 JL
Di-n-butyl phthalate	84-74-2	mg/kg		<0.0034 U JL	<0.0034	<0.0035	<0.0038	<0.0033	<0.0036	<0.0031	<0.0031	<0.0032	<0.0034	0.0071 JL	0.0052 JL	0.0067 JL
Di-n-octyl phthalate	117-84-0	mg/kg		<0.0039	<0.004	<0.0041	<0.0044	<0.0039	<0.0041	<0.0036	<0.0035	<0.0038	<0.0039	<0.0043 JL	<0.0044 JL	<0.0042 JL
Fluoranthene	206-44-0	mg/kg		0.0044 J	0.012	0.84	0.0055 J	<0.0029	<0.0031	<0.0028	<0.0027	<0.0029	0.0099	0.013 JL	0.0055 JL	0.044 JL
Fluorene	86-73-7	mg/kg		<0.003	<0.003	0.02	<0.0033	<0.0029	<0.0031	<0.0028	<0.0027	<0.0029	<0.003	<0.0033 JL	<0.0033 JL	<0.0032 JL
Hexachlorobenzene	118-74-1	mg/kg		<0.0035	<0.0035	<0.0036	<0.004	<0.0035	<0.0037	<0.0033	<0.0032	<0.0034	<0.0035	<0.0039 JL	<0.0039 JL	<0.0038 JL
Hexachlorobutadiene	87-68-3	mg/kg		<0.006	<0.006	<0.0062	<0.0067	<0.0059	<0.0063	<0.0055	<0.0054	<0.0057	<0.0059	<0.0066 JL	<0.0066 JL	<0.0064 JL
Hexachlorocyclopentadiene	77-47-4	mg/kg		<0.0049	<0.0049	<0.005	<0.0055	<0.0048	<0.0051	<0.0045	<0.0044	<0.0047	<0.0048	<0.0054 JL	<0.0054 JL	<0.0052 JL
Hexachloroethane	67-72-1	mg/kg		<0.0053	<0.0053	<0.0055	<0.0059	<0.0052	<0.0056	<0.0049	<0.0048	<0.0051	<0.0052	<0.0058 JL	<0.0059 JL	<0.0056 JL
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg		<0.0048	0.0056 J	0.26	<0.0053	<0.0047	<0.005	<0.0044	<0.0043	<0.0045	<0.0047	<0.0052 JL	<0.0053 JL	0.016 JL
Isophorone	78-59-1	mg/kg		<0.0041	<0.0041	<0.0042	<0.0046	<0.004	<0.0043	<0.0038	<0.0037	<0.0039	<0.004	<0.0045 JL	<0.0045 JL	<0.0043 JL
Naphthalene	91-20-3	mg/kg		<0.0045	<0.0045	0.0067 J	<0.005	<0.0044	<0.0047	<0.0041	<0.004	<0.0043	<0.0044	<0.0049 JL	<0.005 JL	<0.0048 JL
Nitrobenzene	98-95-3	mg/kg		<0.0045	<0.0045	<0.0046	<0.005	<0.0044	<0.0047	<0.0041	<0.004	<0.0043	<0.0044	<0.0049 JL	<0.005 JL	<0.0048 JL
N-Nitrosodi-n-propylamine	621-64-7	mg/kg		<0.0054	<0.0055	<0.0056	<0.0061	<0.0053	<0.0057	<0.005	<0.0049	<0.0052	<0.0054	<0.006 JL	<0.006 JL	<0.0058 JL
N-Nitrosodiphenylamine	86-30-6	mg/kg		<0.003	<0.003	<0.0031	<0.0033	<0.0029	<0.0031	<0.0028	<0.0027	<0.0029	<0.003	<0.0033 JL	<0.0033 JL	<0.0032 JL

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect

Sediment Analytical Data Summary
East Ditch Background/Upstream
Brine Service Company Superfund Site

			Sample Location	EDBSS01	EDBSS01	EDBSS02	EDBSD03	EDBSS04	EDBSD05	EDBSD06	EDBSD06	EDBSD07	EDBSD08	EDBSD09	EDBSD10	EDBSD11
			Depth Interval	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
			Sample Date	10/5/2010	10/5/2010	10/5/2010	10/5/2010	10/5/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010	11/15/2010	11/15/2010	11/15/2010	11/15/2010
Analyte	CAS No.	Units														
Pentachlorophenol	87-86-5	mg/kg		<0.0038	<0.0038	<0.0039	<0.0043	<0.0037	<0.004 JL	<0.0035 JL	<0.0034	<0.0036	<0.0038	<0.0042 JL	<0.0042 JL	<0.004 JL
Phenanthrene	85-01-8	mg/kg		<0.0041	0.0044 J	0.36	<0.0046	<0.004	<0.0043	<0.0038	<0.0037	<0.0039	0.004 J	0.0096 JL	<0.0045 JL	0.018 JL
Phenol	108-95-2	mg/kg		<0.0045	<0.0045	<0.0046	<0.005	<0.0044	<0.0047 JL	<0.0041 JL	<0.004	<0.0043	0.0068 J	<0.0049 JL	<0.005 JL	<0.0048 JL
Pyrene	129-00-0	mg/kg		0.0037 J	0.012	0.61	0.0045 J	<0.0029	<0.0031	<0.0028	<0.0027	<0.0029	0.0086 J	0.01 JL	0.0051 JL	0.039 JL
Low Molecular Weight PAHs	NA	mg/kg		0.012475	0.014825	0.48852	0.01383	0.012105	0.012955	0.011565	0.011205	0.011975	0.014335	0.021025	0.01378	0.03111
High Molecular Weight PAHs	NA	mg/kg		0.015	0.0594	2.732	0.01775	0.0097	0.01035	0.0092	0.0089	0.00955	0.0394	0.03885	0.0183	0.1636
Total PAHs	NA	mg/kg		0.037875	0.109775	4.50212	0.04318	0.032055	0.034205	0.030315	0.029405	0.031475	0.073835	0.074175	0.04368	0.27736
				EDBSS01	EDBSS01	EDBSS02	EDBSD03	EDBSS04	EDBSD05	EDBSD06	EDBSD06	EDBSD07	EDBSD08	EDBSD09	EDBSD10	EDBSD11

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect

Sediment Analytical Data Summary
East Ditch
Brine Service Company Superfund Site

Analyte	CAS No.	Units	Sample Location / Depth Interval / Sample Date	EDDSD01 0-0.5 ft 11/16/2010	EDDSD02 0-0.5 ft 11/16/2010	EDDSD03 0-0.5 ft 11/16/2010	EDDSD04 0-0.5 ft 11/16/2010	EDDSD05 0-0.5 ft 11/16/2010	EDDSD05 0-0.5 ft 11/16/2010	EDDSD06 0-0.5 ft 11/16/2010	EDDSD07 0-0.5 ft 11/16/2010	EDDSD08 0-0.5 ft 11/16/2010	EDDSD09 0-0.5 ft 11/16/2010	EDDSD10 0-0.5 ft 11/16/2010	EDNSS01 0-0.5 ft 11/17/2010	EDNSD02 0-0.5 ft 11/17/2010	EDNSD03 0-0.5 ft 11/17/2010	EDNSD03 0-0.5 ft 11/17/2010	EDNSD04 0-0.5 ft 11/17/2010	EDNSD05 0-0.5 ft 11/17/2010	EDNSD06 0-0.5 ft 11/17/2010	EDNSD07 0-0.5 ft 11/17/2010	EDNSD08 0-0.5 ft 11/17/2010
METALS																							
Aluminum	7429-90-5	mg/kg		8240	8730	9700	6060	6360	7670	5340	4360	8910	6370	6110	4440	6800	6370	5720	5050	6480	6820	7530	10000
Antimony	7440-36-0	mg/kg		<0.42	<0.43	<0.39	<0.35	<0.44	<0 5	<0.34	<0.3	<0 36	<0.33	<0.35	<0.24	<0.38	<0.37	<0.39	<0.29	<0.35	<0 34	<0.44	<0.4
Arsenic	7440-38-2	mg/kg		3.68	37.8	3.36	4.99	5.32	5.98	10.2	3.78	14.4	12.4	6.32	2.48	4.56	3.24	3.45	2.29	2.96	2.7	4.5	4.34
Barium	7440-39-3	mg/kg		3940	4730	1070	1440	2960	3190	696	278	206	367	395	368	484	837	698	355	456	615	3740	3650
Beryllium	7440-41-7	mg/kg		0.344 J	0.368 J	0.393 J	0.261 J	0.269 J	0.303 J	0.227 J	0.17 J	0.371 J	0.293 J	0.269 J	0.3 J	0.541 J	0.411 J	0.374 J	0.339 J	0.44 J	0.444 J	0.488 J	0.479 J
Cadmium	7440-43-9	mg/kg		1.89	2.42	0.741 J	3.76	1.25	1	1.63	0.33 J	0.307 J	1.27	0.614 J	0.4 J	1.23	0.912	0.662 J	0.618	0.398 J	0.397 J	0.603 J	1.62
Chromium	7440-47-3	mg/kg		7.58	7.82	6.96	9.36	9.6	10.7	9.19	6.87	5.07	7.23	7.16	10.3	7.41	10.4	9.82	5.56	5.69	6.23	7.29	9.14
Cobalt	7440-48-4	mg/kg		4.48	3.42	3.62	2.65	2.25	2.61	4.77	2.64	14.5	3.24	3.63	1.97	4.51	3.55	3.51	3.29	4.05	3.64	3.23	4
Copper	7440-50-8	mg/kg		9.69	10.4	9.62	12	7.66	11.7	13.8	12.4	5.68	28	8.73	10.2	19.5	20.8	14.7	7.26	8.4	7.43	10	14.5
Lead	7439-92-1	mg/kg		37.4	38	31.1	44.4	26.3	25	33.6	14.5	9.68	23.1	24.7	225	64.4	133	85.8	32.9	32	19.6	30.8	57
Manganese	7439-96-5	mg/kg		404	319	130	234	230	255	1230	951	441	474	722	148	2530	131	163	199	160	180	291	223
Nickel	7440-02-0	mg/kg		5.83	5.56	5.7	4.16	4.24	4.7	5.06	3.5	8.37	9.75	4.16	4.7	5.51	6.24	5.75	4.54	5.7	5.85	5.9	8.08
Selenium	7782-49-2	mg/kg		0.955	0.597 J	0.534 J	0.427 J	0.508 J	0.524 J	1.12	<0.3	0.441 J	0.392 J	0.802	0.651	1.23	0.9	0.693 J	0.779	0.718	0.647 J	1.03	1.39
Silver	7440-22-4	mg/kg		0.0942 J	0.082 J	0.0639 J	0.0678 J	<0.071	<0.08	0.152 J	<0.048	<0.058	0.128 J	0.258 J	0.0406 J	0.337 J	0.104 J	0.0792 J	0.0601 J	<0.056	<0.055	<0.07	0.123 JL
Thallium	7440-28-0	mg/kg		<0.12	<0.12	<0.11	<0.097	0.167 J	<0.14	<0.096	<0.084	0.297 J	<0.094	0.124 J	0.0892 J	0.21 J	0.103 J	<0.11	0.0825 J	0.111 J	0.119 J	0.161 J	0.126 J
Vanadium	7440-62-2	mg/kg		11.8	12.8	11.8	8.15	12.4	11.1	11.8	9.24	10.7	11	9.79	11	12.8	13.7	12.4	10.8	11.9	11.6	11.9	14.1
Zinc	7440-66-6	mg/kg		250	192	197	364	171	193	239	55.3	35.2	198	124	111	408	347	211	105	81.4	126	185	353
Mercury	7439-97-6	mg/kg		0.178	0.104	0.505	0.259	0.0784	0.133	0.258	0.0835	0.0154	0.105	0.097	0.0288	0.212	0.358	0.234	0.183	0.0642	0.0913	0.4	0.533
Cyanide	57-12-5	mg/kg		<1.1	<1.1	<1.1	1.75 J	<1.2	3.03 J	<0.93	<0.78	1.28 J	<0.91	<0.95	0.673 J	<0.93	<0.94	<0.96	<0.76	<0.9	<0 88	<1.2	<1
PESTICIDES AND PCBS																							
4,4´-DDD	72-54-8	mg/kg		<0.0095	<0.0095	<0.0009	<0.0077	<0.01	<0.011	<0.0078	<0.0065	<0.0076	<0.0076	<0.008	<0.0053	<0.0078	<0.008	<0.0081	<0.0032	<0.0038	<0.0037	<0.005	0.012
4,4´-DDE	72-55-9	mg/kg		<0.0095	<0.0095	<0.0009	<0.0077	<0.01	<0.011	<0.0078	<0.0065	<0.0076	<0.0076	<0.008	<0.0053	<0.0078	<0.008	<0.0081	<0.0032	<0.0038	<0.0037	<0.005	<0.00085
4 4´-DDT	50-29-3	mg/kg		<0.0095	<0.0095	<0.0009 JL	<0.0077	<0.01	<0.011	<0.0078	<0.0065	<0.0076	<0.0076	<0.008	<0.0053	<0.0078	<0.008	<0.0081	<0.0032	<0.0038	<0.0037	<0.005	<0.00085 JH
Aldrin	309-00-2	mg/kg		<0.0057	<0.0057	<0.00054	<0.0046	<0.006	<0.0068	<0.0047	<0.0039	<0.0046	<0.0046	<0.0048	<0.0032	<0.0047	<0.0048	<0.0049	<0.0019	<0.0023	<0.0022	<0.003	<0.00051 J
alpha-BHC	319-84-6	mg/kg		<0.0057	<0.0057	<0.00054	<0.0046	<0.006	<0.0068	<0.0047	<0.0039	0.027 J	<0.0046	<0.0048	<0.0032	<0.0047	<0.0048	<0.0049	<0.0019	<0.0023	<0.0022	<0.003	<0.00051
alpha-Chlordane	5103-71-9	mg/kg		<0.0038	<0.0038	<0.00036	<0.0031	<0.004	<0.0045	<0.0031	<0.0026	<0.003	<0.0031	<0.0032	<0.0021	<0.0031	<0.0032	<0.0032	<0.0013	<0.0015	0.011 J	<0.002	<0.00034
beta-BHC	319-85-7	mg/kg		<0.0057	<0.0057	0.015 J	<0.0046	<0.006	<0.0068	<0.0047	<0.0039	<0.0046	<0.0046	<0.0048	<0.0032	<0.0047	<0.0048	<0.0049	<0.0019	<0.0023	<0.0022	<0.003	<0.00051
delta-BHC	319-86-8	mg/kg		<0.0038	<0.0038	<0.00036	<0.0031	<0.004	<0.0045	<0.0031	<0.0026	0.029 J	<0.0031	<0.0032	<0.0021	<0.0031	<0.0032	<0.0032	<0.0013	<0.0015	<0.0015	<0.002	<0.00034
Dieldrin	60-57-1	mg/kg		<0.0095	<0.0095	<0.0009	<0.0077	<0.01	<0.011	<0.0078	<0.0065	<0.0076	<0.0076	<0.008	<0.0053	<0.0078	<0.008	<0.0081	<0.0032	<0.0038	<0.0037	<0.005	<0.00085
Endosulfan I	959-98-8	mg/kg		<0.0057	<0.0057	<0.00054	<0.0046	<0.006	<0.0068	<0.0047	<0.0039	<0.0046	<0.0046	<0.0048	<0.0032	<0.0047	<0.0048	<0.0049	<0.0019	<0.0023	<0.0022	<0.003	<0.00051
Endosulfan II	33213-65-9	mg/kg		<0.011	<0.011	<0.0011	<0.0093	<0.012	<0.014	<0.0094	<0.0079	<0.0091	<0.0092	<0.0096	<0.0063	<0.0094	<0.0095	<0.0097	<0.0039	<0.0046	<0.0045	<0.006	<0.001
Endosulfan sulfate	1031-07-8	mg/kg		<0.011	<0.011	0.0038 J	<0.0093	<0.012	<0.014	<0.0094	<0.0079	<0.0091	<0.0092	<0.0096	<0.0063	<0.0094	<0.0095	<0.0097	<0.0039	<0.0046	<0.0045	<0.006	<0.001 J
Endrin	72-20-8	mg/kg		<0.011	<0.011	0.011 J	<0.0093	<0.012	<0.014	<0.0094	<0.0079	<0.0091	<0.0092	<0.0096	<0.0063	<0.0094	<0.0095	<0.0097	<0.0039	<0.0046	<0.0045	<0.006	<0.001
Endrin aldehyde	7421-93-4	mg/kg		<0.011	<0.011	<0.0011 JL	<0.0093	<0.012	<0.014	<0.0094	<0.0079	<0.0091	<0.0092	<0.0096	<0.0063	<0.0094	<0.0095	<0.0097	<0.0039	<0.0046	<0.0045	<0.006	<0.001
gamma-BHC	58-89-9	mg/kg		<0.0038	<0.0038	<0.00036	<0.0031	<0.004	<0.0045	<0.0031	0.017 J	<0.003	<0.0031	<0.0032	<0.0021	<0.0031	<0.0032	<0.0032	<0.0013	<0.0015	<0.0015	<0.002	<0.00034
gamma-Chlordane	5103-74-2	mg/kg		<0.0038	<0.0038	<0.00036	<0.0031	<0.004	<0.0045	<0.0031	<0.0026	<0.003	0.014 J	<0.0032	<0.0021	<0.0031	<0.0032	<0.0032	<0.0013	<0.0015	<0.0015	<0.002	<0.00034
Heptachlor	76-44-8	mg/kg		<0.0057	<0.0057	<0.00054	<0.0046	<0.006	<0.0068	<0.0047	0.011 J	0.023 J	<0.0046	<0.0048	<0.0032	<0.0047	<0.0048	<0.0049	<0.0019	<0.0023	<0.0022	<0.003	<0.00051
Heptachlor epoxide	1024-57-3	mg/kg		<0.0057	<0.0057	<0.00054	<0.0046	<0.006	<0.0068	<0.0047	<0.0039	<0.0046	<0.0046	<0.0048	<0.0032	<0.0047	<0.0048	<0.0049	<0.0019	<0.0023	<0.0022	<0.003	<0.00051
Methoxychlor	72-43-5	mg/kg		<0.065	<0.065	<0.0061	<0.052	<0.068	<0.077	<0.053	<0.045	<0.052	<0.052	<0.055	<0.036	<0.053	<0.054	<0.055	<0.022	<0.026	<0.025	<0.034	<0.0058
Toxaphene	8001-35-2	mg/kg		<0.072	<0.072	<0.0069	<0.059	<0.076	<0.086	<0.059	<0.05	<0.058	<0.058	<0.061	<0.04	<0.059	<0.06	<0.061	<0.025	<0.029	<0.028	<0.038	<0.0065
Aroclor 1016	12674-11-2	mg/kg		<0.0046	<0.0046	<0.0043	<0.0037	<0.0048	<0.0054	<0.0037	<0.0031	<0.0037	<0.0037	<0.0039	<0.0025	<0.0038	<0.0038	<0.0039	<0.0031	<0.0037	<0.0036	<0.0048	<0.0041
Aroclor 1221	11104-28-2	mg/kg		<0.0046	<0.0046	<0.0043	<0.0037	<0.0048	<0.0054	<0.0037	<0.0031	<0.0037	<0.0037	<0.0039	<0.0025	<0.0038	<0.0038	<0.0039	<0.0031	<0.0037	<0.0036	<0.0048	<0.0041
Aroclor 1232	11141-16-5	mg/kg		<0.0046	<0.0046	<0.0043	<0.0037	<0.0048	<0.0054	<0.0037	<0.0031	<0.0037	<0.0037	<0.0039	<0.0025	<0.0038	<0.0038	<0.0039	<0.0031	<0.0037	<0.0036	<0.0048	<0.0041
Aroclor 1242	53469-21-9	mg/kg		<0.0046	<0.0046	<0.0043	<0.0037	<0.0048	<0.0054	<0.0037	<0.0031	<0.0037	<0.0037	<0.0039	<0.0025	<0.0038	<0.0038	<0.0039	<0.0031	<0.0037	<0.0036	<0.0048	<0.0041
Aroclor 1248	12672-29-6	mg/kg		<0.0046	<0.0046	<0.0043	<0.0037	<0.0048	<0.0054	<0.0037	<0.0031	<0.0037	<0.0037	<0.0039	<0.0025	<0.0038	<0.0038	<0.0039	<0.0031	<0.0037	<0.0036	<0.0048	<0.0041
Aroclor 1254	11097-69-1	mg/kg		<0.0046	<0.0046	<0.0043	<0.0037	<0.0048	<0.0054	<0.0037	<0.0031	<0.0037	<0.0037	<0.0039	<0.0025	<0.0038	<0.0038	<0.0039	<0.0031	<0.0037	<0.0036	<0.0048	<0.0041
Aroclor 1260	11096-82-5	mg/kg		<0.0034	<0.0034	<0.0032	<0.0028	<0.0036	<0.0041	<0.0028	<0.0024	<0.0027	<0.0028	<0.0029	0.011 J	<0.0028	<0.0029	<0.0029	<0.0023	<0.0028	<0.0027	<0.0036	<0.003
Total PCBs	N/A	mg/kg		All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	0.0185	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND
VOCS																							
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1 1 1-Trichloroethane	71-55-6	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1 1 2-Trichloroethane	79-00-5	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1 1-Dichloroethane	75-34-3	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1,1-Dichloroethene	75-35-4	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1 2 4-Trichlorobenzene	120-82-1	mg/kg		<0.0012	<0.0011	<0.0011	<0.00093	<0.0012	<0.0014	<0.00094	<0.00079	<0.00092	<0.00092	<0.00097	<0.00061	<0.00094	<0.00096	<0.00097	<0.00078	<0.00092	<0.0009	<0.0012	<0.001 JL
1 2 4-Trimethylbenzene	95-63-6	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1,2-Dibromoethane	106-93-4	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1,2-Dichlorobenzene	95-50-1	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1 2-Dichloroethane	107-06-2	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1,2-Dichloropropane	78-87-5	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1,3,5-Trimethylbenzene	108-67-8	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1 3-Dichlorobenzene	541-73-1	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
1,4-Dichlorobenzene	106-46-7	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
2-Butanone	78-93-3	mg/kg		<0.0027	<0.0027	<0.0025	<0.0022	<0.0028	<0.0032	<0.0022	<0.0018	<0.0021	<0.0022	<0.0023	<0.0014	<0.0022	<0.0022	<0.0023	<0.0018	<0.0021	<0.0021	<0.0028	<0.0024
2-Hexanone	591-78-6	mg/kg		<0.0019	<0.0019	<0.0018	<0.0015	<0.002	<0.0023	<0.0016	<0.0013	<0.0015	<0.0015	<0.0016	<0.001	<0.0016	<0.0016	<0.0016	<0.0013	<0.0015	<0.0015	<0.002	<0.0017
4-Methyl-2-pentanone	108-10-1	mg/kg		<0.0019	<0.0019	<0.0018	<0.0015	<0.002	<0.0023	<0.0016	<0.0013	<0.0015	<0.0015	<0.0016	<0.001	<0.0016	<0.0016	<0.0016	<0.0013	<0.0015	<0.0015	<0.002	<0.0017
Acetone	67-64-1	mg/kg		<0.0038	0.015 U	0.014 U	0.0031 U	0.0088 U	0.011 U	0.015 U	<0.0026	0.0055 U	0.011 U	0.023 U	<0.002	0.012 U	<0.0032	0.015 U	<0.0026	<0.0031	<0.003	<0.004	<0.0034
Benzene	71-43-2	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Bromodichloromethane	75-27-4	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Bromoform	75-25-2	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Bromomethane	74-83-9	mg/kg		<0.0019	<0.0019	<0.0018	<0.0015	<0.002	<0.0023	<0.0016	<0.0013	<0.0015	<0.0015	<0.0016	<0.001	<0.0016	<0.0016	<0.0016	<0.0013	<0.0015	<0.0015	<0.002	<0.0017
Carbon disulfide	75-15-0	mg/kg		<0.0019	0.0025 J	<0.0018	<0.0015	0.0052 J	0.013 J	0.0035 J	<0.0013	<0.0015	<0.0015	<0.0016	<0.001	<0.0016	<0.0016	<0.0016	<0.0013	0.0099 J	<0.0015	<0.002	<0.0017
Carbon tetrachloride	56-23-5	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Chlorobenzene	108-90-7	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Chloroethane	75-00-3	mg/kg		<0.0019	<0.0019	<0.0018	<0.0015	<0.002	<0.0023	<0.0016	<0.0013	<0.0015	<0.0015	<0.0016	<0.001	<0.0016	<0.0016	<0.0016	<0.0013	<0.0015	<0.0015	<0.002	<0.0017
Chloroform	67-66-3	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Chloromethane	74-87-3	mg/kg		<0.0019	<0.0019	<0.0018	<0.0015	<0.002	<0.0023	<0.0016	<0.0013	<0.0015	<0.0015	<0.0016	<0.001	<0.0016	<0.0016	<0.0016	<0.0013	<0.0015	<0.0015	<0.002	<0.0017
cis-1 2-Dichloroethene	156-59-2	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
cis-1,3-Dichloropropene	10061-01-5	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Cyclohexane	110-82-7	mg/kg		<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not Analyzed

Sediment Analytical Data Summary
East Ditch
Brine Service Company Superfund Site

	Sample Location		EDDSD01	EDDSD02	EDDSD03	EDDSD04	EDDSD05	EDDSD05	EDDSD06	EDDSD07	EDDSD08	EDDSD09	EDDSD10	EDNSS01	EDNSD02	EDNSD03	EDNSD03	EDNSD04	EDNSD05	EDNSD06	EDNSD07	EDNSD08
	Depth Interval		0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
	Sample Date		11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/17/2010	11/17/2010	11/17/2010	11/17/2010	11/17/2010	11/17/2010	11/17/2010	11/17/2010	11/17/2010
Analyte	CAS No.	Units																				
Dibromochloromethane	124-48-1	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Dichlorodifluoromethane	75-71-8	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Ethylbenzene	100-41-4	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Isopropylbenzene	98-82-8	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	0.004 J	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	0.0052 J	<0.00085
Methyl acetate	79-20-9	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Methylcyclohexane	108-87-2	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Methylene chloride	75-09-2	mg/kg	<0.0019	<0.0019	<0.0018	<0.0015	<0.002	<0.0023	<0.0016	<0.0013	<0.0015	<0.0015	<0.0016	<0.001	<0.0016	<0.0016	0.0017 U	0.0019 U	<0.0015	<0.0015	<0.002	<0.0017
Naphthalene	91-20-3	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	0.0019 J	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085 JL
n-Propylbenzene	103-65-1	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
sec-Butylbenzene	135-98-8	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Styrene	100-42-5	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
tert-Butylbenzene	98-06-6	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Tetrachloroethene	127-18-4	mg/kg	<0.0012	<0.0011	<0.0011	<0.00093	<0.0012	<0.0014	<0.00094	<0.00079	<0.00092	<0.00092	<0.00097	<0.00061	<0.00094	<0.00096	<0.00097	<0.00078	<0.00092	<0.0009	<0.0012	<0.001
Toluene	108-88-3	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
trans-1,2-Dichloroethene	156-60-5	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Trichloroethene	79-01-6	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Trichlorofluoromethane	75-69-4	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Vinyl chloride	75-01-4	mg/kg	<0.00096	<0.00095	<0.0009	<0.00077	<0.001	<0.0011	<0.00078	<0.00066	<0.00076	<0.00077	<0.00081	<0.00051	<0.00079	<0.0008	<0.00081	<0.00065	<0.00077	<0.00075	<0.001	<0.00085
Xylenes Total	1330-20-7	mg/kg	<0.0029	<0.0029	<0.0027	<0.0023	<0.003	<0.0034	<0.0024	<0.002	<0.0023	<0.0023	<0.0024	<0.0015	<0.0024	<0.0024	<0.0024	<0.0024	<0.002	<0.0023	<0.0022	<0.0026
SVOCS																						
1,1´-Biphenyl	92-52-4	mg/kg	<0.056	<0.055	<0.0052	<0.045 JL	<0.058	<0.066	<0.045 JL	<0.038	<0.0044	<0.044 JL	<0.0047	<0.03	<0.0046	<0.0046 JL	<0.0047 JL	<0.0038	<0.0044 JL	<0.0043 JL	<0.0058 JL	<0.0049
1-Methylnaphthalene	90-12-0	mg/kg	<0.044	<0.044	<0.0041	<0.036 JL	<0.046	<0.052	<0.036 JL	<0.03	<0.0035	<0.035 JL	0.0043 J	<0.024	<0.0036	<0.0036 JL	<0.0037 JL	<0.003	<0.0035 JL	<0.0034 JL	<0.0046 JL	<0.0039
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.054 JL	<0.053	<0.005	<0.043 JL	<0.056	<0.064	<0.044 JL	<0.037	<0.0043	<0.043 JL	<0.0045	<0.029	<0.0044	<0.0044 JL	<0.0045 JL	<0.0036	<0.0043 JL	<0.0042 JL	<0.0056 JL	<0.0048
2,4,6-Trichlorophenol	88-06-2	mg/kg	<0.063 JL	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	<0.005	<0.051 JL	<0.0053	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
2 4-Dichlorophenol	120-83-2	mg/kg	<0.042 JL	<0.042	<0.0039	<0.034 JL	<0.044	<0.05	<0.034 JL	<0.029	<0.0034	<0.034 JL	<0.0035	<0.023	<0.0035	<0.0035 JL	<0.0036 JL	<0.0029	<0.0034 JL	<0.0033 JL	<0.0044 JL	<0.0037
2 4-Dimethylphenol	105-67-9	mg/kg	<0.063 JL	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	<0.005	<0.051 JL	<0.0053	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
2,4-Dinitrophenol	51-28-5	mg/kg	<0.063 JL	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	<0.005	<0.051 JL	<0.0053	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
2 4-Dinitrotoluene	121-14-2	mg/kg	<0.063	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	<0.005	<0.051 JL	<0.0053	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.061	<0.061	<0.0057	<0.049 JL	<0.064	<0.073	<0.05 JL	<0.042	<0.0049	<0.049 JL	<0.0051	<0.034	<0.005	<0.0051 JL	<0.0052 JL	<0.0041	<0.0049 JL	<0.0048 JL	<0.0064 JL	<0.0054
2-Chloronaphthalene	91-58-7	mg/kg	<0.079	<0.078	<0.0074	<0.063 JL	<0.082	<0.093	<0.064 JL	<0.054	<0.0062	<0.063 JL	<0.0066	<0.043	<0.0064	<0.0065 JL	<0.0066 JL	<0.0053	<0.0063 JL	<0.0061 JL	<0.0082 JL	<0.007
2-Chlorophenol	95-57-8	mg/kg	<0.061 JL	<0.061	<0.0057	<0.049 JL	<0.064	<0.073	<0.05 JL	<0.042	<0.0049	<0.049 JL	<0.0051	<0.034	<0.005	<0.0051 JL	<0.0052 JL	<0.0041	<0.0049 JL	<0.0048 JL	<0.0064 JL	<0.0054
2-Methylnaphthalene	91-57-6	mg/kg	<0.052	<0.051	0.0063 J	<0.042 JL	<0.054	<0.061	<0.042 JL	<0.035	<0.0041	<0.041 JL	0.0088 J	<0.028	<0.0042	<0.0043 JL	<0.0044 JL	<0.0035	<0.0041 JL	<0.004 JL	<0.0054 JL	<0.0046
2-Methylphenol	95-48-7	mg/kg	<0.056 JL	<0.055	<0.0052	<0.045 JL	<0.058	<0.066	<0.045 JL	<0.038	<0.0044	<0.044 JL	<0.0047	<0.03	<0.0046	<0.0046 JL	<0.0047 JL	<0.0038	<0.0044 JL	<0.0043 JL	<0.0058 JL	<0.0049
2-Nitroaniline	88-74-4	mg/kg	<0.063	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	<0.005	<0.051 JL	<0.0053	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
2-Nitrophenol	88-75-5	mg/kg	<0.088 JL	<0.087	<0.0083	<0.071 JL	<0.092	<0.1	<0.072 JL	<0.06	<0.007	<0.07 JL	<0.0074	<0.048	<0.0072	<0.0073 JL	<0.0074 JL	<0.006	<0.0071 JL	<0.0069 JL	<0.0092 JL	<0.0078
3&4-Methylphenol	106-44-5	mg/kg	<0.054 JL	<0.053	<0.005	<0.043 JL	<0.056	<0.064	<0.044 JL	<0.037	<0.0043	<0.043 JL	<0.0045	<0.029	<0.0044	<0.0044 JL	<0.0045 JL	<0.0036	<0.0043 JL	<0.0042 JL	<0.0056 JL	0.0087 J
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.059	<0.059	<0.0056	<0.048 JL	<0.062	<0.07	<0.048 JL	<0.041	<0.0047	<0.047 JL	<0.005	<0.033	<0.0049	<0.0049 JL	<0.005 JL	<0.004	<0.0048 JL	<0.0046 JL	<0.0062 JL	<0.0053 JL
3-Nitroaniline	99-09-2	mg/kg	<0.05	<0.049	<0.0047	<0.04 JL	<0.052	<0.059	<0.041 JL	<0.034	<0.004	<0.04 JL	<0.0042	<0.027	<0.0041	<0.0041 JL	<0.0042 JL	<0.0034	<0.004 JL	<0.0039 JL	<0.0052 JL	<0.0044
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.063 JL	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	<0.005	<0.051 JL	<0.0053	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.063	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	<0.005	<0.051 JL	<0.0053	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.063 JL	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	<0.005	<0.051 JL	<0.0053	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
4-Chloroaniline	106-47-8	mg/kg	<0.042	<0.042	<0.0039 JL	<0.034 JL	<0.044	<0.05	<0.034 JL	<0.029	<0.0034	<0.034 JL	<0.0035	<0.023	<0.0035	<0.0035 JL	<0.0036 JL	<0.0029	<0.0034 JL	<0.0033 JL	<0.0044 JL	<0.0037 JL
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.042	<0.042	<0.0039	<0.034 JL	<0.044	<0.05	<0.034 JL	<0.029	<0.0034	<0.034 JL	<0.0035	<0.023	<0.0035	<0.0035 JL	<0.0036 JL	<0.0029	<0.0034 JL	<0.0033 JL	<0.0044 JL	<0.0037
4-Nitroaniline	100-01-6	mg/kg	<0.063	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	<0.005	<0.051 JL	<0.0053	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
4-Nitrophenol	100-02-7	mg/kg	<0.073 JL	<0.072	<0.0068	<0.059 JL	<0.076	<0.086	<0.059 JL	<0.05	<0.0058	<0.058 JL	<0.0061	<0.04	<0.006	<0.006 JL	<0.0061 JL	<0.0049	<0.0058 JL	<0.0057 JL	<0.0076 JL	<0.0065
Acenaphthene	83-32-9	mg/kg	<0.042	<0.042	<0.0039	<0.034 JL	<0.044	<0.05	<0.034 JL	0.16	<0.0034	0.3 JL	0.0072 J	<0.023	<0.0035	0.0047 JL	<0.0036 JL	<0.0029	<0.0034 JL	<0.0033 JL	<0.0044 JL	<0.0037
Acenaphthylene	208-96-8	mg/kg	<0.042	<0.042	<0.0039	<0.034 JL	<0.044	<0.05	<0.034 JL	<0.029	<0.0034	0.043 JL	0.0086 J	<0.023	<0.0035	0.0055 JL	0.011 JL	<0.0029	<0.0034 JL	<0.0033 JL	<0.0044 JL	<0.0037
Acetophenone	98-86-2	mg/kg	<0.046	<0.046	0.014	<0.037 JL	<0.048	<0.054	<0.037 JL	<0.031	<0.0037	<0.037 JL	<0.0039	<0.025	0.39	<0.0038 JL	<0.0039 JL	<0.0031	<0.0037 JL	<0.0036 JL	<0.0048 JL	<0.0041
Anthracene	120-12-7	mg/kg	<0.042	<0.042	0.0097 J	<0.034 JL	<0.044	<0.05	0.046 JL	0.31	0.0071 J	0.6 JL	0.029	0.074	0.024	0.019 JL	0.021 JL	0.0047 J	0.0051 JL	0.0051 JL	0.0045 JL	0.0048 J
Benz(a)anthracene	56-55-3	mg/kg	<0.054	0.06 J	0.049	0.12 JL	<0.056	<0.064	0.15 JL	2.5	0.053	5.8	0.36	0.049 J	0.04	0.059 JL	0.046 JL	0.0096	0.013 JL	0.012 JL	0.0098 JL	0.024
Benzaldehyde	100-52-7	mg/kg	<0.088 JL	<0.087 JL	0.0098 JL	<0.071 JL	<0.092 JL	<0.1 JL	<0.072 JL	<0.06 JL	<0.007 JL	<0.07 JL	<0.0074 JL	<0.048 JL	0.14 JL	<0.0073 JL	0.018 JL	<0.006 JL	<0.0071 JL	<0.0069 JL	<0.0092 JL	0.0083 J
Benzo(a)pyrene	50-32-8	mg/kg	<0.044	0.065 J	0.047	0.12 JL	<0.046	<0.052	0.17 JL	2	0.063	5 JL	0.49	<0.024	<0.0036	0.053 JL	0.045 JL	0.012	0.015 JL	<0.0034 JL	<0.0046 JL	0.026
Benzo(b)fluoranthene	205-99-2	mg/kg	<0.063	0.067 J	0.045	0.14 JL	<0.066	<0.075	0.2 JL	1.8	0.052	4.6 JL	0.48	<0.035	0.027	0.056 JL	0.057 JL	0.011	0.014 JL	0.014 JL	0.014 JL	0.048
Benzo(g h i)perylene	191-24-2	mg/kg	<0.056	<0.055	0.046	0.094 JL	<0.058	<0.066	0.14 JL	1.3	0.047	3.1 JL	0.35	<0.03	0.17	0.049 JL	0.052 JL	0.016	0.013 JL	0.015 JL	<0.0058 JL	0.023
Benzo(k)fluoranthene	207-08-9	mg/kg	<0.063	0.066 J	0.059	0.094 JL	<0.066	<0.075	0.14 JL	1.7	0.073	4	0.34	<0.035	0.036	0.068 JL	0.068 JL	0.014	0.019 JL	0.022 JL	0.012 JL	0.016
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.046	<0.046	<0.0043	<0.037 JL	<0.048	<0.054	<0.037 JL	<0.031	<0.0037	<0.037 JL	<0.0039	<0.025	<0.0038	<0.0038 JL	<0.0039 JL	<0.0031	<0.0037 JL	<0.0036 JL	<0.0048 JL	<0.0041
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.054	<0.053	<0.005	<0.043 JL	<0.056	<0.064	<0.044 JL	<0.037	<0.0043	<0.043 JL	<0.0045	<0.029	<0.0044	<0.0044 JL	<0.0045 JL	<0.0036	<0.0043 JL	<0.0042 JL	<0.0056 JL	<0.0048
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.052	<0.051	<0.0048	<0.042 JL	<0.054	<0.061	<0.042 JL	<0.035	<0.0041	<0.041 JL	<0.0043	<0.028	<0.0042	<0.0043 JL	<0.0044 JL	<0.0035	<0.0041 JL	<0.004 JL	<0.0054 JL	<0.0046
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	<0.13	<0.13	0.098	0.13 JL	<0.13	<0.15	<0.1 JL	<0.087	0.028	<0.1 JL	0.22	<0.069	0.026	0.023 JL	0.11 JL	0.022	0.024 JL	0.083 JL	0.039 JL	0.066
Butyl benzyl phthalate	85-68-7	mg/kg	<0.048	<0.048	0.0063 J	<0.039 JL	<0.05	<0.057	<0.039 JL	<0.033	<0.0038	<0.038 JL	<0.004	<0.026	<0.0039	<0.004 JL	<0.004 JL	<0.0032	<0.0038 JL	<0.0037 JL	<0.005 JL	0.013
Caprolactam	105-60-2	mg/kg	<0.046	<0.046	<0.0043	<0.037 JL	<0.048	<0.054	<0.037 JL	<0.031	<0.0037	<0.037 JL	<0.0039	<0.025	<0.0038	<0.0038 JL	<0.0039 JL	<0.0031	0.027 JL	<0.0036 JL	<0.0048 JL	<0.0041
Carbazole	86-74-8	mg/kg	<0.042	<0.042	0.0075 J	<0.034 JL	<0.044	<0.05	0.043 JL	0.35	<0.0034	0.77 JL	0.026	<0.023	<0.0035	0.011 JL	0.023 JL	0.0039 J	0.004 JL	0.0033 JL	<0.0044 JL	0.0046 J
Chrysene	218-01-9	mg/kg	<0.056	0.078 J	0.055	0.16 JL	<0.058	<0.066	0.21 JL	2.9	0.077	7.1	0.52	0.084	0.05	0.07 JL	0.08 JL	0.012	0.017 JL	0.023 JL	0.014 JL	0.031
Dibenz(a,h)anthracene	53-70-3	mg/kg	<0.042	<0.042	0.015	<0.034 JL	<0.044	<0.05	<0.034 JL	0.37	<0.0034	1.1 JL	0.13	<0.023	<0.0035	<0.0035 JL	<0.0036 JL	<0.0029	<0.0034 JL	<0.0033 JL	<0.0044 JL	0.011 J
Dibenzofuran	132-64-9	mg/kg	<0.042	<0.042	<0.0039	<0.034 JL	<0.044	<0.05	<0.034 JL	0.062 J	<0.0034	0.11 JL	0.0054 J	<0.023	<0.0035	<0.0035 JL	<0.0036 JL	<0.0029	<0.0034 JL	<0.0033 JL	<0.0044 JL	<0.0037
Diethyl phthalate	84-66-2	mg/kg	<0.063	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	0.0083 J	<0.051 JL	0.009 J	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
Dimethyl phthalate	131-11-3	mg/kg	<0.046	<0.046	<0.0043	<0.037 JL	<0.048	<0.054	<0.037 JL	<0.031	<0.0037	<0.037 JL	<0.0039	<0.025	<0.0038	<0.0038 JL	<0.0039 JL	<0.0031	<0.0037 JL	<0.0036 JL	<0.0048 JL	<0.0041
Di-n-butyl phthalate	84-74-2	mg/kg	<0.048	<0.048	0.0052 J	<0.039 JL	<0.05	<0.057	<0.039 JL	<0.033	<0.0038	<0.038 JL	<0.004	<0.026	<0.0039	<0.004 JL	<0.004 JL	<0.0032	<0.0038 JL	<0.0037 JL	<0.005 JL	0.0052 J
Di-n-octyl phthalate	117-84-0	mg/kg	<0.056	<0.055	0.085	<0.045 JL	<0.058	<0.066	<0.045 JL	<0.038	<0.0044	<0.044 JL	<0.0047	<0.03	<0.0046	<0.0046 JL	<0.0047 JL	<0.0038	<0.0044 JL	<0.0043 JL	<0.0058 JL	<0.0049
Fluoranthene	206-44-0	mg/kg	0.046 J	0.098 J	0.067	0.18 JL	0.066 J	0.084 J	0.35 JL	6.3	0.12	12	0.96	0.054 J	0.027	0.13 JL	0.068 JL	0.017	0.023 JL	0.046 JL	0.018 JL	0.041
Fluorene	86-73-7	mg/kg	<0.042	<0.042	<0.0039	<0.034 JL	<0.044	<0.05	<0.034 JL	0.17	<0.0034	0.27 JL	0.0097 J	<0.023	<0.0035	0.0057 JL	<0.0036 JL	<0.0029	<0.0034 JL	<0.0033 JL	<0.0044 JL	<0.0037
Hexachlorobenzene	118-74-1	mg/kg	<0.05	<0.049	<0.0047	<0.04 JL	<0.052	<0.059	<0.041 JL	<0.034	<0.004	<0.04 JL	<0.0042	<0.027	<0.0041	<0.0041 JL	<0.0042 JL	<0.0034	<0.004 JL	<0.0039 JL	<0.0052 JL	<0.0044
Hexachlorobutadiene	87-68-3	mg/kg	<0.084	<0.084	<0.0079	<0.068 JL	<0.088	<0.1	<0.069 JL	<0.058	<0.0067	<0.067 JL	<0.0071	<0.046	<0.0069	<0.007 JL	<0.0071 JL	<0.0057	<0.0068 JL	<0.0066 JL	<0.0088 JL	<0.0075
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.069	<0.068	R	<0.056 JL	<0.072	<0.082	<0.056 JL	<0.047	<0.0055	<0.055 JL	<0.0058	<0.038	<0.0056	<0.0057 JL	<0.0058 JL	<0.0047	<0.0055 JL	<0.0054 JL	<0.0072 JL	R
Hexachloroethane	67-72-1	mg/kg	<0.075	<0.074	<0.007	<0.06 JL	<0.078	<0.089	<0.061 JL	<0.051	<0.0059	<0.06 JL	<0.0063	<0.041	<0.0061	<0.0062 JL	<0.0063 JL	<0.0051	<0.006 JL	<0.0058 JL	<0.0078 JL	<0.0066 JL
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	<0.067	<0.067	0.032	0.086 JL	<0.07	<0.079	0.18 JL	1.4	0.048	3.5 JL	0.39	<0.037	<0.0055	0.05 JL	0.038 JL	0.0088	0.011 JL	0.013 JL	<0.007 JL	0.023
Isophorone	78-59-1	mg/kg	<0.057	<0.057	<0.0054	<0.046 JL	<0.06	<0.068	<0.047 JL	<0.039	<0.0046	<0.046 JL	<0.0048	<0.032	<0.0047	<0.0048 JL	<0.0049 JL	<0.0039	<0.0046 JL	<0.0045 JL	<0.006 JL	<0.0051
Naphthalene	91-20-3	mg/kg	<0.063	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	<0.005	<0.051 JL	<0.0053	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
Nitrobenzene	98-95-3	mg/kg	<0.063	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	<0.005	<0.051 JL	<0.0053	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.077	<0.076	<0.0072	<0.062 JL	<0.08	<0.091	<0.062 JL	<0.052	<0.0061	<0.061 JL	<0.0064	<0.042	<0.0063	<0.0063 JL	<0.0065 JL	<0.0052	<0.0061 JL	<0.006 JL	<0.008 JL	<0.0068
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.042	<0.042	<0.0039	<0.034 JL	<0.044	<0.05	<0.034 JL	<0.029	<0.0034	<0.034 JL	<0.0035	<0.023	<0.0035	<0.0035 JL	<0.0036 JL	<0.0029	<0.0034 JL	<0.0033 JL	<0.0044 JL	<0.0037

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not Analyzed

Sediment Analytical Data Summary
East Ditch
Brine Service Company Superfund Site

Analyte	CAS No.	Units	Sample Location	EDDSD01	EDDSD02	EDDSD03	EDDSD04	EDDSD05	EDDSD05	EDDSD06	EDDSD07	EDDSD08	EDDSD09	EDDSD10	EDNSS01	EDNSD02	EDNSD03	EDNSD03	EDNSD04	EDNSD05	EDNSD06	EDNSD07	EDNSD08
			Depth Interval	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
			Sample Date	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/16/2010	11/17/2010	11/17/2010	11/17/2010	11/17/2010	11/17/2010	11/17/2010	11/17/2010	11/17/2010	11/17/2010
Pentachlorophenol	87-86-5	mg/kg		<0.054 JL	<0.053 JL	<0.005 JL	<0.043 JL	<0.056 JL	<0.064 JL	<0.044 JL	<0.037 JL	<0.0043 JL	<0.043 JL	<0.0045 JL	<0.029 JL	<0.0044 JL	<0.0044 JL	<0.0045 JL	<0.0036 JL	<0.0043 JL	<0.0042 JL	<0.0056 JL	<0.0048 JL
Phenanthrene	85-01-8	mg/kg		<0.057	<0.057	0.037	<0.046 JL	<0.06	<0.068	0.18 JL	2.6	0.036	4.3 JL	0.15	<0.032	0.044	0.057 JL	0.025 JL	0.0082 J	0.011 JL	0.015 JL	0.01 JL	0.019
Phenol	108-95-2	mg/kg		<0.063 JL	<0.063	<0.0059	<0.051 JL	<0.066	<0.075	<0.051 JL	<0.043	<0.005	<0.051 JL	<0.0053	<0.035	<0.0052	<0.0052 JL	<0.0053 JL	<0.0043	<0.0051 JL	<0.0049 JL	<0.0066 JL	<0.0056
Pyrene	129-00-0	mg/kg		<0.042	0.11 J	0.06	0.17 JL	0.051 J	0.076 J	0.3 JL	4.6	0.095	9.1	0.75	0.09	0.04	0.12 JL	0.075 JL	0.016	0.024 JL	0.033 JL	0.023 JL	0.039
Low Molecular Weight PAHs	NA	mg/kg		0.34	0.339	0.0706	0.275	0.356	0.404	0.421	3.347	0.0624	5.605	0.2186	0.2049	0.0879	0.1014	0.0739	0.0294	0.0355	0.0389	0.0397	0.0451
High Molecular Weight PAHs	NA	mg/kg		0.284	0.453	0.293	0.784	0.321	0.392	1.214	18.67	0.4114	40.1	3.21	0.324	0.1641	0.4355	0.3176	0.0695	0.0954	0.1207	0.0738	0.172
Total PAHs	NA	mg/kg		0.917	1.091	0.5497	1.509	0.983	1.143	2.331	28.247	0.6973	60.94	4.9929	0.6899	0.4941	0.7635	0.6102	0.1517	0.1914	0.227	0.1569	0.331
				EDDSD01	EDDSD02	EDDSD03	EDDSD04	EDDSD05	EDDSD05	EDDSD06	EDDSD07	EDDSD08	EDDSD09	EDDSD10	EDNSS01	EDNSD02	EDNSD03	EDNSD03	EDNSD04	EDNSD05	EDNSD06	EDNSD07	EDNSD08

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not Analyzed

Sediment Analytical Data Summary
East Ditch
Brine Service Company Superfund Site

Analyte	CAS No.	Units	Sample Location / Depth Interval / Sample Date	EDSSD01 0-0.5 ft 11/18/2010	EDSSD01 0-0.5 ft 11/18/2010	EDSSD02 0-0.5 ft 11/18/2010	EDSSD03 0-0.5 ft 11/18/2010	EDSSD04 0-0.5 ft 11/18/2010	EDSSD05 0-0.5 ft 11/18/2010	EDSSD06 0-0.5 ft 11/18/2010	EDSSD07 0-0.5 ft 11/18/2010	EDSSD08 0-0.5 ft 11/18/2010	EDDSD07 0-0.5 ft 1/31/2012	EDDSD09 0-0.5 ft 1/31/2012
METALS														
Aluminum	7429-90-5	mg/kg		14200	9940	8530	5810	9130	4870	11200	8750	9920	3.17E+03	5.02E+03
Antimony	7440-36-0	mg/kg		<0.42	<0.38	<0.32	<0 28	<0.32	<0.32	<0.36	<0.33	<0.35	<0.36	<0.39
Arsenic	7440-38-2	mg/kg		3.35	2.49	3.18	2.28	2.42	2.26	2.94	2.54	2.87	2.12E+01	1.22E+01
Barium	7440-39-3	mg/kg		978	594	567	484	1250	264	395	586	674	5.72E+02	2.02E+03
Beryllium	7440-41-7	mg/kg		0.56 J	0.48 J	0.331 J	0.248 J	0.332 J	0.219 J	0.614 J	0.477 J	0.568 J	2.11E-01	3.31E-01
Cadmium	7440-43-9	mg/kg		0.352 J	0.266 J	0.192 J	0.355 J	0.333 J	0.0966 J	0.312 J	0.327 J	0.394 J	5.81E-01	2.04E+00
Chromium	7440-47-3	mg/kg		9.05	6.85	4.46	4.8	5.61	3.14	6.78	5.69	9.41	1.22E+01	8.73E+00
Cobalt	7440-48-4	mg/kg		6.52 J	3.65 J	6.82	3.21	3.96	2.89	4.55	5.12	3.9	3.35E+00	5.00E+00
Copper	7440-50-8	mg/kg		11.9	9.11	5.25	5.26	7.49	3.28	7.8	6.37	12.5	1.59E+01	9.15E+01
Lead	7439-92-1	mg/kg		33	22.8	14.1	12.6	18	6.41	11.2	14	77	1.94E+01	5.28E+01
Manganese	7439-96-5	mg/kg		514 J	253 J	559	262	314	252	253	379	280	1.22E+03	2.59E+03
Nickel	7440-02-0	mg/kg		8.46	6.06	5.03	4.26	5.69	2.98	6.93	5.44	6.47	4.35E+00	5.67E+00
Selenium	7782-49-2	mg/kg		0.757 J	0.512 J	0.371 J	0.399 J	0.501 J	<0.32	0.59 J	0.571 J	0.641 J	6.50E-01	9.68E-01
Silver	7440-22-4	mg/kg		<0.067	<0.061	<0.051	<0.045	<0.052	<0.051	0.13 J	0.161 J	0.13 J	<0.14	<0.16
Thallium	7440-28-0	mg/kg		0.268 J	0.139 J	0.0952 J	<0.079	<0.091	<0.089	0.217 J	0.234 J	0.288 J	<0.13	1.97E-01
Vanadium	7440-62-2	mg/kg		17.7	13.1	15.7	9.79	13.4	10.2	14.3	13.8	14.2	1.18E+01	1.34E+01
Zinc	7440-66-6	mg/kg		60.1	45.6	22.4	48	48.3	15.6	33.9	32.8	78.9	1.19E+02	3.42E+02
Mercury	7439-97-6	mg/kg		0.0246	0.0213	0.00735	0.0219	0.0225	0.0056	0.0143	0.0128	0.0184	1.54E-01	1.44E-01
Cyanide	57-12-5	mg/kg		<1	<0.93	<0.79	<0.75	<0.84	<0.79	<0.94	<0.88	0.99 J	---	---
PESTICIDES AND PCBS														
4,4´-DDD	72-54-8	mg/kg		<0.0043	<0.0039	<0.0034	<0.0032	<0.0035	<0.0033	<0.004	<0.0037	<0.0039	<0.0097	<0.01
4,4´-DDE	72-55-9	mg/kg		<0.0043	<0.0039	<0.0034	<0.0032	<0.0035	<0.0033	<0.004	<0.0037	<0.0039	<0.0097	<0.01
4 4´-DDT	50-29-3	mg/kg		<0.0043	<0.0039	<0.0034	<0.0032	0.024 JH	<0.0033	<0.004	<0.0037	<0.0039	<0.0097	<0.01
Aldrin	309-00-2	mg/kg		<0.0026	<0.0024	<0.002	<0.0019	<0.0021	<0.002	<0.0024	<0.0022	<0.0023	<0.0058	<0.0063
alpha-BHC	319-84-6	mg/kg		<0.0026	<0.0024	<0.002	<0.0019	<0.0021	<0.002	<0.0024	<0.0022	<0.0023	<0.0058	<0.0063
alpha-Chlordane	5103-71-9	mg/kg		<0.0017	<0.0016	<0.0013	<0.0013	<0.0014	<0.0013	<0.0016	<0.0015	<0.0015	<0.0039	<0.0042
beta-BHC	319-85-7	mg/kg		<0.0026	<0.0024	<0.002	<0.0019	0.04 JH	<0.002	<0.0024	<0.0022	<0.0023	<0.0058	<0.0063
delta-BHC	319-86-8	mg/kg		<0.0017	<0.0016	<0.0013	<0.0013	<0.0014	<0.0013	<0.0016	<0.0015	<0.0015	<0.0039	<0.0042
Dieldrin	60-57-1	mg/kg		<0.0043	<0.0039	<0.0034	<0.0032	<0.0035	<0.0033	<0.004	<0.0037	<0.0039	<0.0097	<0.01
Endosulfan I	959-98-8	mg/kg		<0.0026	<0.0024	<0.002	<0.0019	<0.0021	<0.002	<0.0024	<0.0022	<0.0023	<0.0058	<0.0063
Endosulfan II	33213-65-9	mg/kg		<0.0052	<0.0047	<0.004	<0.0038	<0.0042	<0.004	<0.0047	<0.0044	<0.0046	<0.012	<0.013
Endosulfan sulfate	1031-07-8	mg/kg		<0.0052	<0.0047	<0.004	<0.0038	<0.0042	<0.004	<0.0047	<0.0044	<0.0046	<0.012	2.30E-02
Endrin	72-20-8	mg/kg		<0.0052	<0.0047	<0.004	<0.0038	<0.0042	<0.004	<0.0047	<0.0044	<0.0046	<0.012	<0.013
Endrin aldehyde	7421-93-4	mg/kg		<0.0052	<0.0047	<0.004	<0.0038	<0.0042	<0.004	<0.0047	<0.0044	<0.0046	<0.012	<0.013
gamma-BHC	58-89-9	mg/kg		<0.0017	<0.0016	<0.0013	<0.0013	<0.0014	<0.0013	<0.0016	<0.0015	<0.0015	<0.0039	<0.0042
gamma-Chlordane	5103-74-2	mg/kg		<0.0017	<0.0016	<0.0013	<0.0013	0.028	<0.0013	<0.0016	<0.0015	<0.0015	<0.0039	<0.0042
Heptachlor	76-44-8	mg/kg		<0.0026	<0.0024	<0.002	<0.0019	<0.0021	<0.002	<0.0024	<0.0022	<0.0023	<0.0058	<0.0063
Heptachlor epoxide	1024-57-3	mg/kg		<0.0026	<0.0024	<0.002	<0.0019	<0.0021	<0.002	<0.0024	<0.0022	<0.0023	<0.0058	<0.0063
Methoxychlor	72-43-5	mg/kg		<0.029	<0.027	<0.023	<0.022	<0.024	<0.022	<0.027	<0.025	<0.026	<0.066	<0.071
Toxaphene	8001-35-2	mg/kg		<0.033	<0.03	<0.025	<0.024	<0.027	<0.025	<0.03	<0.028	<0.029	<0.094	<0.1
Aroclor 1016	12674-11-2	mg/kg		<0.0041	<0.0038	<0.0032	<0.003	<0.0034	<0.0032	<0.0038	<0.0036	<0.0037	<0.047	<0.05
Aroclor 1221	11104-28-2	mg/kg		<0.0041	<0.0038	<0.0032	<0.003	<0.0034	<0.0032	<0.0038	<0.0036	<0.0037	<0.047	<0.05
Aroclor 1232	11141-16-5	mg/kg		<0.0041	<0.0038	<0.0032	<0.003	<0.0034	<0.0032	<0.0038	<0.0036	<0.0037	<0.047	<0.05
Aroclor 1242	53469-21-9	mg/kg		<0.0041	<0.0038	<0.0032	<0.003	<0.0034	<0.0032	<0.0038	<0.0036	<0.0037	<0.047	<0.05
Aroclor 1248	12672-29-6	mg/kg		<0.0041	<0.0038	<0.0032	<0.003	<0.0034	<0.0032	<0.0038	<0.0036	<0.0037	<0.047	<0.05
Aroclor 1254	11097-69-1	mg/kg		<0.0041	<0.0038	<0.0032	<0.003	<0.0034	<0.0032	<0.0038	<0.0036	<0.0037	<0.047	<0.05
Aroclor 1260	11096-82-5	mg/kg		<0.0031	<0.0028	<0.0024	<0.0023	<0.0025	<0.0024	<0.0028	<0.0027	<0.0028	<0.035	<0.037
Total PCBs	N/A	mg/kg		All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND
VOCS														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1 1 1-Trichloroethane	71-55-6	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1 1 2-Trichloroethane	79-00-5	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1 1-Dichloroethane	75-34-3	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1,1-Dichloroethene	75-35-4	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1 2 4-Trichlorobenzene	120-82-1	mg/kg		<0.001	<0.00094	<0.00081	<0.00076	<0.00085	<0.0008	<0.00095	<0.00089	<0.00093	---	---
1 2 4-Trimethylbenzene	95-63-6	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	0.0048 J	---	---
1,2-Dibromoethane	106-93-4	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1,2-Dichlorobenzene	95-50-1	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1 2-Dichloroethane	107-06-2	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1,2-Dichloropropane	78-87-5	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1,3,5-Trimethylbenzene	108-67-8	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1 3-Dichlorobenzene	541-73-1	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
1,4-Dichlorobenzene	106-46-7	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
2-Butanone	78-93-3	mg/kg		<0.0024	<0.0022	<0.0019	<0.0018	<0.002	<0.0019	<0.0022	<0.0021	<0.0022	---	---
2-Hexanone	591-78-6	mg/kg		<0.0017	<0.0016	<0.0013	<0.0013	<0.0014	<0.0013	<0.0016	<0.0015	<0.0015	---	---
4-Methyl-2-pentanone	108-10-1	mg/kg		<0.0017	<0.0016	<0.0013	<0.0013	<0.0014	<0.0013	<0.0016	<0.0015	<0.0015	---	---
Acetone	67-64-1	mg/kg		<0.0035	<0.0031	<0.0027	<0.0025	<0.0028	<0.0027	<0.0032	<0.003	<0.0031	---	---
Benzene	71-43-2	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Bromodichloromethane	75-27-4	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Bromoform	75-25-2	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Bromomethane	74-83-9	mg/kg		<0.0017	<0.0016	<0.0013	<0.0013	<0.0014	<0.0013	<0.0016	<0.0015	<0.0015	---	---
Carbon disulfide	75-15-0	mg/kg		<0.0017	<0.0016	<0.0013	<0.0013	<0.0014	<0.0013	<0.0016	<0.0015	<0.0015	---	---
Carbon tetrachloride	56-23-5	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Chlorobenzene	108-90-7	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Chloroethane	75-00-3	mg/kg		<0.0017	<0.0016	<0.0013	<0.0013	<0.0014	<0.0013	<0.0016	<0.0015	<0.0015	---	---
Chloroform	67-66-3	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Chloromethane	74-87-3	mg/kg		<0.0017	<0.0016	<0.0013	<0.0013	<0.0014	<0.0013	<0.0016	<0.0015	<0.0015	---	---
cis-1 2-Dichloroethene	156-59-2	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
cis-1,3-Dichloropropene	10061-01-5	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Cyclohexane	110-82-7	mg/kg		<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not Analyzed

Sediment Analytical Data Summary
East Ditch
Brine Service Company Superfund Site

	Sample Location		EDSSD01	EDSSD01	EDSSD02	EDSSD03	EDSSD04	EDSSD05	EDSSD06	EDSSD07	EDSSD08	EDDSD07	EDDSD09
	Depth Interval		0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
	Sample Date		11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	1/31/2012	1/31/2012
Analyte	CAS No.	Units											
Dibromochloromethane	124-48-1	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Dichlorodifluoromethane	75-71-8	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Ethylbenzene	100-41-4	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	0.0036 J	<0.00066	<0.00079	<0.00074	0.0038 J	---	---
Isopropylbenzene	98-82-8	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Methyl acetate	79-20-9	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Methyl tert-butyl ether	1634-04-4	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Methylcyclohexane	108-87-2	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Methylene chloride	75-09-2	mg/kg	<0.0017	<0.0016	<0.0013	<0.0013	<0.0014	<0.0013	<0.0016	<0.0015	<0.0015	---	---
Naphthalene	91-20-3	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
n-Propylbenzene	103-65-1	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	0.0036 J	---	---
sec-Butylbenzene	135-98-8	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Styrene	100-42-5	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
tert-Butylbenzene	98-06-6	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Tetrachloroethene	127-18-4	mg/kg	<0.001	<0.00094	<0.00081	<0.00076	<0.00085	<0.0008	<0.00095	<0.00089	<0.00093	---	---
Toluene	108-88-3	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	0.0049 J	<0.00066	<0.00079	<0.00074	<0.00077	---	---
trans-1,2-Dichloroethene	156-60-5	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
trans-1,3-Dichloropropene	10061-02-6	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Trichloroethene	79-01-6	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Trichlorofluoromethane	75-69-4	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Vinyl chloride	75-01-4	mg/kg	<0.00086	<0.00078	<0.00067	<0.00064	<0.00071	<0.00066	<0.00079	<0.00074	<0.00077	---	---
Xylenes Total	1330-20-7	mg/kg	<0.0026	<0.0024	<0.002	<0.0019	<0.0021	<0.002	<0.0024	<0.0022	0.012 J	---	---
SVOCS													
1,1´-Biphenyl	92-52-4	mg/kg	<0.005 JL	<0.0045 JL	<0.019 JL	<0.0037 JL	<0.0041	<0.0038 JL	<0.0046 JL	<0.0043 JL	<0.0045 JL	<0.025	<0.027
1-Methylnaphthalene	90-12-0	mg/kg	<0.004 JL	<0.0036 JL	<0.015 JL	<0.0029 JL	<0.0032	<0.003 JL	<0.0036 JL	<0.0034 JL	<0.0036 JL	<0.025	<0.027
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.0048 JL	<0.0044 JL	<0.019 JL	<0.0035 JL	<0.004	<0.0037 JL	<0.0044 JL	<0.0041 JL	<0.0043 JL	<0.025	<0.027
2,4,6-Trichlorophenol	88-06-2	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	<0.025	<0.027
2 4-Dichlorophenol	120-83-2	mg/kg	<0.0038 JL	<0.0034 JL	<0.015 JL	<0.0028 JL	<0.0031	<0.0029 JL	<0.0035 JL	<0.0033 JL	<0.0034 JL	<0.025	<0.027
2 4-Dimethylphenol	105-67-9	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	<0.025	<0.027
2,4-Dinitrophenol	51-28-5	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	<0.051	<0.055
2 4-Dinitrotoluene	121-14-2	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	<0.025	<0.027
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.0055 JL	<0.005 JL	<0.021 JL	<0.004 JL	<0.0045	<0.0042 JL	<0.0051 JL	<0.0047 JL	<0.0049 JL	<0.025	<0.027
2-Chloronaphthalene	91-58-7	mg/kg	<0.0071 JL	<0.0064 JL	<0.027 JL	<0.0052 JL	<0.0058	<0.0054 JL	<0.0065 JL	<0.0061 JL	<0.0063 JL	<0.025	<0.027
2-Chlorophenol	95-57-8	mg/kg	<0.0055 JL	<0.005 JL	<0.021 JL	<0.004 JL	<0.0045	<0.0042 JL	<0.0051 JL	<0.0047 JL	<0.0049 JL	<0.025	<0.027
2-Methylnaphthalene	91-57-6	mg/kg	<0.0047 JL	<0.0042 JL	<0.018 JL	0.0055 JL	<0.0038	<0.0036 JL	<0.0043 JL	<0.004 JL	<0.0042 JL	3.10E-02	<0.027
2-Methylphenol	95-48-7	mg/kg	<0.005 JL	<0.0045 JL	<0.019 JL	<0.0037 JL	<0.0041	<0.0038 JL	<0.0046 JL	<0.0043 JL	<0.0045 JL	<0.025	<0.027
2-Nitroaniline	88-74-4	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	<0.025	<0.027
2-Nitrophenol	88-75-5	mg/kg	<0.0079 JL	<0.0072 JL	<0.031 JL	<0.0058 JL	<0.0065	<0.0061 JL	<0.0073 JL	<0.0068 JL	<0.0071 JL	<0.025	<0.027
3&4-Methylphenol	106-44-5	mg/kg	0.068 JL	0.057 JL	<0.019 JL	0.14 JL	0.022	<0.0037 JL	0.016 JL	<0.0041 JL	<0.0043 JL	3.20E-02	<0.027
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.0054 JL	<0.0048 JL	<0.021 JL	<0.0039 JL	<0.0044	<0.0041 JL	<0.0049 JL	<0.0046 JL	<0.0048 JL	<0.025	<0.027
3-Nitroaniline	99-09-2	mg/kg	<0.0045 JL	<0.0041 JL	<0.017 JL	<0.0033 JL	<0.0037	<0.0034 JL	<0.0041 JL	<0.0039 JL	<0.004 JL	<0.025	<0.027
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	<0.025	<0.027
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	<0.025	<0.027
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	<0.025	<0.027
4-Chloroaniline	106-47-8	mg/kg	<0.0038 JL	<0.0034 JL	<0.015 JL	<0.0028 JL	<0.0031	<0.0029 JL	<0.0035 JL	<0.0033 JL	<0.0034 JL	<0.025	<0.027
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.0038 JL	<0.0034 JL	<0.015 JL	<0.0028 JL	<0.0031	<0.0029 JL	<0.0035 JL	<0.0033 JL	<0.0034 JL	<0.025	<0.027
4-Nitroaniline	100-01-6	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	<0.025	<0.027
4-Nitrophenol	100-02-7	mg/kg	<0.0066 JL	<0.0059 JL	<0.025 JL	<0.0048 JL	<0.0054	<0.005 JL	<0.006 JL	<0.0056 JL	<0.0059 JL	<0.051	<0.055
Acenaphthene	83-32-9	mg/kg	<0.0038 JL	<0.0034 JL	<0.015 JL	<0.0028 JL	<0.0031	<0.0029 JL	<0.0035 JL	<0.0033 JL	<0.0034 JL	<0.025	<0.027
Acenaphthylene	208-96-8	mg/kg	<0.0038 JL	<0.0034 JL	<0.015 JL	<0.0028 JL	<0.0031	<0.0029 JL	<0.0035 JL	<0.0033 JL	<0.0034 JL	<0.025	<0.027
Acetophenone	98-86-2	mg/kg	<0.0041 JL	<0.0038 JL	<0.016 JL	0.022 JL	0.0094	<0.0032 JL	<0.0038 JL	<0.0036 JL	<0.0037 JL	<0.025	<0.027
Anthracene	120-12-7	mg/kg	<0.0038 JL	<0.0034 JL	<0.015 JL	<0.0028 JL	<0.0031	<0.0029 JL	<0.0035 JL	<0.0033 JL	<0.0034 JL	4.40E-02	3.20E-02
Benz(a)anthracene	56-55-3	mg/kg	0.056 JL	0.018 JL	<0.019 JL	0.0091 JL	0.017	<0.0037 JL	0.015 JL	0.0058 JL	0.019 JL	2.60E-01	2.80E-01
Benzaldehyde	100-52-7	mg/kg	<0.0079 JL	<0.0072 JL	<0.031 JL	0.0087 JL	<0.0065 JL	<0.0061 JL	<0.0073 JL	<0.0068 JL	<0.0071 JL	5.10E-02	<0.027
Benzo(a)pyrene	50-32-8	mg/kg	0.045 JL	0.015 JL	<0.015 JL	0.019 JL	0.018	<0.003 JL	0.011 JL	0.0068 JL	0.02 JL	2.70E-01	2.80E-01
Benzo(b)fluoranthene	205-99-2	mg/kg	0.074 JL	0.022 JL	<0.022 JL	0.0085 JL	0.02	<0.0044 JL	0.02 JL	0.008 JL	0.034 JL	3.80E-01	3.80E-01
Benzo(g h i)perylene	191-24-2	mg/kg	0.041 JL	0.016 JL	<0.019 JL	0.022 JL	0.03	<0.0038 JL	0.012 JL	0.006 JL	0.025 JL	2.70E-01	2.20E-01
Benzo(k)fluoranthene	207-08-9	mg/kg	0.044 JL	0.012 JL	<0.022 JL	0.0085 JL	0.018	<0.0044 JL	0.0096 JL	<0.0049 JL	0.012 JL	1.70E-01	1.70E-01
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.0041 JL	<0.0038 JL	<0.016 JL	<0.003 JL	<0.0034	<0.0032 JL	<0.0038 JL	<0.0036 JL	<0.0037 JL	<0.025	<0.027
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.0048 JL	<0.0044 JL	<0.019 JL	<0.0035 JL	<0.004	<0.0037 JL	<0.0044 JL	<0.0041 JL	<0.0043 JL	<0.025	<0.027
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.0047 JL	<0.0042 JL	<0.018 JL	<0.0034 JL	<0.0038	<0.0036 JL	<0.0043 JL	<0.004 JL	<0.0042 JL	<0.025	<0.027
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	0.57 JL	0.012 JL	<0.044 JL	0.018 JL	0.023	<0.0087 JL	0.023 JL	0.012 JL	0.035 JL	1.60E+00	1.70E-01
Butyl benzyl phthalate	85-68-7	mg/kg	<0.0043 JL	<0.0039 JL	<0.017 JL	<0.0032 JL	<0.0035	<0.0033 JL	<0.004 JL	<0.0037 JL	0.0052 JL	<0.044	<0.047
Caprolactam	105-60-2	mg/kg	<0.0041 JL	<0.0038 JL	<0.016 JL	<0.003 JL	<0.0034	<0.0032 JL	<0.0038 JL	<0.0036 JL	<0.0037 JL	<0.031	<0.033
Carbazole	86-74-8	mg/kg	<0.0038 JL	<0.0034 JL	<0.015 JL	<0.0028 JL	0.0033 J	<0.0029 JL	<0.0035 JL	<0.0033 JL	<0.0034 JL	3.50E-02	3.40E-02
Chrysene	218-01-9	mg/kg	0.058 JL	0.019 JL	<0.019 JL	0.012 JL	0.017	<0.0038 JL	0.018 JL	0.008 JL	0.02 JL	3.10E-01	3.50E-01
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.0072 JL	<0.0034 JL	<0.015 JL	<0.0028 JL	0.012	<0.0029 JL	<0.0035 JL	<0.0033 JL	0.0091 JL	4.80E-02	6.70E-02
Dibenzofuran	132-64-9	mg/kg	<0.0038 JL	<0.0034 JL	<0.015 JL	<0.0028 JL	<0.0031	<0.0029 JL	<0.0035 JL	<0.0033 JL	<0.0034 JL	<0.025	<0.027
Diethyl phthalate	84-66-2	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	<0.025	<0.027
Dimethyl phthalate	131-11-3	mg/kg	<0.0041 JL	<0.0038 JL	<0.016 JL	<0.003 JL	<0.0034	<0.0032 JL	<0.0038 JL	<0.0036 JL	<0.0037 JL	<0.031	<0.033
Di-n-butyl phthalate	84-74-2	mg/kg	<0.0043 JL	<0.0039 JL	<0.017 JL	<0.0032 JL	<0.0035	<0.0033 JL	<0.004 JL	<0.0037 JL	<0.0039 JL	9.70E-02	<0.033
Di-n-octyl phthalate	117-84-0	mg/kg	<0.005 JL	<0.0045 JL	<0.019 JL	<0.0037 JL	<0.0041	<0.0038 JL	<0.0046 JL	<0.0043 JL	<0.0045 JL	<0.031	<0.033
Fluoranthene	206-44-0	mg/kg	0.056 JL	0.031 JL	<0.015 JL	0.014 JL	0.026	0.0048 JL	0.036 JL	0.013 JL	0.038 JL	6.90E-01	6.60E-01
Fluorene	86-73-7	mg/kg	<0.0038 JL	<0.0034 JL	<0.015 JL	<0.0028 JL	<0.0031	<0.0029 JL	<0.0035 JL	<0.0033 JL	<0.0034 JL	<0.025	<0.027
Hexachlorobenzene	118-74-1	mg/kg	<0.0045 JL	<0.0041 JL	<0.017 JL	<0.0033 JL	<0.0037	<0.0034 JL	<0.0041 JL	<0.0039 JL	<0.004 JL	<0.025	<0.027
Hexachlorobutadiene	87-68-3	mg/kg	<0.0076 JL	<0.0069 JL	<0.029 JL	<0.0056 JL	<0.0062	<0.0058 JL	<0.007 JL	<0.0065 JL	<0.0068 JL	<0.025	<0.027
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.0062 JL	<0.0056 JL	<0.024 JL	<0.0045 JL	<0.0051	<0.0048 JL	<0.0057 JL	<0.0053 JL	<0.0056 JL	<0.025	<0.027
Hexachloroethane	67-72-1	mg/kg	<0.0067 JL	<0.0061 JL	<0.026 JL	<0.0049 JL	<0.0055	<0.0051 JL	<0.0062 JL	<0.0058 JL	<0.006 JL	<0.025	<0.027
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	0.0099 JL	<0.0055 JL	<0.023 JL	0.0094 JL	0.013	<0.0046 JL	0.011 JL	0.0055 JL	0.018 JL	2.50E-01	2.50E-01
Isophorone	78-59-1	mg/kg	<0.0052 JL	<0.0047 JL	<0.02 JL	<0.0038 JL	<0.0042	<0.004 JL	<0.0047 JL	<0.0044 JL	<0.0046 JL	<0.025	<0.027
Naphthalene	91-20-3	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	2.70E-02	<0.027
Nitrobenzene	98-95-3	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	<0.025	<0.027
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.0069 JL	<0.0063 JL	<0.027 JL	<0.0051 JL	<0.0056	<0.0053 JL	<0.0063 JL	<0.0059 JL	<0.0062 JL	<0.031	<0.033
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.0038 JL	<0.0034 JL	<0.015 JL	<0.0028 JL	<0.0031	<0.0029 JL	<0.0035 JL	<0.0033 JL	<0.0034 JL	<0.031	<0.033

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not Analyzed

Sediment Analytical Data Summary
East Ditch
Brine Service Company Superfund Site

	Sample Location		EDSSD01	EDSSD01	EDSSD02	EDSSD03	EDSSD04	EDSSD05	EDSSD06	EDSSD07	EDSSD08	EDDSD07	EDDSD09
	Depth Interval		0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
	Sample Date		11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	11/18/2010	1/31/2012	1/31/2012
Analyte	CAS No.	Units											
Pentachlorophenol	87-86-5	mg/kg	<0.0048 JL	<0.0044 JL	<0.019 JL	<0.0035 JL	<0.004 JL	<0.0037 JL	<0.0044 JL	<0.0041 JL	<0.0043 JL	<0.028	<0.03
Phenanthrene	85-01-8	mg/kg	0.013 JL	0.014 JL	<0.02 JL	0.009 JL	0.015	<0.004 JL	0.013 JL	0.0053 JL	0.018 JL	1.90E-01	2.30E-01
Phenol	108-95-2	mg/kg	<0.0057 JL	<0.0052 JL	<0.022 JL	<0.0042 JL	<0.0047	<0.0044 JL	<0.0052 JL	<0.0049 JL	<0.0051 JL	<0.031	<0.033
Pyrene	129-00-0	mg/kg	0.064 JL	0.026 JL	<0.015 JL	0.016 JL	0.026	0.0037 JL	0.027 JL	0.01 JL	0.036 JL	5.00E-01	4.70E-01
Low Molecular Weight PAHs	NA	mg/kg	0.0386	0.037	All ND	0.0299	0.0359	0.0236	0.0365	0.0274	0.0409	2.078	2.107
High Molecular Weight PAHs	NA	mg/kg	0.2862	0.1124	All ND	0.0729	0.116	0.0219	0.1105	0.0469	0.1421	0.3295	0.3295
Total PAHs	NA	mg/kg	0.4977	0.2085	All ND	0.1541	0.2361	0.0657	0.2032	0.1021	0.2756	3.49	3.47
			EDSSD01	EDSSD01	EDSSD02	EDSSD03	EDSSD04	EDSSD05	EDSSD06	EDSSD07	EDSSD08	EDDSD07	EDDSD09

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not Analyzed

Sediment Analytical Data Summary
Up River Road
Brine Service Company Superfund Site

Analyte	CAS No.	Units	Sample Location Depth Interval Sample Date	UPSD01 0-0.5 ft 2/1/2012	UPSD02 0-0.5 ft 2/1/2012	UPSD03 0-0.5 ft 2/1/2012	UPSD04 0-0.5 ft 2/1/2012	UPSD04 0-0.5 ft 2/1/2012	UPSD05 0-0.5 ft 2/1/2012	UPSD06 0-0.5 ft 1/31/2012	UPSD06 0-0.5 ft 1/31/2012	UPSD07 0-0.5 ft 2/1/2012
METALS												
Aluminum	7429-90-5	mg/kg		3.88E+03	5.91E+03	1.02E+04	3.81E+03	4.76E+03	3.01E+03	6.02E+03	3.77E+03	3.00E+03
Antimony	7440-36-0	mg/kg		<0.28	<0.28	4.20E-01	<0.26	<0.25	<0.23	<0.46	<0.34	<0.27
Arsenic	7440-38-2	mg/kg		1.71E+00	2.40E+00	5.86E+00	2.04E+00	1.68E+00	1.70E+00	2.47E+01	2.11E+01	1.15E+00
Barium	7440-39-3	mg/kg		2.72E+02	2.15E+02	7.81E+02	3.58E+02	4.18E+02	2.63E+02	8.34E+02	5.84E+02	1.11E+02
Beryllium	7440-41-7	mg/kg		2.60E-01	3.99E-01	3.57E-01	2.31E-01	2.34E-01	2.08E-01	3.94E-01	2.77E-01	1.96E-01
Cadmium	7440-43-9	mg/kg		2.86E-01	4.01E-01	3.47E-01	3.78E-01	2.92E-01	1.65E-01	9.07E-01	5.99E-01	9.02E-02
Chromium	7440-47-3	mg/kg		3.42E+00	2.43E+01	1.02E+02	8.71E+00	7.71E+00	3.35E+00	1.19E+01	8.65E+00	2.71E+00
Cobalt	7440-48-4	mg/kg		1.72E+00	2.19E+00	1.27E+01	1.91E+00	1.99E+00	1.44E+00	7.36E+00	4.57E+00	1.34E+00
Copper	7440-50-8	mg/kg		4.22E+00	7.28E+00	2.55E+01	1.94E+01	6.85E+00	5.89E+00	3.00E+01	3.49E+01	3.00E+00
Lead	7439-92-1	mg/kg		9.81E+00	2.33E+01	3.07E+01	2.25E+01	1.60E+01	2.08E+01	6.80E+01	5.44E+01	4.81E+00
Manganese	7439-96-5	mg/kg		1.12E+02	1.41E+02	6.54E+03	3.14E+02	2.77E+02	1.07E+02	2.10E+03	1.58E+03	4.93E+01
Nickel	7440-02-0	mg/kg		2.93E+00	6.10E+00	2.66E+01	4.33E+00	4.17E+00	2.54E+00	6.80E+00	4.93E+00	2.02E+00
Selenium	7782-49-2	mg/kg		5.90E-01	9.50E-01	7.67E-01	7.85E-01	4.74E-01	4.26E-01	4.82E-01	6.15E-01	3.29E-01
Silver	7440-22-4	mg/kg		<0.11	<0.11	<0.11	<0.1	<0.1	<0.091	2.37E-01	1.56E-01	<0.11
Thallium	7440-28-0	mg/kg		<0.097	<0.097	<0.099	<0.091	<0.089	<0.08	<0.16	<0.12	<0.093
Vanadium	7440-62-2	mg/kg		6.81E+00	9.72E+00	2.52E+01	1.02E+01	1.03E+01	6.12E+00	1.64E+01	1.24E+01	6.01E+00
Zinc	7440-66-6	mg/kg		4.06E+01	7.73E+01	1.46E+02	7.39E+01	6.54E+01	3.60E+01	1.62E+02	1.27E+02	1.96E+01
Mercury	7439-97-6	mg/kg		1.95E-02	1.16E-01	3.83E-02	3.98E-02	4.00E-02	1.02E-02	1.10E-01	6.17E-02	6.91E-03
Cyanide	57-12-5	mg/kg		---	---	---	---	---	---	---	---	---
PESTICIDES AND PCBS												
4,4´-DDD	72-54-8	mg/kg		<0.0073	<0.0074	<0.0073	<0.0069	<0.007	<0.0062	<0.026	<0.0099	<0.0074
4,4´-DDE	72-55-9	mg/kg		<0.0073	<0.0074	<0.0073	<0.0069	<0.007	<0.0062	<0.026	<0.0099	<0.0074
4 4´-DDT	50-29-3	mg/kg		<0.0073	<0.0074	<0.0073	<0.0069	<0.007	<0.0062	<0.026	<0.0099	<0.0074
Aldrin	309-00-2	mg/kg		<0.0044	<0.0045	<0.0044	<0.0042	<0.0042	<0.0037	<0.016	<0.0059	<0.0044
alpha-BHC	319-84-6	mg/kg		<0.0044	<0.0045	<0.0044	<0.0042	<0.0042	<0.0037	<0.016	2.20E-02	<0.0044
alpha-Chlordane	5103-71-9	mg/kg		<0.0029	<0.003	<0.0029	<0.0028	<0.0028	<0.0025	<0.011	<0.004	<0.003
beta-BHC	319-85-7	mg/kg		<0.0044	<0.0045	<0.0044	<0.0042	<0.0042	<0.0037	<0.016	<0.0059	<0.0044
delta-BHC	319-86-8	mg/kg		<0.0029	<0.003	<0.0029	<0.0028	<0.0028	<0.0025	<0.011	<0.004	<0.003
Dieldrin	60-57-1	mg/kg		<0.0073	<0.0074	<0.0073	<0.0069	<0.007	<0.0062	<0.026	<0.0099	<0.0074
Endosulfan I	959-98-8	mg/kg		<0.0044	<0.0045	<0.0044	<0.0042	<0.0042	<0.0037	<0.016	<0.0059	<0.0044
Endosulfan II	33213-65-9	mg/kg		<0.0087	<0.0089	<0.0088	<0.0083	<0.0084	<0.0075	<0.032	<0.012	<0.0089
Endosulfan sulfate	1031-07-8	mg/kg		<0.0087	2.80E-02	<0.0088	<0.0083	<0.0084	<0.0075	<0.032	<0.012	<0.0089
Endrin	72-20-8	mg/kg		<0.0087	<0.0089	<0.0088	<0.0083	<0.0084	<0.0075	<0.032	<0.012	<0.0089
Endrin aldehyde	7421-93-4	mg/kg		<0.0087	<0.0089	<0.0088	<0.0083	<0.0084	<0.0075	<0.032	<0.012	<0.0089
gamma-BHC	58-89-9	mg/kg		<0.0029	<0.003	<0.0029	<0.0028	<0.0028	<0.0025	<0.011	<0.004	<0.003
gamma-Chlordane	5103-74-2	mg/kg		<0.0029	<0.003	<0.0029	<0.0028	<0.0028	<0.0025	<0.011	<0.004	<0.003
Heptachlor	76-44-8	mg/kg		<0.0044	<0.0045	<0.0044	<0.0042	<0.0042	<0.0037	<0.016	<0.0059	<0.0044
Heptachlor epoxide	1024-57-3	mg/kg		<0.0044	<0.0045	<0.0044	<0.0042	<0.0042	<0.0037	<0.016	<0.0059	<0.0044
Methoxychlor	72-43-5	mg/kg		<0.049	<0.051	<0.05	<0.047	<0.048	<0.042	<0.18	<0.067	<0.05
Toxaphene	8001-35-2	mg/kg		<0.07	<0.071	<0.07	<0.067	<0.067	<0.06	<0.25	<0.095	<0.071
Aroclor 1016	12674-11-2	mg/kg		<0.0035	<0.0036	<0.0035	<0.0033	<0.0034	<0.003	<0.063	<0.047	<0.0035
Aroclor 1221	11104-28-2	mg/kg		<0.0035	<0.0036	<0.0035	<0.0033	<0.0034	<0.003	<0.063	<0.047	<0.0035
Aroclor 1232	11141-16-5	mg/kg		<0.0035	<0.0036	<0.0035	<0.0033	<0.0034	<0.003	<0.063	<0.047	<0.0035
Aroclor 1242	53469-21-9	mg/kg		<0.0035	<0.0036	<0.0035	<0.0033	<0.0034	<0.003	<0.063	<0.047	<0.0035
Aroclor 1248	12672-29-6	mg/kg		<0.0035	<0.0036	<0.0035	<0.0033	<0.0034	<0.003	<0.063	<0.047	<0.0035
Aroclor 1254	11097-69-1	mg/kg		<0.0035	<0.0036	<0.0035	<0.0033	<0.0034	<0.003	<0.063	<0.047	<0.0035
Aroclor 1260	11096-82-5	mg/kg		<0.0026	<0.0027	<0.0026	<0.0025	<0.0025	<0.0022	<0.047	<0.036	<0.0027
Total PCBs	N/A	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND
VOCS												
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg		---	---	---	---	---	---	---	---	---
1 1 1-Trichloroethane	71-55-6	mg/kg		---	---	---	---	---	---	---	---	---
1 1 2 2-Tetrachloroethane	79-34-5	mg/kg		---	---	---	---	---	---	---	---	---
1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	mg/kg		---	---	---	---	---	---	---	---	---
1 1 2-Trichloroethane	79-00-5	mg/kg		---	---	---	---	---	---	---	---	---
1 1-Dichloroethane	75-34-3	mg/kg		---	---	---	---	---	---	---	---	---
1,1-Dichloroethene	75-35-4	mg/kg		---	---	---	---	---	---	---	---	---
1 2 4-Trichlorobenzene	120-82-1	mg/kg		---	---	---	---	---	---	---	---	---
1 2 4-Trimethylbenzene	95-63-6	mg/kg		---	---	---	---	---	---	---	---	---
1,2-Dibromoethane	106-93-4	mg/kg		---	---	---	---	---	---	---	---	---
1,2-Dichlorobenzene	95-50-1	mg/kg		---	---	---	---	---	---	---	---	---
1 2-Dichloroethane	107-06-2	mg/kg		---	---	---	---	---	---	---	---	---
1,2-Dichloropropane	78-87-5	mg/kg		---	---	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	108-67-8	mg/kg		---	---	---	---	---	---	---	---	---
1 3-Dichlorobenzene	541-73-1	mg/kg		---	---	---	---	---	---	---	---	---
1,4-Dichlorobenzene	106-46-7	mg/kg		---	---	---	---	---	---	---	---	---
2-Butanone	78-93-3	mg/kg		---	---	---	---	---	---	---	---	---
2-Hexanone	591-78-6	mg/kg		---	---	---	---	---	---	---	---	---
4-Methyl-2-pentanone	108-10-1	mg/kg		---	---	---	---	---	---	---	---	---
Acetone	67-64-1	mg/kg		---	---	---	---	---	---	---	---	---
Benzene	71-43-2	mg/kg		---	---	---	---	---	---	---	---	---
Bromodichloromethane	75-27-4	mg/kg		---	---	---	---	---	---	---	---	---
Bromoform	75-25-2	mg/kg		---	---	---	---	---	---	---	---	---
Bromomethane	74-83-9	mg/kg		---	---	---	---	---	---	---	---	---
Carbon disulfide	75-15-0	mg/kg		---	---	---	---	---	---	---	---	---
Carbon tetrachloride	56-23-5	mg/kg		---	---	---	---	---	---	---	---	---
Chlorobenzene	108-90-7	mg/kg		---	---	---	---	---	---	---	---	---
Chloroethane	75-00-3	mg/kg		---	---	---	---	---	---	---	---	---
Chloroform	67-66-3	mg/kg		---	---	---	---	---	---	---	---	---
Chloromethane	74-87-3	mg/kg		---	---	---	---	---	---	---	---	---
cis-1 2-Dichloroethene	156-59-2	mg/kg		---	---	---	---	---	---	---	---	---
cis-1,3-Dichloropropene	10061-01-5	mg/kg		---	---	---	---	---	---	---	---	---
Cyclohexane	110-82-7	mg/kg		---	---	---	---	---	---	---	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Sediment Analytical Data Summary
Up River Road
Brine Service Company Superfund Site

Analyte	CAS No.	Units	Sample Location / Depth Interval / Sample Date								
			UPSD01 0-0.5 ft 2/1/2012	UPSD02 0-0.5 ft 2/1/2012	UPSD03 0-0.5 ft 2/1/2012	UPSD04 0-0.5 ft 2/1/2012	UPSD04 0-0.5 ft 2/1/2012	UPSD05 0-0.5 ft 2/1/2012	UPSD06 0-0.5 ft 1/31/2012	UPSD06 0-0.5 ft 1/31/2012	UPSD07 0-0.5 ft 2/1/2012
Dibromochloromethane	124-48-1	mg/kg	---	---	---	---	---	---	---	---	---
Dichlorodifluoromethane	75-71-8	mg/kg	---	---	---	---	---	---	---	---	---
Ethylbenzene	100-41-4	mg/kg	---	---	---	---	---	---	---	---	---
Isopropylbenzene	98-82-8	mg/kg	---	---	---	---	---	---	---	---	---
Methyl acetate	79-20-9	mg/kg	---	---	---	---	---	---	---	---	---
Methyl tert-butyl ether	1634-04-4	mg/kg	---	---	---	---	---	---	---	---	---
Methylcyclohexane	108-87-2	mg/kg	---	---	---	---	---	---	---	---	---
Methylene chloride	75-09-2	mg/kg	---	---	---	---	---	---	---	---	---
Naphthalene	91-20-3	mg/kg	---	---	---	---	---	---	---	---	---
n-Propylbenzene	103-65-1	mg/kg	---	---	---	---	---	---	---	---	---
sec-Butylbenzene	135-98-8	mg/kg	---	---	---	---	---	---	---	---	---
Styrene	100-42-5	mg/kg	---	---	---	---	---	---	---	---	---
tert-Butylbenzene	98-06-6	mg/kg	---	---	---	---	---	---	---	---	---
Tetrachloroethene	127-18-4	mg/kg	---	---	---	---	---	---	---	---	---
Toluene	108-88-3	mg/kg	---	---	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	156-60-5	mg/kg	---	---	---	---	---	---	---	---	---
trans-1,3-Dichloropropene	10061-02-6	mg/kg	---	---	---	---	---	---	---	---	---
Trichloroethene	79-01-6	mg/kg	---	---	---	---	---	---	---	---	---
Trichlorofluoromethane	75-69-4	mg/kg	---	---	---	---	---	---	---	---	---
Vinyl chloride	75-01-4	mg/kg	---	---	---	---	---	---	---	---	---
Xylenes Total	1330-20-7	mg/kg	---	---	---	---	---	---	---	---	---
SVOCS											
1,1´-Biphenyl	92-52-4	mg/kg	<0.019	1.30E-01	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
1-Methylnaphthalene	90-12-0	mg/kg	<0.019	3.70E-01	2.30E-02	<0.018	<0.018	<0.016	4.80E-02	<0.025	<0.019
2 4 5-Trichlorophenol	95-95-4	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
2,4,6-Trichlorophenol	88-06-2	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
2 4-Dichlorophenol	120-83-2	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
2 4-Dimethylphenol	105-67-9	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
2,4-Dinitrophenol	51-28-5	mg/kg	<0.038	<0.098	<0.039	<0.037	<0.037	<0.033	<0.069	<0.052	<0.039
2 4-Dinitrotoluene	121-14-2	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	2.00E-02
2 6-Dinitrotoluene	606-20-2	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	2.50E-02
2-Chloronaphthalene	91-58-7	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
2-Chlorophenol	95-57-8	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
2-Methylnaphthalene	91-57-6	mg/kg	2.00E-02	6.50E-01	2.50E-02	4.50E-02	6.80E-02	1.80E-02	8.60E-02	3.40E-02	<0.019
2-Methylphenol	95-48-7	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
2-Nitroaniline	88-74-4	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	6.50E-02
2-Nitrophenol	88-75-5	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
3&4-Methylphenol	106-44-5	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	6.40E-02	<0.025	<0.019
3,3´-Dichlorobenzidine	91-94-1	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	2.30E-02
3-Nitroaniline	99-09-2	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	7.40E-02
4-Bromophenyl phenyl ether	101-55-3	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
4-Chloro-3-methylphenol	59-50-7	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
4-Chloroaniline	106-47-8	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
4-Nitroaniline	100-01-6	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
4-Nitrophenol	100-02-7	mg/kg	<0.038	<0.098	<0.039	<0.037	<0.037	<0.033	<0.069	<0.052	8.80E-02
Acenaphthene	83-32-9	mg/kg	<0.019	3.10E+00	<0.019	<0.018	<0.018	<0.016	9.20E-02	<0.025	<0.019
Acenaphthylene	208-96-8	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
Acetophenone	98-86-2	mg/kg	2.00E-02	<0.048	<0.019	<0.018	<0.018	<0.016	4.90E-02	<0.025	<0.019
Anthracene	120-12-7	mg/kg	<0.019	6.10E+00	2.30E-02	<0.018	<0.018	<0.016	2.30E-01	2.90E-02	5.60E-02
Benz(a)anthracene	56-55-3	mg/kg	4.40E-02	1.70E+01	1.30E-01	1.10E-01	8.90E-02	4.90E-02	4.20E-01	5.80E-02	5.50E-02
Benzaldehyde	100-52-7	mg/kg	4.10E-02	<0.048	<0.019	<0.018	<0.018	2.60E-02	5.40E-02	<0.025	5.00E-02
Benzo(a)pyrene	50-32-8	mg/kg	<0.019	1.50E+01	1.30E-01	1.00E-01	9.40E-02	2.30E-02	4.60E-01	7.20E-02	8.10E-01
Benzo(b)fluoranthene	205-99-2	mg/kg	<0.019	2.20E+01	1.60E-01	1.50E-01	1.50E-01	4.10E-02	6.00E-01	1.10E-01	8.70E-01
Benzo(g h i)perylene	191-24-2	mg/kg	<0.02	7.80E+00	1.10E-01	1.00E-01	8.10E-02	4.80E-02	4.00E-01	7.00E-02	7.50E-01
Benzo(k)fluoranthene	207-08-9	mg/kg	<0.019	6.40E+00	7.50E-02	5.70E-02	6.00E-02	2.70E-02	2.40E-01	4.40E-02	8.30E-01
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
Bis(2-chloroethyl)ether	111-44-4	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	2.00E-02
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	<0.019	<0.048	9.20E-02	<0.018	<0.018	5.90E-02	3.70E-01	1.70E-01	2.90E-02
Butyl benzyl phthalate	85-68-7	mg/kg	<0.033	<0.083	3.70E-02	<0.031	<0.031	<0.028	<0.059	<0.044	<0.033
Caprolactam	105-60-2	mg/kg	<0.023	<0.059	<0.024	<0.022	<0.022	<0.02	<0.042	<0.032	2.50E-02
Carbazole	86-74-8	mg/kg	<0.019	4.50E+00	2.40E-02	<0.018	<0.018	<0.016	1.30E-01	<0.025	<0.019
Chrysene	218-01-9	mg/kg	4.40E-02	1.90E+01	1.50E-01	1.20E-01	1.10E-01	4.00E-02	4.60E-01	6.40E-02	5.30E-02
Dibenz(a,h)anthracene	53-70-3	mg/kg	<0.023	2.30E+00	2.40E-02	<0.022	<0.022	<0.02	<0.042	4.40E-02	3.90E-02
Dibenzofuran	132-64-9	mg/kg	<0.019	1.60E+00	<0.019	<0.018	<0.018	<0.016	4.50E-02	<0.025	<0.019
Diethyl phthalate	84-66-2	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
Dimethyl phthalate	131-11-3	mg/kg	<0.023	<0.059	<0.024	<0.022	<0.022	<0.02	<0.042	<0.032	<0.024
Di-n-butyl phthalate	84-74-2	mg/kg	<0.023	<0.059	<0.024	<0.022	<0.022	2.10E-02	<0.042	<0.032	<0.024
Di-n-octyl phthalate	117-84-0	mg/kg	<0.023	<0.059	<0.024	<0.022	<0.022	<0.02	<0.042	<0.032	1.60E-01
Fluoranthene	206-44-0	mg/kg	4.30E-02	3.30E+01	2.50E-01	2.00E-01	2.10E-01	6.10E-02	1.10E+00	1.80E-01	1.40E-01
Fluorene	86-73-7	mg/kg	<0.019	2.40E+00	<0.019	<0.018	<0.018	<0.016	7.40E-02	<0.025	<0.019
Hexachlorobenzene	118-74-1	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
Hexachlorobutadiene	87-68-3	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
Hexachlorocyclopentadiene	77-47-4	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
Hexachloroethane	67-72-1	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
Indeno(1 2 3-cd)pyrene	193-39-5	mg/kg	<0.019	9.70E+00	1.20E-01	1.00E-01	6.40E-02	3.00E-02	3.90E-01	6.10E-02	6.50E-01
Isophorone	78-59-1	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
Naphthalene	91-20-3	mg/kg	<0.019	2.40E+00	<0.019	<0.018	2.40E-02	<0.016	8.80E-02	2.70E-02	<0.019
Nitrobenzene	98-95-3	mg/kg	<0.019	<0.048	<0.019	<0.018	<0.018	<0.016	<0.034	<0.025	<0.019
N-Nitrosodi-n-propylamine	621-64-7	mg/kg	<0.023	<0.059	<0.024	<0.022	<0.022	<0.02	<0.042	<0.032	9.40E-02
N-Nitrosodiphenylamine	86-30-6	mg/kg	<0.023	<0.059	<0.024	<0.022	<0.022	<0.02	<0.042	<0.032	<0.024

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Sediment Analytical Data Summary
Up River Road
Brine Service Company Superfund Site

Analyte	CAS No.	Units	Sample Location / Depth Interval / Sample Date								
			UPSD01 0-0.5 ft 2/1/2012	UPSD02 0-0.5 ft 2/1/2012	UPSD03 0-0.5 ft 2/1/2012	UPSD04 0-0.5 ft 2/1/2012	UPSD04 0-0.5 ft 2/1/2012	UPSD05 0-0.5 ft 2/1/2012	UPSD06 0-0.5 ft 1/31/2012	UPSD06 0-0.5 ft 1/31/2012	UPSD07 0-0.5 ft 2/1/2012
Pentachlorophenol	87-86-5	mg/kg	<0.021	<0.054	<0.021	<0.02	<0.02	<0.018	<0.038	<0.028	<0.021
Phenanthrene	85-01-8	mg/kg	5.40E-02	2.40E+01	1.00E-01	8.70E-02	7.70E-02	3.70E-02	6.50E-01	8.20E-02	5.60E-02
Phenol	108-95-2	mg/kg	<0.023	<0.059	<0.024	<0.022	<0.022	<0.02	<0.042	<0.032	<0.024
Pyrene	129-00-0	mg/kg	5.00E-02	2.40E+01	1.70E-01	1.70E-01	1.40E-01	4.70E-02	7.20E-01	1.20E-01	8.60E-02
Low Molecular Weight PAHs	NA	mg/kg	0.202	110.3	0.854	0.711	0.654	0.23	3.181	0.538	1.183
High Molecular Weight PAHs	NA	mg/kg	0.1215	38.674	0.186	0.177	0.205	0.095	1.237	0.2095	0.1595
Total PAHs	NA	mg/kg	0.3715	195.244	1.528	1.304	1.223	0.479	6.096	1.045	4.452
			UPSD01	UPSD02	UPSD03	UPSD04	UPSD04	UPSD05	UPSD06	UPSD06	UPSD07

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Groundwater Analytical Data Summary
Upper Transmissive Unit
Brine Service Company Superfund Site

Sample Location			MWGW02	MWGW03	MWGW04	MWGW05	MWGW06	MWGW07	MWGW07	MWGW08	MWGW12	MWGW13	MWGW14	MWGW15	MWGW16	MWGW20
Sample Date			2/27/2014	2/27/2014	2/26/2014	2/26/2014	2/26/2014	2/27/2014	2/27/2014	2/27/2014	2/27/2014	2/26/2014	2/26/2014	2/26/2014	2/26/2014	2/27/2014
Sample ID			MWGW02-022714	MWGW03-022714	MWGW04-022614	MWGW05-022614	MWGW06-022614	MWGW07-022714	MWGW07-FD-022714	MWGW08-022714	MWGW12-022714	MWGW13-022614	MWGW14-022614	MWGW15-022614	MWGW16-022614	MWGW20-022714
Analyte	CAS No.	Units														
Aluminum, Dissolved	7429-90-5	mg/l	---	0.00864 J	<0.008	<0.008	---	---	---	---	---	<0.008	0.0108 J	0.016 J	<0.02	---
Aluminum, Total	7429-90-5	mg/l	0.14	<0.008	<0.008	0.0339	0.114	0.392	0.324	0.67	0.113	0.00801 J	0.038	0.0649	0.0388 J	0.0467
Antimony, Dissolved	7440-36-0	mg/l	---	<0.0016	<0.0016	<0.0016	---	---	---	---	---	<0.0016	<0.0016	<0.0016	<0.004	---
Antimony, Total	7440-36-0	mg/l	0.0332	<0.0016	<0.0016	<0.0016	<0.0016	<0.004	<0.004	<0.004	0.0638	<0.0016	<0.0016	<0.0016	<0.004	<0.0016
Arsenic, Dissolved	7440-38-2	mg/l	---	0.0046 J	0.00348 J	0.0128	---	---	---	---	---	0.00614 J	0.00795 J	0.00949 J	0.0089 J	---
Arsenic, Total	7440-38-2	mg/l	1.37	0.00377 J	0.00472 J	0.0181	0.0298	0.276	0.27	0.198	2.4	0.00638 J	0.00893 J	0.0107	0.00888 J	0.0829
Barium, Dissolved	7440-39-3	mg/l	---	0.162	0.0494	0.073	---	---	---	---	---	0.118	0.0711	0.0522	0.0616	---
Barium, Total	7440-39-3	mg/l	0.159	0.165	0.047	0.0732	0.319	0.0698	0.065	0.1	1.99	0.136	0.0781	0.052	0.0624	0.0433
Beryllium, Dissolved	7440-41-7	mg/l	---	<0.0014	<0.0014	<0.0014	---	---	---	---	---	<0.0014	<0.0014	<0.0014	<0.0035	---
Beryllium, Total	7440-41-7	mg/l	<0.0035	<0.0014	<0.0014	<0.0014	<0.0014	<0.0035	<0.0035	<0.0035	<0.0035	<0.0014	<0.0014	<0.0014	<0.0035	<0.0014
Cadmium, Dissolved	7440-43-9	mg/l	---	<0.0016	<0.0016	<0.0016	---	---	---	---	---	<0.0016	<0.0016	<0.0016	<0.004	---
Cadmium, Total	7440-43-9	mg/l	<0.004	<0.0016	<0.0016	<0.0016	<0.0016	<0.004	<0.004	<0.004	<0.004	<0.0016	<0.0016	<0.0016	<0.004	<0.0016
Chromium, Dissolved	7440-47-3	mg/l	---	<0.002	<0.002	<0.002	---	---	---	---	---	<0.002	<0.002	<0.002	<0.005	---
Chromium, Total	7440-47-3	mg/l	0.404	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	0.00608 J	0.0109 J	<0.002	<0.002	<0.002	<0.005	<0.002
Cobalt, Dissolved	7440-48-4	mg/l	---	<0.0016	0.00209 J	<0.0016	---	---	---	---	---	<0.0016	0.00256 J	0.00896 J	0.04	---
Cobalt, Total	7440-48-4	mg/l	0.161	0.00168 J	0.00203 J	<0.0016	0.00636 J	<0.004	<0.004	0.00922 J	0.018 J	0.00506 J	0.00239 J	0.00902 J	0.0373	<0.0016
Copper, Dissolved	7440-50-8	mg/l	---	<0.002	<0.002	<0.002	---	---	---	---	---	<0.002	<0.002	0.00209 J	<0.005	---
Copper, Total	7440-50-8	mg/l	<0.005	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.005	<0.002
Lead, Dissolved	7439-92-1	mg/l	---	<0.0014	<0.0014	<0.0014	---	---	---	---	---	<0.0014	<0.0014	<0.0014	<0.0035	---
Lead, Total	7439-92-1	mg/l	0.0122 J	<0.0014	<0.0014	<0.0014	<0.0014	<0.0035	<0.0035	<0.0035	<0.0035	<0.0014	<0.0014	<0.0014	<0.0035	<0.0014
Manganese, Dissolved	7439-96-5	mg/l	---	0.333	0.822	0.555	---	---	---	---	---	0.134	0.498	0.356	2.13	---
Manganese, Total	7439-96-5	mg/l	0.206	0.342	0.874	0.619	0.512	6.04	6.02	0.946	3.05	0.135	0.516	0.374	2.03	0.589
Nickel, Dissolved	7440-02-0	mg/l	---	<0.002	0.00311 J	<0.002	---	---	---	---	---	<0.002	0.00331 J	0.00283 J	0.0166 J	---
Nickel, Total	7440-02-0	mg/l	0.632	<0.002	0.00279 J	<0.002	<0.002	0.0147 J	0.0143 J	0.121	0.429	<0.002	0.00327 J	0.00285 J	0.0161 J	0.00293 J
Selenium, Dissolved	7782-49-2	mg/l	---	<0.002	0.00481 J	<0.002	---	---	---	---	---	<0.002	<0.002	0.00541 J	0.0114 J	---
Selenium, Total	7782-49-2	mg/l	0.0101 J	<0.002	0.00418 J	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	0.00571 J	0.0126 J	<0.002
Silver, Dissolved	7440-22-4	mg/l	---	<0.0016	<0.0016	<0.0016	---	---	---	---	---	<0.0016	<0.0016	<0.0016	<0.004	---
Silver, Total	7440-22-4	mg/l	<0.004	<0.0016	<0.0016	<0.0016	<0.0016	<0.004	<0.004	<0.004	<0.004	<0.0016	<0.0016	<0.0016	<0.004	<0.0016
Thallium, Dissolved	7440-28-0	mg/l	---	<0.002	<0.002	<0.002	---	---	---	---	---	<0.002	<0.002	<0.002	<0.005	---
Thallium, Total	7440-28-0	mg/l	<0.005	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.005	<0.002
Vanadium, Dissolved	7440-62-2	mg/l	---	0.00225 J	0.00575 J	<0.0018	---	---	---	---	---	0.00483 J	0.0271	0.0369	0.0184 J	---
Vanadium, Total	7440-62-2	mg/l	1.17	0.0025 J	0.00617 J	<0.0018	<0.0018	0.00949 J	0.00843 J	0.0469	1.39	0.00522 J	0.0276	0.0372	0.0185 J	0.0066 J
Zinc, Dissolved	7440-66-6	mg/l	---	<0.005	0.00671 J	0.00789 J	---	---	---	---	---	0.00573 J	0.0127	0.00752 J	<0.012	---
Zinc, Total	7440-66-6	mg/l	0.326	<0.004	<0.004	0.0067 J	<0.004	<0.01	<0.01	0.0424	0.0226 J	<0.004	0.0134	<0.004	<0.01	0.00459 J
Mercury, Dissolved	7439-97-6	mg/l	---	<4.2e-005	<4 2e-005	<4.2e-005	---	---	---	---	---	<4.2e-005	<4.2e-005	<4.2e-005	<4.2e-005	---
Mercury, Total	7439-97-6	mg/l	0.000727	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005
Cyanide	57-12-5	mg/l	0.131	0.00724 J	<0.005	<0.005	<0.005	0.0295	0.0247	0.0168 J	0.061	<0.005	<0.005	<0.005	<0.005	<0.005
4,4´-DDD	72-54-8	mg/l	<0.0012	<0.00012	<5e-005	<2.5e-006	<2.5e-006	0.0009	0.00075	<5e-005	<0.0012	<0.00012	<2.5e-006	<2.5e-006	<2.5e-005	<2.5e-005
4,4´-DDE	72-55-9	mg/l	<0.0012	<0.00012	<5e-005	<2.5e-006	<2.5e-006	<5e-005	<5e-005	0.00016	0.0044	<0.00012	<2.5e-006	<2.5e-006	<2.5e-005	<2.5e-005
4,4´-DDT	50-29-3	mg/l	<0.0012	<0.00012	<5e-005	2.10E-05	2.80E-05	0.00046	0.00022	<5e-005	<0.0012	<0.00012	2.50E-05	<2.5e-006	<2.5e-005	0.00011
Aldrin	309-00-2	mg/l	<0.00062	<6.2e-005	<2 5e-005	<1.2e-006	<1.2e-006	<2.5e-005	<2.5e-005	<2.5e-005	<0.00062	<6.2e-005	<1.2e-006	<1.2e-006	<1.2e-005	<1.2e-005
alpha-BHC	319-84-6	mg/l	0.0075	<6.2e-005	<2 5e-005	<1.2e-006	<1.2e-006	<2.5e-005	<2.5e-005	<2.5e-005	<0.00062	<6.2e-005	<1.2e-006	<1.2e-006	<1.2e-005	<1.2e-005
alpha-Chlordane	5103-71-9	mg/l	<0.0012	<0.00012	<5e-005	<2.5e-006	2.20E-05	<5e-005	<5e-005	<5e-005	<0.0012	<0.00012	1.70E-05	<2.5e-006	<2.5e-005	<2.5e-005
beta-BHC	319-85-7	mg/l	<0.00062	<6.2e-005	<2 5e-005	<1.2e-006	<1.2e-006	0.00055	0.00049	<2.5e-005	0.0075	<6.2e-005	<1.2e-006	1.60E-05	<1.2e-005	6.30E-05
delta-BHC	319-86-8	mg/l	<0.00062	<6.2e-005	<2 5e-005	5.00E-06	1.80E-05	<2.5e-005	<2.5e-005	<2.5e-005	<0.00062	<6.2e-005	2.60E-05	2.00E-05	<1.2e-005	<1.2e-005
Dieldrin	60-57-1	mg/l	0.0049	<0.00012	<5e-005	<2.5e-006	<2.5e-006	<5e-005	<5e-005	<5e-005	<0.0012	<0.00012	<2.5e-006	<2.5e-006	<2.5e-005	<2.5e-005
Endosulfan I	959-98-8	mg/l	<0.00062	<6.2e-005	6.50E-05	2.90E-06	6.30E-06	<2.5e-005	<2.5e-005	<2.5e-005	<0.00062	<6.2e-005	<1.2e-006	<1.2e-006	<1.2e-005	<1.2e-005
Endosulfan II	33213-65-9	mg/l	<0.0012	<0.00012	<5e-005	<2.5e-006	<2.5e-006	0.0002	0.00013	9.90E-05	<0.0012	<0.00012	<2.5e-006	<2.5e-006	<2.5e-005	0.00015
Endosulfan sulfate	1031-07-8	mg/l	<0.0012	<0.00012	<5e-005	<2.5e-006	<2.5e-006	<5e-005	8.80E-05	0.00024	<0.0012	<0.00012	<2.5e-006	2.30E-05	<2.5e-005	<2.5e-005
Endrin	72-20-8	mg/l	<0.0012	<0.00012	<5e-005	<2.5e-006	<2.5e-006	0.00077	0.00067	<5e-005	<0.0012	<0.00012	<2.5e-006	<2.5e-006	<2.5e-005	<2.5e-005
Endrin aldehyde	7421-93-4	mg/l	<0.0012	<0.00012	<5e-005	<2.5e-006	<2.5e-006	<5e-005	0.0003	<5e-005	0.0035	<0.00012	<2.5e-006	<2.5e-006	<2.5e-005	<2.5e-005
gamma-BHC	58-89-9	mg/l	0.0021	<6.2e-005	<2 5e-005	<1.2e-006	<1.2e-006	<2.5e-005	<2.5e-005	<2.5e-005	<0.00062	<6.2e-005	<1.2e-006	<1.2e-006	<1.2e-005	0.00017
gamma-Chlordane	5103-74-2	mg/l	<0.0012	<0.00012	<5e-005	<2.5e-006	4.50E-05	<5e-005	<5e-005	<5e-005	<0.0012	<0.00012	<2.5e-006	6.70E-05	<2.5e-005	<2.5e-005
Heptachlor	76-44-8	mg/l	0.0025	<6.2e-005	<2 5e-005	<1.2e-006	<1.2e-006	0.00051	0.00044	<2.5e-005	0.0058	<6.2e-005	1.60E-05	3.10E-05	<1.2e-005	<1.2e-005
Heptachlor epoxide	1024-57-3	mg/l	<0.00062	<6.2e-005	<2 5e-005	<1.2e-006	<1.2e-006	0.00017	0.00021	<2.5e-005	<0.00062	<6.2e-005	1.90E-05	2.90E-05	<1.2e-005	<1.2e-005
Methoxychlor	72-43-5	mg/l	<0.0062	<0.00062	<0.00025	<1.2e-005	<1.2e-005	0.00097	0.0012	<0.00025	<0.0062	<0.00062	<1.2e-005	<1.2e-005	<0.00012	<0.00012
Toxaphene	8001-35-2	mg/l	<0.012	<0.0012	<0.0005	<2.5e-005	<2.5e-005	<0.0005	<0.0005	<0.0005	<0.012	<0.0012	<2.5e-005	<2.5e-005	<0.00025	<0.00025
Aroclor 1016	12674-11-2	mg/l	<0.01	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.005	<0.0001	<0.0001	<0.0001	<0.0001
Aroclor 1221	11104-28-2	mg/l	<0.05	<0.025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	<0.025	<0.0005	<0.0005	<0.0005	<0.0005
Aroclor 1232	11141-16-5	mg/l	<0.05	<0.025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	<0.025	<0.0005	<0.0005	<0.0005	<0.0005
Aroclor 1242	53469-21-9	mg/l	<0.05	<0.025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	<0.025	<0.0005	<0.0005	<0.0005	<0.0005
Aroclor 1248	12672-29-6	mg/l	<0.05	<0.025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	<0.025	<0.0005	<0.0005	<0.0005	<0.0005
Aroclor 1254	11097-69-1	mg/l	<0.05	<0.025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	<0.025	<0.0005	<0.0005	<0.0005	<0.0005
Aroclor 1260	11096-82-5	mg/l	<0.01	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.005	<0.0001	<0.0001	<0.0001	<0.0001
1,1,1,2-Tetrachloroethane	630-20-6	mg/l	<0.0075	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
1 1 1-Trichloroethane	71-55-6	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1,1,2,2-Tetrachloroethane	79-34-5	mg/l	<0.012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2-Trichlor-1,2,2-trifluoroethan	76-13-1	mg/l	<0.025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
1 1 2-Trichloroethane	79-00-5	mg/l	<0.0075	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
1 1-Dichloroethane	75-34-3	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1,1-Dichloroethene	75-35-4	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1 2 4-Trichlorobenzene	120-82-1	mg/l	<0.012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1 2 4-Trimethylbenzene	95-63-6	mg/l	0.13	0.0093	<0.0003	<0.0003	<0.0003	0.022	0.022	0.008	0.023	<0.0003	<0.0003	<0.0003	<0.0003	0.015
1,2-Dibromoethane	106-93-4	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1 2-Dichlorobenzene	95-50-1	mg/l	<0.012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1 2-Dichloroethane	107-06-2	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1,2-Dichloropropane	78-87-5	mg/l	<0.012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Groundwater Analytical Data Summary
Upper Transmissive Unit
Brine Service Company Superfund Site

Sample Location			MWGW02	MWGW03	MWGW04	MWGW05	MWGW06	MWGW07	MWGW07	MWGW08	MWGW12	MWGW13	MWGW14	MWGW15	MWGW16	MWGW20
Sample Date			2/27/2014	2/27/2014	2/26/2014	2/26/2014	2/26/2014	2/27/2014	2/27/2014	2/27/2014	2/27/2014	2/26/2014	2/26/2014	2/26/2014	2/26/2014	2/27/2014
Sample ID			MWGW02-022714	MWGW03-022714	MWGW04-022614	MWGW05-022614	MWGW06-022614	MWGW07-022714	MWGW07-FD-022714	MWGW08-022714	MWGW12-022714	MWGW13-022614	MWGW14-022614	MWGW15-022614	MWGW16-022614	MWGW20-022714
Analyte	CAS No.	Units														
1,3,5-Trimethylbenzene	108-67-8	mg/l	0.039	0.0027	<0.0003	<0.0003	<0.0003	0.0021	0.0022	0.003	0.0061	<0.0003	<0.0003	<0.0003	<0.0003	0.018
1 3-Dichlorobenzene	541-73-1	mg/l	<0.01	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
1 4-Dichlorobenzene	106-46-7	mg/l	<0.01	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
2-Butanone	78-93-3	mg/l	0.33	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0035	0.22	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2-Hexanone	591-78-6	mg/l	<0.025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.028	<0.001	<0.001	<0.001	<0.001	<0.001
4-Methyl-2-pentanone	108-10-1	mg/l	0.048 J	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	0.0063	<0.0035	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007
Acetone	67-64-1	mg/l	0.9	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.017	0.66	<0.002	<0.002	<0.002	<0.002	0.006
Benzene	71-43-2	mg/l	5.8	0.0084	<0.0002	<0.0002	0.0026	0.0019	0.0019	0.18	4.3	<0.0002	<0.0002	0.00035 J	<0.0002	0.025
Bromodichloromethane	75-27-4	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bromoform	75-25-2	mg/l	<0.01	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Bromomethane	74-83-9	mg/l	<0.01	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Carbon disulfide	75-15-0	mg/l	0.043 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.0014 J	<0.003	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Carbon tetrachloride	56-23-5	mg/l	<0.012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	mg/l	<0.0075	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Chloroethane	75-00-3	mg/l	<0.0075	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Chloroform	67-66-3	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Chloromethane	74-87-3	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
cis-1 2-Dichloroethene	156-59-2	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
cis-1 3-Dichloropropene	10061-01-5	mg/l	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cyclohexane	110-82-7	mg/l	0.074	0.025	<0.0003	<0.0003	0.0032	0.0059	0.0062	0.0017	0.011	0.0019	<0.0003	<0.0003	<0.0003	0.021
Dibromochloromethane	124-48-1	mg/l	<0.0075	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Dichlorodifluoromethane	75-71-8	mg/l	<0.0075	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Ethylbenzene	100-41-4	mg/l	0.36	0.0078	<0.0003	<0.0003	0.028	0.11	0.11	0.019	0.063	0.00083 J	<0.0003	<0.0003	<0.0003	0.018
Isopropylbenzene	98-82-8	mg/l	0.013 J	0.0078	<0.0003	<0.0003	0.0091	0.025	0.025	0.0091	0.0022 J	0.027	<0.0003	0.00045 J	<0.0003	0.0033
Methyl acetate	79-20-9	mg/l	<0.025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
Methyl tert-butyl ether	1634-04-4	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Methylcyclohexane	108-87-2	mg/l	0.044	0.012	<0.0003	<0.0003	0.0034	0.0028	0.0029	0.0011	0.004 J	0.002	<0.0003	<0.0003	<0.0003	0.017
Methylene chloride	75-09-2	mg/l	<0.01	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Naphthalene	91-20-3	mg/l	0.11	0.0058	<0.0003	<0.0003	0.0043	0.024	0.024	0.012	0.052	<0.0003	<0.0003	<0.0003	<0.0003	0.017
n-Butylbenzene	104-51-8	mg/l	<0.01	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.002	0.00091 J	<0.0004	<0.0004	<0.0004	0.0019
n-Propylbenzene	103-65-1	mg/l	0.011 J	0.0022	<0.0003	<0.0003	0.0083	0.013	0.013	0.0022	0.002 J	0.024	<0.0003	<0.0003	<0.0003	0.0033
sec-Butylbenzene	135-98-8	mg/l	<0.0075	0.0021	<0.0003	<0.0003	0.002	0.01	0.01	0.0012	<0.0015	0.0043	<0.0003	<0.0003	<0.0003	0.0017
Styrene	100-42-5	mg/l	<0.0075	<0.0003	<0.0003	<0.0003	<0.0003	0.016	0.015	0.006	<0.0015	<0.0003	<0.0003	<0.0003	<0.0003	0.0015
tert-Butylbenzene	98-06-6	mg/l	<0.0075	0.0071	0.00031 J	<0.0003	0.0031	<0.0003	0.0012	<0.0003	<0.0015	0.008	<0.0003	0.0004 J	<0.0003	0.00064 J
Tetrachloroethene	127-18-4	mg/l	<0.0075	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	108-88-3	mg/l	1.4	0.0012	<0.0002	<0.0002	<0.0002	0.014	0.014	0.024	1.2	<0.0002	<0.0002	<0.0002	<0.0002	0.0083
trans-1 2-Dichloroethene	156-60-5	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
trans-1,3-Dichloropropene	10061-02-6	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Trichloroethene	79-01-6	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Trichlorofluoromethane	75-69-4	mg/l	<0.0075	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Vinyl chloride	75-01-4	mg/l	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Xylenes, Total	1330-20-7	mg/l	1.4	0.018	<0.0005	<0.0005	<0.0005	0.037	0.037	0.034	0.32	<0.0005	<0.0005	<0.0005	<0.0005	0.085
1 1´-Biphenyl	92-52-4	mg/l	0.012	<3.2e-005	<3 2e-005	<3.2e-005	<3.2e-005	0.001	0.0011	<3.2e-005	<0.00032	<3.2e-005	<3.2e-005	<3.2e-005	<3.2e-005	<3.2e-005
1-Methylnaphthalene	90-12-0	mg/l	0.048	0.00092	<3e-005	<3e-005	0.00012 J	0.044	0.052	0.0023	0.018	0.0001 J	<3e-005	<3e-005	<3e-005	0.00027
2,4,5-Trichlorophenol	95-95-4	mg/l	0.0042	<4e-005	<4e-005	<4e-005	<4e-005	0.001	0.0012	<4e-005	<0.0004	5.1e-005 J	<4e-005	0.00019 J	<4e-005	0.00012 J
2 4 6-Trichlorophenol	88-06-2	mg/l	0.0064	<6e-005	<6e-005	<6e-005	<6e-005	0.002	0.0025	<6e-005	<0.0006	<6e-005	<6e-005	0.001	<6e-005	7e-005 J
2 4-Dichlorophenol	120-83-2	mg/l	<0.00065	<6.5e-005	<6 5e-005	<6.5e-005	<6.5e-005	0.0016	0.0017	<6.5e-005	<0.00065	0.00014 J	<6.5e-005	0.00029	<6.5e-005	<6.5e-005
2,4-Dimethylphenol	105-67-9	mg/l	43	7.7e-005 J	<3 3e-005	<3.3e-005	<3.3e-005	0.18	0.18	2.4	25	0.00047	<3.3e-005	0.00061	<3.3e-005	0.024
2 4-Dinitrophenol	51-28-5	mg/l	<0.0005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<0.0005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
2 4-Dinitrotoluene	121-14-2	mg/l	<0.0003	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<0.0003	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005
2,6-Dinitrotoluene	606-20-2	mg/l	<0.0005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<0.0005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
2-Chloronaphthalene	91-58-7	mg/l	<0.0004	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<0.0004	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005
2-Chlorophenol	95-57-8	mg/l	<0.0004	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<0.0004	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005
2-Methylnaphthalene	91-57-6	mg/l	0.072	0.00076	<3.4e-005	<3.4e-005	<3.4e-005	0.00024	0.0003	0.0019	0.015	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005
2-Methylphenol	95-48-7	mg/l	51	0.00013 J	<3 3e-005	<3.3e-005	<3.3e-005	0.0055	0.0058	1.7	54	0.00014 J	<3.3e-005	0.00019 J	<3.3e-005	0.0023
2-Nitroaniline	88-74-4	mg/l	<0.00038	<3.8e-005	<3 8e-005	<3.8e-005	<3.8e-005	<3.8e-005	<3.8e-005	<3.8e-005	<0.00038	<3.8e-005	<3.8e-005	<3.8e-005	<3.8e-005	<3.8e-005
2-Nitrophenol	88-75-5	mg/l	<0.00024	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<0.00024	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005
3&4-Methylphenol	106-44-5	mg/l	53	<3e-005	<3e-005	<3e-005	<3e-005	0.0087	0.0098	0.16	57	0.00025	<3e-005	0.00067	<3e-005	0.0026
3 3´-Dichlorobenzidine	91-94-1	mg/l	<0.00024	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<0.00024	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005
3-Nitroaniline	99-09-2	mg/l	<0.00056	<5.6e-005	<5.6e-005	<5.6e-005	<5.6e-005	<5.6e-005	<5.6e-005	<5.6e-005	<0.00056	<5.6e-005	<5.6e-005	<5.6e-005	<5.6e-005	<5.6e-005
4,6-Dinitro-2-methylphenol	534-52-1	mg/l	<0.00073	<7.3e-005	<7 3e-005	<7.3e-005	<7.3e-005	<7.3e-005	<7.3e-005	<7.3e-005	<0.00073	<7.3e-005	<7.3e-005	<7.3e-005	<7.3e-005	<7.3e-005
4-Bromophenyl phenyl ether	101-55-3	mg/l	<0.00047	<4.7e-005	<4.7e-005	<4.7e-005	<4.7e-005	<4.7e-005	<4.7e-005	<4.7e-005	<0.00047	<4.7e-005	<4.7e-005	<4.7e-005	<4.7e-005	<4.7e-005
4-Chloro-3-methylphenol	59-50-7	mg/l	<0.00022	<2.2e-005	<2 2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<0.00022	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005
4-Chloroaniline	106-47-8	mg/l	<0.00021	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<0.00021	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005
4-Chlorophenyl phenyl ether	7005-72-3	mg/l	<0.00043	<4.3e-005	<4 3e-005	<4.3e-005	<4.3e-005	<4.3e-005	<4.3e-005	<4.3e-005	<0.00043	<4.3e-005	<4.3e-005	<4.3e-005	<4.3e-005	<4.3e-005
4-Nitroaniline	100-01-6	mg/l	<0.0004	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<0.0004	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005
4-Nitrophenol	100-02-7	mg/l	<0.0006	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005	<0.0006	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005
Acenaphthene	83-32-9	mg/l	0.015	7.3e-005 J	<3e-005	<3e-005	<3e-005	0.0023	0.0021	<3e-005	0.024	0.00013 J	<3e-005	<3e-005	<3e-005	0.0019
Acenaphthylene	208-96-8	mg/l	<0.00021	5.5e-005 J	<2.1e-005	<2.1e-005	<2.1e-005	0.00042	0.00049	<2.1e-005	<0.00021	0.00011 J	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005
Acetophenone	98-86-2	mg/l	14	0.0035	0.0066	0.0049	0.0048	0.078	0.079	0.036	1.6	0.0082	0.0074	0.0085	0.0075	0.0096
Anthracene	120-12-7	mg/l	0.0017 J	<2e-005	<2e-005	<2e-005	<2e-005	<2e-005	<2e-005	<2e-005	<0.0002	<2e-005	<2e-005	<2e-005	<2e-005	0.00058
Benz(a)anthracene	56-55-3	mg/l	<0.00025	<2.5e-005	<2 5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<0.00025	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005
Benzaldehyde	100-52-7	mg/l	<0.00046	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	0.024	0.023	0.01	<0.00046	<4.6e-005	<4.6e-005	0.00021	<4.6e-005	<4.6e-005
Benzo(a)pyrene	50-32-8	mg/l	<0.0003	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<0.0003	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005
Benzo(b)fluoranthene	205-99-2	mg/l	<0.00028	<2.8e-005	<2 8e-005	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005	<0.00028	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005
Benzo(g,h,i)perylene	191-24-2	mg/l	<0.00026	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<0.00026	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005
Benzo(k)fluoranthene	207-08-9	mg/l	<0.00028	<2.8e-005	<2 8e-005	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005	<0.00028	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005
Bis(2-chloroethoxy)methane	111-91-1	mg/l	<0.00022	<2.2e-005	<2 2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<0.00022	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005
Bis(2-chloroethyl)ether	111-44-4	mg/l	<0.00029	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<0.00029	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005
Bis(2-chloroisopropyl)ether	108-60-1	mg/l	<0.00064	<6.4e-005	<6.4e-005	<6.4e-005	<6.4e-005	<6.4e-005	<6.4e-005	<6.4e-005	<0.00064	<6.4e-005	<6.4e-005	<6.4e-005	<6.4e-005	<6.4e-005
Bis(2-ethylhexyl)phthalate	117-81-7	mg/l	0.0011 J	6.7e-005 J	<3 3e-005	<3.3e-005	0.00013 J	<3.3e-005	<3.3e-005	0.0011	<0.00033	0.00014 J	0.00041	0.00016 J	0.00016 J	7.8e-005 J
Butyl benzyl phthalate	85-68-7	mg/l	<0.00021	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<0.00021	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Groundwater Analytical Data Summary
Upper Transmissive Unit
Brine Service Company Superfund Site

Sample Location			MWGW02	MWGW03	MWGW04	MWGW05	MWGW06	MWGW07	MWGW07	MWGW08	MWGW12	MWGW13	MWGW14	MWGW15	MWGW16	MWGW20
Sample Date			2/27/2014	2/27/2014	2/26/2014	2/26/2014	2/26/2014	2/27/2014	2/27/2014	2/27/2014	2/27/2014	2/26/2014	2/26/2014	2/26/2014	2/26/2014	2/27/2014
Sample ID			MWGW02-022714	MWGW03-022714	MWGW04-022614	MWGW05-022614	MWGW06-022614	MWGW07-022714	MWGW07-FD-022714	MWGW08-022714	MWGW12-022714	MWGW13-022614	MWGW14-022614	MWGW15-022614	MWGW16-022614	MWGW20-022714
Analyte	CAS No.	Units														
Caprolactam	105-60-2	mg/l	<0.00059	0.00061	<5.9e-005	<5.9e-005	<5.9e-005	<5.9e-005	<5.9e-005	<5.9e-005	<0.00059	<5.9e-005	<5.9e-005	<5.9e-005	<5.9e-005	<5.9e-005
Carbazole	86-74-8	mg/l	<0.00025	<2.5e-005	<2 5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<0.00025	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	0.00063
Chrysene	218-01-9	mg/l	<0.00046	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	<0.00046	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	5.9e-005 J
Dibenz(a,h)anthracene	53-70-3	mg/l	<0.00026	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<0.00026	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005
Dibenzofuran	132-64-9	mg/l	<0.00025	<2.5e-005	<2 5e-005	<2.5e-005	8.3e-005 J	0.0015	0.0018	<2.5e-005	<0.00025	0.00041	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005
Diethyl phthalate	84-66-2	mg/l	<0.00021	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	0.013	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005
Dimethyl phthalate	131-11-3	mg/l	<0.0003	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<0.0003	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005
Di-n-butyl phthalate	84-74-2	mg/l	<0.0003	<3e-005	<3e-005	<3e-005	6e-005 J	<3e-005	<3e-005	<3e-005	<0.0003	<3e-005	<3e-005	<3e-005	<3e-005	0.001
Di-n-octyl phthalate	117-84-0	mg/l	<0.00023	<2.3e-005	<2 3e-005	<2.3e-005	0.00014 J	<2.3e-005	<2.3e-005	<2.3e-005	0.0098	<2.3e-005	9.7e-005 J	<2.3e-005	<2.3e-005	<2.3e-005
Fluoranthene	206-44-0	mg/l	<0.0002	<2e-005	<2e-005	<2e-005	<2e-005	<2e-005	<2e-005	<2e-005	<0.0002	<2e-005	<2e-005	<2e-005	<2e-005	0.00016 J
Fluorene	86-73-7	mg/l	0.0021	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	0.0025	0.0031	<2.1e-005	<0.00021	0.00021	<2.1e-005	<2.1e-005	<2.1e-005	0.001
Hexachlorobenzene	118-74-1	mg/l	<0.0007	<7e-005	<7e-005	<7e-005	<7e-005	<7e-005	<7e-005	<7e-005	<0.0007	<7e-005	<7e-005	<7e-005	<7e-005	<7e-005
Hexachlorobutadiene	87-68-3	mg/l	<0.0005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<0.0005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Hexachlorocyclopentadiene	77-47-4	mg/l	<0.00054	<5.4e-005	<5.4e-005	<5.4e-005	<5.4e-005	<5.4e-005	<5.4e-005	<5.4e-005	<0.00054	<5.4e-005	<5.4e-005	<5.4e-005	<5.4e-005	<5.4e-005
Hexachloroethane	67-72-1	mg/l	<0.00034	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005	<0.00034	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005
Indeno(1,2,3-cd)pyrene	193-39-5	mg/l	<0.00051	<5.1e-005	<5.1e-005	<5.1e-005	<5.1e-005	<5.1e-005	<5.1e-005	<5.1e-005	<0.00051	<5.1e-005	<5.1e-005	<5.1e-005	<5.1e-005	<5.1e-005
Isophorone	78-59-1	mg/l	<0.0003	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<0.0003	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005
Naphthalene	91-20-3	mg/l	0.059	0.0028	<5e-005	<5e-005	0.00015 J	0.0078	0.0084	0.0035	0.016	8.6e-005 J	<5e-005	0.00016 J	<5e-005	<5e-005
Nitrobenzene	98-95-3	mg/l	<0.0005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<0.0005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
N-Nitrosodi-n-propylamine	621-64-7	mg/l	<0.0004	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<0.0004	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005
N-Nitrosodiphenylamine	86-30-6	mg/l	<0.00029	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<0.00029	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005
Pentachlorophenol	87-86-5	mg/l	0.086	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	0.0021	0.0023	0.0017	0.039	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	0.00022
Phenanthrene	85-01-8	mg/l	0.013	<2e-005	<2e-005	<2e-005	<2e-005	0.0017	0.002	<2e-005	<0.0002	<2e-005	<2e-005	<2e-005	<2e-005	0.0032
Phenol	108-95-2	mg/l	22	8.5e-005 J	<3 2e-005	<3.2e-005	0.00021	<3.2e-005	0.0032	0.0077	34	<3.2e-005	<3.2e-005	0.00015 J	<3.2e-005	0.0012
Pyrene	129-00-0	mg/l	<0.00022	<2.2e-005	0.00011 J	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<0.00022	<2.2e-005	<2.2e-005	0.00014 J	<2.2e-005	0.00035

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Groundwater Analytical Data Summary
Upper Transmissive Unit
Brine Service Company Superfund Site

Sample Location			TWGW102A	TWGW102B	TWGW103	TWGW103	TWGW104	TWGW105	TWGW106	TWGW107	TWGW107	TWGW108	TWGWEF90-01	TWGWEF90-02	TWGWEF90-05	TWGWEF90-10
Sample Date			1/4/2013	1/4/2013	1/4/2013	1/4/2013	1/4/2013	1/4/2013	10/8/2013	10/8/2013	10/8/2013	10/8/2013	10/7/2013	10/8/2013	10/7/2013	10/9/2013
Sample ID			TWGW102A-010413	TWGW102B-010413	TWGW103-010413	TWGW103-FD-010413	TWGW104-010413	TWGW105-010413	TWGW106-100813	TWGW107-100813	TWGW107D-100813	TWGW108-100813	TWGWEF90-01	TWGWEF90-02	TWGWEF90-05	TWGWEF10-1BD
Analyte	CAS No.	Units														
Aluminum, Dissolved	7429-90-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Aluminum, Total	7429-90-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Antimony, Dissolved	7440-36-0	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Antimony, Total	7440-36-0	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Arsenic, Dissolved	7440-38-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Arsenic, Total	7440-38-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Barium, Dissolved	7440-39-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Barium, Total	7440-39-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Beryllium, Dissolved	7440-41-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Beryllium, Total	7440-41-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cadmium, Dissolved	7440-43-9	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cadmium, Total	7440-43-9	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chromium, Dissolved	7440-47-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chromium, Total	7440-47-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cobalt, Dissolved	7440-48-4	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cobalt, Total	7440-48-4	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Copper, Dissolved	7440-50-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Copper, Total	7440-50-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Lead, Dissolved	7439-92-1	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Lead, Total	7439-92-1	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Manganese, Dissolved	7439-96-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Manganese, Total	7439-96-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nickel, Dissolved	7440-02-0	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nickel, Total	7440-02-0	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Selenium, Dissolved	7782-49-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Selenium, Total	7782-49-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Silver, Dissolved	7440-22-4	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Silver, Total	7440-22-4	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Thallium, Dissolved	7440-28-0	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Thallium, Total	7440-28-0	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Vanadium, Dissolved	7440-62-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Vanadium, Total	7440-62-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Zinc, Dissolved	7440-66-6	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Zinc, Total	7440-66-6	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mercury, Dissolved	7439-97-6	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mercury, Total	7439-97-6	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cyanide	57-12-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4,4´-DDD	72-54-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4,4´-DDE	72-55-9	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4,4´-DDT	50-29-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Aldrin	309-00-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
alpha-BHC	319-84-6	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
alpha-Chlordane	5103-71-9	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
beta-BHC	319-85-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
delta-BHC	319-86-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dieldrin	60-57-1	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Endosulfan I	959-98-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Endosulfan II	33213-65-9	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Endosulfan sulfate	1031-07-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Endrin	72-20-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Endrin aldehyde	7421-93-4	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
gamma-BHC	58-89-9	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
gamma-Chlordane	5103-74-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Heptachlor	76-44-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Heptachlor epoxide	1024-57-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Methoxychlor	72-43-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Toxaphene	8001-35-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Aroclor 1016	12674-11-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Aroclor 1221	11104-28-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Aroclor 1232	11141-16-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Aroclor 1242	53469-21-9	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Aroclor 1248	12672-29-6	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Aroclor 1254	11097-69-1	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Aroclor 1260	11096-82-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1,1,1,2-Tetrachloroethane	630-20-6	mg/l	<0.001	<0.0002	<0.001	<0.001	<0.005	<0.0002	<0.015	<0.0015	<0.0015	<0.0003	<0.000209	<0.000209	<0.000209	<0.000209
1 1 1-Trichloroethane	71-55-6	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.01	<0.001	<0.001	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003
1,1,2,2-Tetrachloroethane	79-34-5	mg/l	<0.0025	<0.0005	<0.0025	<0.0025	<0.012	<0.0005	<0.025	<0.0025	<0.0025	<0.0005	<0.00019	<0.00019	<0.00019	<0.00019
1,1,2-Trichlor-1,2,2-trifluoroethan	76-13-1	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.05	<0.005	<0.005	<0.001	<0.000278	<0.000278	<0.000278	<0.000278
1 1 2-Trichloroethane	79-00-5	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.015	<0.0015	<0.0015	<0.0003	<0.000173	<0.000173	<0.000173	<0.000173
1 1-Dichloroethane	75-34-3	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.01	<0.001	<0.001	<0.0002	<0.000168	<0.000168	<0.000168	<0.000168
1,1-Dichloroethene	75-35-4	mg/l	<0.0025	<0.0005	<0.0025	<0.0025	<0.012	<0.0005	<0.01	<0.001	<0.001	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003
1 2 4-Trichlorobenzene	120-82-1	mg/l	<0.0025	<0.0005	<0.0025	<0.0025	<0.012	<0.0005	<0.025	<0.0025	<0.0025	<0.0005	<0.000168	<0.000168	<0.000168	<0.000168
1 2 4-Trimethylbenzene	95-63-6	mg/l	0.0098	0.00021 J	0.0062	0.006	0.41	0.018	0.56	0.0042 J	0.005 J	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
1,2-Dibromoethane	106-93-4	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.01	<0.001	<0.001	<0.0002	<0.00015	<0.00015	<0.00015	<0.00015
1 2-Dichlorobenzene	95-50-1	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.025	<0.0025	<0.0025	<0.0005	<0.000117	<0.000117	<0.000117	<0.000117
1 2-Dichloroethane	107-06-2	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.01	<0.001	<0.001	<0.0002	<0.00016	<0.00016	<0.00016	<0.00016
1,2-Dichloropropane	78-87-5	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.025	<0.0025	<0.0025	<0.0005	<0.000173	<0.000173	<0.000173	<0.000173

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Groundwater Analytical Data Summary
Upper Transmissive Unit
Brine Service Company Superfund Site

Sample Location			TWGW102A	TWGW102B	TWGW103	TWGW103	TWGW104	TWGW105	TWGW106	TWGW107	TWGW107	TWGW108	TWGWEF90-01	TWGWEF90-02	TWGWEF90-05	TWGWEF90-10
Sample Date			1/4/2013	1/4/2013	1/4/2013	1/4/2013	1/4/2013	1/4/2013	10/8/2013	10/8/2013	10/8/2013	10/8/2013	10/7/2013	10/8/2013	10/7/2013	10/9/2013
Sample ID			TWGW102A-010413	TWGW102B-010413	TWGW103-010413	TWGW103-FD-010413	TWGW104-010413	TWGW105-010413	TWGW106-100813	TWGW107-100813	TWGW107D-100813	TWGW108-100813	TWGWEF90-01	TWGWEF90-02	TWGWEF90-05	TWGWEF10-1BD
Analyte	CAS No.	Units														
1,3,5-Trimethylbenzene	108-67-8	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	0.22	0.014	0.32	<0.0015	<0.0015	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
1 3-Dichlorobenzene	541-73-1	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.02	<0.002	<0.002	<0.0004	<0.000128	<0.000128	<0.000128	<0.000128
1 4-Dichlorobenzene	106-46-7	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.02	<0.002	<0.002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002
2-Butanone	78-93-3	mg/l	0.013	<0.0004	0.12	0.12	<0.01	<0.0004	<0.025	<0.0025	<0.0025	<0.0005	<0.001	<0.001	<0.001	<0.001
2-Hexanone	591-78-6	mg/l	<0.004	<0.0008	<0.004	<0.004	<0.02	<0.0008	<0.05	<0.005	<0.005	<0.001	<0.0002	<0.0002	<0.0002	<0.0002
4-Methyl-2-pentanone	108-10-1	mg/l	<0.003	<0.0006	<0.003	<0.003	<0.015	<0.0006	<0.035	0.0047 J	<0.0035	<0.0007	<0.000116	<0.000116	<0.000116	<0.000116
Acetone	67-64-1	mg/l	0.041 U	<0.001	0.36	0.35	<0.025	<0.001	<0.1	<0.01	<0.01	<0.002	<0.005	0.00612 J	<0.005	<0.005
Benzene	71-43-2	mg/l	2.9	0.027	6.5	6.6	18	0.4	17	2.7	3	<0.0002	0.0363	<0.00014	<0.00014	0.0028
Bromodichloromethane	75-27-4	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.01	<0.001	<0.001	<0.0002	<0.000175	<0.000175	<0.000175	<0.000175
Bromoform	75-25-2	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.02	<0.002	<0.002	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005
Bromomethane	74-83-9	mg/l	<0.0025	<0.0005	<0.0025	<0.0025	<0.012	<0.0005	<0.02	<0.002	<0.002	<0.0004	<0.000392	<0.000392	<0.000392	<0.000392
Carbon disulfide	75-15-0	mg/l	0.0035 J	<0.0007	<0.0035	<0.0035	<0.018	0.00099 J	<0.03	<0.003	<0.003	<0.0006	<0.0005	<0.0005	<0.0005	<0.0005
Carbon tetrachloride	56-23-5	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.025	<0.0025	<0.0025	<0.0005	<0.000251	<0.000251	<0.000251	<0.000251
Chlorobenzene	108-90-7	mg/l	<0.001	<0.0002	<0.001	<0.001	<0.005	<0.0002	<0.015	<0.0015	<0.0015	<0.0003	<0.000136	<0.000136	<0.000136	<0.000136
Chloroethane	75-00-3	mg/l	<0.0025	<0.0005	<0.0025	<0.0025	<0.012	<0.0005	<0.015	<0.0015	<0.0015	<0.0003	<0.0004	<0.0004	<0.0004	<0.0004
Chloroform	67-66-3	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.01	<0.001	<0.001	<0.0002	<0.000173	<0.000173	<0.000173	<0.000173
Chloromethane	74-87-3	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.01	<0.001	<0.001	<0.0002	<0.00039	<0.00039	<0.00039	<0.00039
cis-1 2-Dichloroethene	156-59-2	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.01	<0.001	<0.001	<0.0002	<0.000121	<0.000121	<0.000121	<0.000121
cis-1 3-Dichloropropene	10061-01-5	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.005	<0.0005	<0.0005	<0.0001	<0.000146	<0.000146	<0.000146	<0.000146
Cyclohexane	110-82-7	mg/l	<0.0025	<0.0005	<0.0025	<0.0025	0.61	0.028	0.93	<0.0015	<0.0015	<0.0003	<0.001	<0.001	<0.001	<0.001
Dibromochloromethane	124-48-1	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.015	<0.0015	<0.0015	<0.0003	<0.000223	<0.000223	<0.000223	<0.000223
Dichlorodifluoromethane	75-71-8	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.015	<0.0015	<0.0015	<0.0003	<0.000429	<0.000429	<0.000429	<0.000429
Ethylbenzene	100-41-4	mg/l	0.023	0.0018	0.085	0.086	0.8	0.056	0.91	0.018	0.022	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
Isopropylbenzene	98-82-8	mg/l	0.0016 J	0.00038 J	0.0017 J	0.0016 J	0.079	0.0064	0.1	0.0038 J	0.0046 J	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
Methyl acetate	79-20-9	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.05	<0.005	<0.005	<0.001	---	---	---	---
Methyl tert-butyl ether	1634-04-4	mg/l	<0.001	<0.0002	<0.001	<0.001	<0.005	<0.0002	<0.01	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Methylcyclohexane	108-87-2	mg/l	<0.002	<0.0004	<0.002	<0.002	0.71	0.0094	0.99	<0.0015	<0.0015	<0.0003	---	---	---	---
Methylene chloride	75-09-2	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.02	<0.002	<0.002	<0.0004	<0.002	<0.002	<0.002	<0.002
Naphthalene	91-20-3	mg/l	0.029	<0.0005	0.029	0.03	0.21	0.018	0.28	<0.0015	<0.0015	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
n-Butylbenzene	104-51-8	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.02	<0.002	<0.002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002
n-Propylbenzene	103-65-1	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	0.075	0.0037	0.1	<0.0015	<0.0015	<0.0003	<0.000106	<0.000106	<0.000106	<0.000106
sec-Butylbenzene	135-98-8	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.015	<0.0015	<0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Styrene	100-42-5	mg/l	<0.0015	0.00066 J	<0.0015	<0.0015	<0.0075	<0.0003	<0.015	<0.0015	<0.0015	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
tert-Butylbenzene	98-06-6	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	0.0018	0.017 J	<0.0015	<0.0015	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
Tetrachloroethene	127-18-4	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.015	<0.0015	<0.0015	<0.0003	<0.000189	<0.000189	<0.000189	<0.000189
Toluene	108-88-3	mg/l	0.41	0.0003 J	2.1	2.1	8	0.038	5	0.061	0.073	<0.0002	0.00169	<0.0003	<0.0003	0.00116
trans-1 2-Dichloroethene	156-60-5	mg/l	<0.0015	<0.0003	<0.0015	<0.0015	<0.0075	<0.0003	<0.01	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
trans-1,3-Dichloropropene	10061-02-6	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.01	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Trichloroethene	79-01-6	mg/l	<0.001	<0.0002	<0.001	<0.001	<0.005	<0.0002	<0.01	<0.001	<0.001	<0.0002	<0.0002	<0.000317	<0.000317	<0.000317
Trichlorofluoromethane	75-69-4	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.015	<0.0015	<0.0015	<0.0003	<0.000244	<0.000244	<0.000244	<0.000244
Vinyl chloride	75-01-4	mg/l	<0.002	<0.0004	<0.002	<0.002	<0.01	<0.0004	<0.01	<0.001	<0.001	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	1330-20-7	mg/l	0.12	0.00054	0.45	0.45	4.6	0.15	5.2	0.085	0.1	<0.0005	0.000797 J	<0.000226	<0.000226	<0.000226
1 1´-Biphenyl	92-52-4	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1-Methylnaphthalene	90-12-0	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2,4,5-Trichlorophenol	95-95-4	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2 4 6-Trichlorophenol	88-06-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2 4-Dichlorophenol	120-83-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	105-67-9	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2 4-Dinitrophenol	51-28-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2 4-Dinitrotoluene	121-14-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2,6-Dinitrotoluene	606-20-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	91-58-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2-Chlorophenol	95-57-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylnaphthalene	91-57-6	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	95-48-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2-Nitroaniline	88-74-4	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2-Nitrophenol	88-75-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3&4-Methylphenol	106-44-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3 3´-Dichlorobenzidine	91-94-1	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3-Nitroaniline	99-09-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4,6-Dinitro-2-methylphenol	534-52-1	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4-Bromophenyl phenyl ether	101-55-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4-Chloro-3-methylphenol	59-50-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4-Chloroaniline	106-47-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4-Chlorophenyl phenyl ether	7005-72-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4-Nitroaniline	100-01-6	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4-Nitrophenol	100-02-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthene	83-32-9	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthylene	208-96-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Acetophenone	98-86-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Anthracene	120-12-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benz(a)anthracene	56-55-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzaldehyde	100-52-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)pyrene	50-32-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	205-99-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(g,h,i)perylene	191-24-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	207-08-9	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bis(2-chloroethoxy)methane	111-91-1	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bis(2-chloroethyl)ether	111-44-4	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bis(2-chloroisopropyl)ether	108-60-1	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bis(2-ethylhexyl)phthalate	117-81-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Butyl benzyl phthalate	85-68-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Groundwater Analytical Data Summary
Upper Transmissive Unit
Brine Service Company Superfund Site

Sample Location			TWGW102A	TWGW102B	TWGW103	TWGW103	TWGW104	TWGW105	TWGW106	TWGW107	TWGW107	TWGW108	TWGWEF90-01	TWGWEF90-02	TWGWEF90-05	TWGWEF90-10
Sample Date			1/4/2013	1/4/2013	1/4/2013	1/4/2013	1/4/2013	1/4/2013	10/8/2013	10/8/2013	10/8/2013	10/8/2013	10/7/2013	10/8/2013	10/7/2013	10/9/2013
Sample ID			TWGW102A-010413	TWGW102B-010413	TWGW103-010413	TWGW103-FD-010413	TWGW104-010413	TWGW105-010413	TWGW106-100813	TWGW107-100813	TWGW107D-100813	TWGW108-100813	TWGWEF90-01	TWGWEF90-02	TWGWEF90-05	TWGWEF10-1BD
Analyte	CAS No.	Units														
Caprolactam	105-60-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	86-74-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chrysene	218-01-9	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dibenz(a,h)anthracene	53-70-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dibenzofuran	132-64-9	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Diethyl phthalate	84-66-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dimethyl phthalate	131-11-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Di-n-butyl phthalate	84-74-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Di-n-octyl phthalate	117-84-0	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	206-44-0	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluorene	86-73-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Hexachlorobenzene	118-74-1	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Hexachlorobutadiene	87-68-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Hexachlorocyclopentadiene	77-47-4	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Hexachloroethane	67-72-1	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	193-39-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Isophorone	78-59-1	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	91-20-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrobenzene	98-95-3	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
N-Nitrosodi-n-propylamine	621-64-7	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
N-Nitrosodiphenylamine	86-30-6	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pentachlorophenol	87-86-5	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenanthrene	85-01-8	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenol	108-95-2	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pyrene	129-00-0	mg/l	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Groundwater Analytical Data Summary
Upper Transmissive Unit
Brine Service Company Superfund Site

Sample Location Sample Date Sample ID			TWGWEF90-10 10/9/2013 TWGWEF90-10
Analyte	CAS No.	Units	
Aluminum, Dissolved	7429-90-5	mg/l	---
Aluminum, Total	7429-90-5	mg/l	---
Antimony, Dissolved	7440-36-0	mg/l	---
Antimony, Total	7440-36-0	mg/l	---
Arsenic, Dissolved	7440-38-2	mg/l	---
Arsenic, Total	7440-38-2	mg/l	---
Barium, Dissolved	7440-39-3	mg/l	---
Barium, Total	7440-39-3	mg/l	---
Beryllium, Dissolved	7440-41-7	mg/l	---
Beryllium, Total	7440-41-7	mg/l	---
Cadmium, Dissolved	7440-43-9	mg/l	---
Cadmium, Total	7440-43-9	mg/l	---
Chromium, Dissolved	7440-47-3	mg/l	---
Chromium, Total	7440-47-3	mg/l	---
Cobalt, Dissolved	7440-48-4	mg/l	---
Cobalt, Total	7440-48-4	mg/l	---
Copper, Dissolved	7440-50-8	mg/l	---
Copper, Total	7440-50-8	mg/l	---
Lead, Dissolved	7439-92-1	mg/l	---
Lead, Total	7439-92-1	mg/l	---
Manganese, Dissolved	7439-96-5	mg/l	---
Manganese, Total	7439-96-5	mg/l	---
Nickel, Dissolved	7440-02-0	mg/l	---
Nickel, Total	7440-02-0	mg/l	---
Selenium, Dissolved	7782-49-2	mg/l	---
Selenium, Total	7782-49-2	mg/l	---
Silver, Dissolved	7440-22-4	mg/l	---
Silver, Total	7440-22-4	mg/l	---
Thallium, Dissolved	7440-28-0	mg/l	---
Thallium, Total	7440-28-0	mg/l	---
Vanadium, Dissolved	7440-62-2	mg/l	---
Vanadium, Total	7440-62-2	mg/l	---
Zinc, Dissolved	7440-66-6	mg/l	---
Zinc, Total	7440-66-6	mg/l	---
Mercury, Dissolved	7439-97-6	mg/l	---
Mercury, Total	7439-97-6	mg/l	---
Cyanide	57-12-5	mg/l	---
4,4´-DDD	72-54-8	mg/l	---
4,4´-DDE	72-55-9	mg/l	---
4,4´-DDT	50-29-3	mg/l	---
Aldrin	309-00-2	mg/l	---
alpha-BHC	319-84-6	mg/l	---
alpha-Chlordane	5103-71-9	mg/l	---
beta-BHC	319-85-7	mg/l	---
delta-BHC	319-86-8	mg/l	---
Dieldrin	60-57-1	mg/l	---
Endosulfan I	959-98-8	mg/l	---
Endosulfan II	33213-65-9	mg/l	---
Endosulfan sulfate	1031-07-8	mg/l	---
Endrin	72-20-8	mg/l	---
Endrin aldehyde	7421-93-4	mg/l	---
gamma-BHC	58-89-9	mg/l	---
gamma-Chlordane	5103-74-2	mg/l	---
Heptachlor	76-44-8	mg/l	---
Heptachlor epoxide	1024-57-3	mg/l	---
Methoxychlor	72-43-5	mg/l	---
Toxaphene	8001-35-2	mg/l	---
Aroclor 1016	12674-11-2	mg/l	---
Aroclor 1221	11104-28-2	mg/l	---
Aroclor 1232	11141-16-5	mg/l	---
Aroclor 1242	53469-21-9	mg/l	---
Aroclor 1248	12672-29-6	mg/l	---
Aroclor 1254	11097-69-1	mg/l	---
Aroclor 1260	11096-82-5	mg/l	---
1,1,1,2-Tetrachloroethane	630-20-6	mg/l	<0.000209
1 1 1-Trichloroethane	71-55-6	mg/l	<0.0003
1,1,2,2-Tetrachloroethane	79-34-5	mg/l	<0.00019
1,1,2-Trichlor-1,2,2-trifluoroethan	76-13-1	mg/l	<0.000278
1 1 2-Trichloroethane	79-00-5	mg/l	<0.000173
1 1-Dichloroethane	75-34-3	mg/l	<0.000168
1,1-Dichloroethene	75-35-4	mg/l	<0.0003
1 2 4-Trichlorobenzene	120-82-1	mg/l	<0.000168
1 2 4-Trimethylbenzene	95-63-6	mg/l	<0.0002
1,2-Dibromoethane	106-93-4	mg/l	<0.00015
1 2-Dichlorobenzene	95-50-1	mg/l	<0.000117
1 2-Dichloroethane	107-06-2	mg/l	<0.00016
1,2-Dichloropropane	78-87-5	mg/l	<0.000173

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Groundwater Analytical Data Summary
Upper Transmissive Unit
Brine Service Company Superfund Site

Sample Location Sample Date Sample ID			TWGWEF90-10 10/9/2013 TWGWEF90-10
Analyte	CAS No.	Units	
1,3,5-Trimethylbenzene	108-67-8	mg/l	<0.0002
1 3-Dichlorobenzene	541-73-1	mg/l	<0.000128
1 4-Dichlorobenzene	106-46-7	mg/l	<0.0002
2-Butanone	78-93-3	mg/l	<0.001
2-Hexanone	591-78-6	mg/l	<0.0002
4-Methyl-2-pentanone	108-10-1	mg/l	<0.000116
Acetone	67-64-1	mg/l	<0.005
Benzene	71-43-2	mg/l	0.00247
Bromodichloromethane	75-27-4	mg/l	<0.000175
Bromoform	75-25-2	mg/l	<0.0005
Bromomethane	74-83-9	mg/l	<0.000392
Carbon disulfide	75-15-0	mg/l	<0.0005
Carbon tetrachloride	56-23-5	mg/l	<0.000251
Chlorobenzene	108-90-7	mg/l	<0.000136
Chloroethane	75-00-3	mg/l	<0.0004
Chloroform	67-66-3	mg/l	<0.000173
Chloromethane	74-87-3	mg/l	<0.00039
cis-1 2-Dichloroethene	156-59-2	mg/l	<0.000121
cis-1 3-Dichloropropene	10061-01-5	mg/l	<0.000146
Cyclohexane	110-82-7	mg/l	<0.001
Dibromochloromethane	124-48-1	mg/l	<0.000223
Dichlorodifluoromethane	75-71-8	mg/l	<0.000429
Ethylbenzene	100-41-4	mg/l	<0.0002
Isopropylbenzene	98-82-8	mg/l	<0.0002
Methyl acetate	79-20-9	mg/l	---
Methyl tert-butyl ether	1634-04-4	mg/l	<0.0002
Methylcyclohexane	108-87-2	mg/l	---
Methylene chloride	75-09-2	mg/l	<0.002
Naphthalene	91-20-3	mg/l	<0.0002
n-Butylbenzene	104-51-8	mg/l	<0.0002
n-Propylbenzene	103-65-1	mg/l	<0.000106
sec-Butylbenzene	135-98-8	mg/l	<0.0003
Styrene	100-42-5	mg/l	<0.0002
tert-Butylbenzene	98-06-6	mg/l	<0.0002
Tetrachloroethene	127-18-4	mg/l	<0.000189
Toluene	108-88-3	mg/l	0.000992 J
trans-1 2-Dichloroethene	156-60-5	mg/l	<0.0002
trans-1,3-Dichloropropene	10061-02-6	mg/l	<0.0002
Trichloroethene	79-01-6	mg/l	<0.000317
Trichlorofluoromethane	75-69-4	mg/l	<0.000244
Vinyl chloride	75-01-4	mg/l	<0.0003
Xylenes, Total	1330-20-7	mg/l	<0.000226
1 1´-Biphenyl	92-52-4	mg/l	---
1-Methylnaphthalene	90-12-0	mg/l	---
2,4,5-Trichlorophenol	95-95-4	mg/l	---
2 4 6-Trichlorophenol	88-06-2	mg/l	---
2 4-Dichlorophenol	120-83-2	mg/l	---
2,4-Dimethylphenol	105-67-9	mg/l	---
2 4-Dinitrophenol	51-28-5	mg/l	---
2 4-Dinitrotoluene	121-14-2	mg/l	---
2,6-Dinitrotoluene	606-20-2	mg/l	---
2-Chloronaphthalene	91-58-7	mg/l	---
2-Chlorophenol	95-57-8	mg/l	---
2-Methylnaphthalene	91-57-6	mg/l	---
2-Methylphenol	95-48-7	mg/l	---
2-Nitroaniline	88-74-4	mg/l	---
2-Nitrophenol	88-75-5	mg/l	---
3&4-Methylphenol	106-44-5	mg/l	---
3 3´-Dichlorobenzidine	91-94-1	mg/l	---
3-Nitroaniline	99-09-2	mg/l	---
4,6-Dinitro-2-methylphenol	534-52-1	mg/l	---
4-Bromophenyl phenyl ether	101-55-3	mg/l	---
4-Chloro-3-methylphenol	59-50-7	mg/l	---
4-Chloroaniline	106-47-8	mg/l	---
4-Chlorophenyl phenyl ether	7005-72-3	mg/l	---
4-Nitroaniline	100-01-6	mg/l	---
4-Nitrophenol	100-02-7	mg/l	---
Acenaphthene	83-32-9	mg/l	---
Acenaphthylene	208-96-8	mg/l	---
Acetophenone	98-86-2	mg/l	---
Anthracene	120-12-7	mg/l	---
Benz(a)anthracene	56-55-3	mg/l	---
Benzaldehyde	100-52-7	mg/l	---
Benzo(a)pyrene	50-32-8	mg/l	---
Benzo(b)fluoranthene	205-99-2	mg/l	---
Benzo(g,h,i)perylene	191-24-2	mg/l	---
Benzo(k)fluoranthene	207-08-9	mg/l	---
Bis(2-chloroethoxy)methane	111-91-1	mg/l	---
Bis(2-chloroethyl)ether	111-44-4	mg/l	---
Bis(2-chloroisopropyl)ether	108-60-1	mg/l	---
Bis(2-ethylhexyl)phthalate	117-81-7	mg/l	---
Butyl benzyl phthalate	85-68-7	mg/l	---

Bolded - detection above the SDL
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U - Detection qualified as non-detect
--- Not analyzed

Groundwater Analytical Data Summary
Upper Transmissive Unit
Brine Service Company Superfund Site

Sample Location Sample Date Sample ID			TWGWEF90-10 10/9/2013 TWGWEF90-10
Analyte	CAS No.	Units	
Caprolactam	105-60-2	mg/l	---
Carbazole	86-74-8	mg/l	---
Chrysene	218-01-9	mg/l	---
Dibenz(a,h)anthracene	53-70-3	mg/l	---
Dibenzofuran	132-64-9	mg/l	---
Diethyl phthalate	84-66-2	mg/l	---
Dimethyl phthalate	131-11-3	mg/l	---
Di-n-butyl phthalate	84-74-2	mg/l	---
Di-n-octyl phthalate	117-84-0	mg/l	---
Fluoranthene	206-44-0	mg/l	---
Fluorene	86-73-7	mg/l	---
Hexachlorobenzene	118-74-1	mg/l	---
Hexachlorobutadiene	87-68-3	mg/l	---
Hexachlorocyclopentadiene	77-47-4	mg/l	---
Hexachloroethane	67-72-1	mg/l	---
Indeno(1,2,3-cd)pyrene	193-39-5	mg/l	---
Isophorone	78-59-1	mg/l	---
Naphthalene	91-20-3	mg/l	---
Nitrobenzene	98-95-3	mg/l	---
N-Nitrosodi-n-propylamine	621-64-7	mg/l	---
N-Nitrosodiphenylamine	86-30-6	mg/l	---
Pentachlorophenol	87-86-5	mg/l	---
Phenanthrene	85-01-8	mg/l	---
Phenol	108-95-2	mg/l	---
Pyrene	129-00-0	mg/l	---

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Groundwater Analytical Data Summary
Second Transmissive Unit
Brine Service Company Superfund Site

Sample Location			MWGW11	MWGW11	MWGW201	MWGW202	MWGW203	MWGW204
Sample Date			2/25/2014	2/25/2014	2/25/2014	2/25/2014	2/25/2014	2/25/2014
Sample ID			MWGW11-022514	MWGW11-FD-022514	MWGW201-022514	MWGW202-022514	MWGW203-022514	MWGW204-022514
Analyte	CAS No.	Units						
Aluminum, Dissolved	7429-90-5	mg/l	---	---	---	---	---	---
Aluminum, Total	7429-90-5	mg/l	0.0328	0.0359	0.0139	0.00936 J	0.0288	0.0635
Antimony, Dissolved	7440-36-0	mg/l	---	---	---	---	---	---
Antimony, Total	7440-36-0	mg/l	<0.0008	<0.0008	<0.0008	<0.0008	<0.0016	<0.0008
Arsenic, Dissolved	7440-38-2	mg/l	---	---	---	---	---	---
Arsenic, Total	7440-38-2	mg/l	0.00577	0.00596	0.0177	0.0093	0.0109	0.0105
Barium, Dissolved	7440-39-3	mg/l	---	---	---	---	---	---
Barium, Total	7440-39-3	mg/l	0.0448	0.043	0.0544	0.0307	0.0455	0.111
Beryllium, Dissolved	7440-41-7	mg/l	---	---	---	---	---	---
Beryllium, Total	7440-41-7	mg/l	<0.0014	<0.0014	<0.0014	<0.0007	<0.0014	<0.0014
Cadmium, Dissolved	7440-43-9	mg/l	---	---	---	---	---	---
Cadmium, Total	7440-43-9	mg/l	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008
Chromium, Dissolved	7440-47-3	mg/l	---	---	---	---	---	---
Chromium, Total	7440-47-3	mg/l	<0.001	<0.001	<0.001	0.00163 J	0.00957 J	<0.001
Cobalt, Dissolved	7440-48-4	mg/l	---	---	---	---	---	---
Cobalt, Total	7440-48-4	mg/l	0.00203 J	0.00191 J	0.00785	<0.0008	<0.0016	0.00546
Copper, Dissolved	7440-50-8	mg/l	---	---	---	---	---	---
Copper, Total	7440-50-8	mg/l	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001
Lead, Dissolved	7439-92-1	mg/l	---	---	---	---	---	---
Lead, Total	7439-92-1	mg/l	<0.0007	<0.0007	<0.0007	<0.0007	<0.0014	<0.0007
Manganese, Dissolved	7439-96-5	mg/l	---	---	---	---	---	---
Manganese, Total	7439-96-5	mg/l	0.195	0.201	0.575	0.0423	0.0644	3.55
Nickel, Dissolved	7440-02-0	mg/l	---	---	---	---	---	---
Nickel, Total	7440-02-0	mg/l	0.00156 J	0.00158 J	0.00179 J	0.00139 J	<0.002	0.0122
Selenium, Dissolved	7782-49-2	mg/l	---	---	---	---	---	---
Selenium, Total	7782-49-2	mg/l	0.00257 J	0.00322 J	0.00109 J	0.00343 J	0.0087 J	0.00122 J
Silver, Dissolved	7440-22-4	mg/l	---	---	---	---	---	---
Silver, Total	7440-22-4	mg/l	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008
Thallium, Dissolved	7440-28-0	mg/l	---	---	---	---	---	---
Thallium, Total	7440-28-0	mg/l	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001
Vanadium, Dissolved	7440-62-2	mg/l	---	---	---	---	---	---
Vanadium, Total	7440-62-2	mg/l	0.0279	0.0282	0.0578	0.0317	0.0447	0.0216
Zinc, Dissolved	7440-66-6	mg/l	---	---	---	---	---	---
Zinc, Total	7440-66-6	mg/l	<0.002	0.00212 J	0.00274 J	0.00522	<0.004	0.00493 J
Mercury, Dissolved	7439-97-6	mg/l	---	---	---	---	---	---
Mercury, Total	7439-97-6	mg/l	<4e-005	<4e-005	<4e-005	0.000144 J	<4e-005	<4e-005
Cyanide	57-12-5	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4,4´-DDD	72-54-8	mg/l	8.00E-05	4.40E-05	5.80E-06	4.50E-06	1.70E-05	<2.5e-006
4,4´-DDE	72-55-9	mg/l	7.10E-06	<2.5e-006	<2.5e-006	<2.5e-006	<2.5e-006	<2.5e-006
4,4´-DDT	50-29-3	mg/l	1.60E-05	1.60E-05	1.00E-04	3.90E-05	3.40E-06	2.50E-05
Aldrin	309-00-2	mg/l	<1.2e-006	<1.2e-006	<1.2e-006	<1.2e-006	<1.2e-006	<1.2e-006
alpha-BHC	319-84-6	mg/l	<1.2e-006	<1.2e-006	1.10E-05	6.70E-06	<1.2e-006	4.30E-06
alpha-Chlordane	5103-71-9	mg/l	<2.5e-006	<2.5e-006	<2.5e-006	<2.5e-006	<2.5e-006	<2.5e-006
beta-BHC	319-85-7	mg/l	5.20E-05	7.80E-05	<1.2e-006	3.50E-06	<1.2e-006	<1.2e-006
delta-BHC	319-86-8	mg/l	2.80E-05	<1.2e-006	3.20E-06	6.20E-06	<1.2e-006	<1.2e-006
Dieldrin	60-57-1	mg/l	4.80E-06	2.60E-06	<2.5e-006	<2.5e-006	<2.5e-006	4.90E-06
Endosulfan I	959-98-8	mg/l	6.00E-06	4.60E-06	5.30E-06	1.70E-06	3.10E-06	5.50E-06
Endosulfan II	33213-65-9	mg/l	6.40E-06	6.80E-06	<2.5e-006	<2.5e-006	<2.5e-006	4.10E-06
Endosulfan sulfate	1031-07-8	mg/l	1.30E-05	2.00E-05	<2.5e-006	3.30E-06	<2.5e-006	<2.5e-006
Endrin	72-20-8	mg/l	<2.5e-006	<2.5e-006	<2.5e-006	<2.5e-006	<2.5e-006	4.20E-06
Endrin aldehyde	7421-93-4	mg/l	7.50E-06	7.20E-06	<2.5e-006	<2.5e-006	<2.5e-006	<2.5e-006
gamma-BHC	58-89-9	mg/l	1.50E-05	9.20E-06	7.70E-06	8.00E-06	<1.2e-006	6.50E-06
gamma-Chlordane	5103-74-2	mg/l	1.20E-05	1.70E-05	3.30E-06	1.30E-05	2.10E-05	2.30E-05
Heptachlor	76-44-8	mg/l	<1.2e-006	<1.2e-006	2.40E-06	1.90E-06	<1.2e-006	<1.2e-006
Heptachlor epoxide	1024-57-3	mg/l	2.80E-06	2.50E-06	<1.2e-006	<1.2e-006	<1.2e-006	2.20E-06
Methoxychlor	72-43-5	mg/l	<1.2e-005	<1.2e-005	<1.2e-005	<1.2e-005	<1.2e-005	<1.2e-005
Toxaphene	8001-35-2	mg/l	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005
Aroclor 1016	12674-11-2	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aroclor 1221	11104-28-2	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Aroclor 1232	11141-16-5	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Aroclor 1242	53469-21-9	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Aroclor 1248	12672-29-6	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Aroclor 1254	11097-69-1	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Aroclor 1260	11096-82-5	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1,1,1,2-Tetrachloroethane	630-20-6	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
1 1 1-Trichloroethane	71-55-6	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1,1,2,2-Tetrachloroethane	79-34-5	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2-Trichlor-1,2,2-trifluoroethan	76-13-1	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1 1 2-Trichloroethane	79-00-5	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
1 1-Dichloroethane	75-34-3	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1,1-Dichloroethene	75-35-4	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1 2 4-Trichlorobenzene	120-82-1	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1 2 4-Trimethylbenzene	95-63-6	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
1,2-Dibromoethane	106-93-4	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1 2-Dichlorobenzene	95-50-1	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1 2-Dichloroethane	107-06-2	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1,2-Dichloropropane	78-87-5	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Groundwater Analytical Data Summary
Second Transmissive Unit
Brine Service Company Superfund Site

Sample Location			MWGW11	MWGW11	MWGW201	MWGW202	MWGW203	MWGW204
Sample Date			2/25/2014	2/25/2014	2/25/2014	2/25/2014	2/25/2014	2/25/2014
Sample ID			MWGW11-022514	MWGW11-FD-022514	MWGW201-022514	MWGW202-022514	MWGW203-022514	MWGW204-022514
Analyte	CAS No.	Units						
1,3,5-Trimethylbenzene	108-67-8	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
1 3-Dichlorobenzene	541-73-1	mg/l	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
1 4-Dichlorobenzene	106-46-7	mg/l	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
2-Butanone	78-93-3	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2-Hexanone	591-78-6	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4-Methyl-2-pentanone	108-10-1	mg/l	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007
Acetone	67-64-1	mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Benzene	71-43-2	mg/l	0.00042 J	0.00041 J	<0.0002	<0.0002	<0.0002	<0.0002
Bromodichloromethane	75-27-4	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bromoform	75-25-2	mg/l	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Bromomethane	74-83-9	mg/l	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Carbon disulfide	75-15-0	mg/l	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Carbon tetrachloride	56-23-5	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Chloroethane	75-00-3	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Chloroform	67-66-3	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Chloromethane	74-87-3	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
cis-1 2-Dichloroethene	156-59-2	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
cis-1 3-Dichloropropene	10061-01-5	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cyclohexane	110-82-7	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Dibromochloromethane	124-48-1	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Dichlorodifluoromethane	75-71-8	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Ethylbenzene	100-41-4	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Isopropylbenzene	98-82-8	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Methyl acetate	79-20-9	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Methyl tert-butyl ether	1634-04-4	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Methylcyclohexane	108-87-2	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Methylene chloride	75-09-2	mg/l	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Naphthalene	91-20-3	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
n-Butylbenzene	104-51-8	mg/l	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
n-Propylbenzene	103-65-1	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
sec-Butylbenzene	135-98-8	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Styrene	100-42-5	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
tert-Butylbenzene	98-06-6	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Tetrachloroethene	127-18-4	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	108-88-3	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
trans-1 2-Dichloroethene	156-60-5	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
trans-1,3-Dichloropropene	10061-02-6	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Trichloroethene	79-01-6	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Trichlorofluoromethane	75-69-4	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Vinyl chloride	75-01-4	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Xylenes, Total	1330-20-7	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1 1´-Biphenyl	92-52-4	mg/l	<3.2e-005	<3.2e-005	<3.2e-005	<3.2e-005	<3.2e-005	<3.2e-005
1-Methylnaphthalene	90-12-0	mg/l	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005
2,4,5-Trichlorophenol	95-95-4	mg/l	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005
2 4 6-Trichlorophenol	88-06-2	mg/l	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005
2 4-Dichlorophenol	120-83-2	mg/l	<6.5e-005	<6.5e-005	<6.5e-005	<6.5e-005	<6.5e-005	<6.5e-005
2,4-Dimethylphenol	105-67-9	mg/l	<3.3e-005	<3.3e-005	<3.3e-005	<3.3e-005	<3.3e-005	<3.3e-005
2 4-Dinitrophenol	51-28-5	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
2 4-Dinitrotoluene	121-14-2	mg/l	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005
2,6-Dinitrotoluene	606-20-2	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
2-Chloronaphthalene	91-58-7	mg/l	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005
2-Chlorophenol	95-57-8	mg/l	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005
2-Methylnaphthalene	91-57-6	mg/l	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005
2-Methylphenol	95-48-7	mg/l	<3.3e-005	<3.3e-005	<3.3e-005	<3.3e-005	0.00012 J	<3.3e-005
2-Nitroaniline	88-74-4	mg/l	<3.8e-005	<3.8e-005	<3.8e-005	<3.8e-005	<3.8e-005	<3.8e-005
2-Nitrophenol	88-75-5	mg/l	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005
3&4-Methylphenol	106-44-5	mg/l	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005
3 3´-Dichlorobenzidine	91-94-1	mg/l	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005	<2.4e-005
3-Nitroaniline	99-09-2	mg/l	<5.6e-005	<5.6e-005	<5.6e-005	<5.6e-005	<5.6e-005	<5.6e-005
4,6-Dinitro-2-methylphenol	534-52-1	mg/l	<7.3e-005	<7.3e-005	<7.3e-005	<7.3e-005	<7.3e-005	<7.3e-005
4-Bromophenyl phenyl ether	101-55-3	mg/l	<4.7e-005	<4.7e-005	<4.7e-005	<4.7e-005	<4.7e-005	<4.7e-005
4-Chloro-3-methylphenol	59-50-7	mg/l	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005
4-Chloroaniline	106-47-8	mg/l	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005
4-Chlorophenyl phenyl ether	7005-72-3	mg/l	<4.3e-005	<4.3e-005	<4.3e-005	<4.3e-005	<4.3e-005	<4.3e-005
4-Nitroaniline	100-01-6	mg/l	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005
4-Nitrophenol	100-02-7	mg/l	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005	<6e-005
Acenaphthene	83-32-9	mg/l	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005
Acenaphthylene	208-96-8	mg/l	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005
Acetophenone	98-86-2	mg/l	0.0029	0.0037	0.015	0.0068	0.0089	0.0026
Anthracene	120-12-7	mg/l	<2e-005	<2e-005	<2e-005	<2e-005	<2e-005	<2e-005
Benz(a)anthracene	56-55-3	mg/l	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005
Benzaldehyde	100-52-7	mg/l	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005
Benzo(a)pyrene	50-32-8	mg/l	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005
Benzo(b)fluoranthene	205-99-2	mg/l	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005
Benzo(g,h,i)perylene	191-24-2	mg/l	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005
Benzo(k)fluoranthene	207-08-9	mg/l	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005	<2.8e-005
Bis(2-chloroethoxy)methane	111-91-1	mg/l	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005
Bis(2-chloroethyl)ether	111-44-4	mg/l	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005
Bis(2-chloroisopropyl)ether	108-60-1	mg/l	<6.4e-005	<6.4e-005	<6.4e-005	<6.4e-005	<6.4e-005	<6.4e-005
Bis(2-ethylhexyl)phthalate	117-81-7	mg/l	6.8e-005 J	4.9e-005 J	9.6e-005 J	0.00021	6.7e-005 J	<3.3e-005
Butyl benzyl phthalate	85-68-7	mg/l	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Groundwater Analytical Data Summary
Second Transmissive Unit
Brine Service Company Superfund Site

Sample Location			MWGW11	MWGW11	MWGW201	MWGW202	MWGW203	MWGW204
Sample Date			2/25/2014	2/25/2014	2/25/2014	2/25/2014	2/25/2014	2/25/2014
Sample ID			MWGW11-022514	MWGW11-FD-022514	MWGW201-022514	MWGW202-022514	MWGW203-022514	MWGW204-022514
Analyte	CAS No.	Units						
Caprolactam	105-60-2	mg/l	<5.9e-005	<5.9e-005	<5.9e-005	<5.9e-005	<5.9e-005	<5.9e-005
Carbazole	86-74-8	mg/l	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005
Chrysene	218-01-9	mg/l	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005
Dibenz(a,h)anthracene	53-70-3	mg/l	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005	<2.6e-005
Dibenzofuran	132-64-9	mg/l	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005	<2.5e-005
Diethyl phthalate	84-66-2	mg/l	<2.1e-005	<2.1e-005	5.2e-005 J	<2.1e-005	<2.1e-005	<2.1e-005
Dimethyl phthalate	131-11-3	mg/l	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005
Di-n-butyl phthalate	84-74-2	mg/l	<3e-005	<3e-005	0.00011 J	<3e-005	<3e-005	0.00026
Di-n-octyl phthalate	117-84-0	mg/l	6.3e-005 J	<2.3e-005	<2.3e-005	<2.3e-005	<2.3e-005	<2.3e-005
Fluoranthene	206-44-0	mg/l	<2e-005	<2e-005	<2e-005	<2e-005	<2e-005	<2e-005
Fluorene	86-73-7	mg/l	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005	<2.1e-005
Hexachlorobenzene	118-74-1	mg/l	<7e-005	<7e-005	<7e-005	<7e-005	<7e-005	<7e-005
Hexachlorobutadiene	87-68-3	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Hexachlorocyclopentadiene	77-47-4	mg/l	<5.4e-005	<5.4e-005	<5.4e-005	<5.4e-005	<5.4e-005	<5.4e-005
Hexachloroethane	67-72-1	mg/l	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005	<3.4e-005
Indeno(1,2,3-cd)pyrene	193-39-5	mg/l	<5.1e-005	<5.1e-005	<5.1e-005	<5.1e-005	<5.1e-005	<5.1e-005
Isophorone	78-59-1	mg/l	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005	<3e-005
Naphthalene	91-20-3	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
Nitrobenzene	98-95-3	mg/l	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005	<5e-005
N-Nitrosodi-n-propylamine	621-64-7	mg/l	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005	<4e-005
N-Nitrosodiphenylamine	86-30-6	mg/l	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005	<2.9e-005
Pentachlorophenol	87-86-5	mg/l	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005	<4.6e-005
Phenanthrene	85-01-8	mg/l	0.00016 J	0.00018 J	<2e-005	<2e-005	<2e-005	<2e-005
Phenol	108-95-2	mg/l	<3.2e-005	<3.2e-005	<3.2e-005	<3.2e-005	<3.2e-005	<3.2e-005
Pyrene	129-00-0	mg/l	5.4e-005 J	5.4e-005 J	<2.2e-005	<2.2e-005	<2.2e-005	<2.2e-005

Bolded - detection above the SDL
< - Analyte not detected above the SDL
J - Concentration is estimated; L - Low bias, H - High bias
U - Detection qualified as non-detect
--- Not analyzed

Passive Soil Gas Results for Lot 6 and Lot 7
Brine Service Company Superfund Site

Client Sample ID:	SG-1	SG-2	SG-3	SG-4	SG-5	SG-6	SG-7	SG-8	SG-9	SG-9 DUP	SG-10	SG-11	SG-12	SG-13	SG-14	SG-15	SG-16	SG-17	SG-18	SG-19	SG-20	SG-21	SG-22
Received Date:	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012
Analysis Date:	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/5/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012
Analysis Time:	17:37	17:58	18:20	18:41	19:02	19:24	19:45	20:06	20:27	20:49	21:10	21:32	21:53	22:14	22:36	22:58	23:20	23:41	0:02	12:25	12:46	13:07	13:28
Units:	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng
COMPOUNDS																							
Acetone	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500
Methylene Chloride	<25	**37**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**117**	<25	<25	<25	**46**	<25	**29**	**39**	<25	<25
Carbon disulfide	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**55**	**64**	<25	<25	<25	<25	<25	<25	<25	**73**
2-Butanone (MEK)	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**53**
Cyclohexane	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**90**	**330**	<25	<25	<25	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**45**	**626**	<25	<25	<25	<25	<25	<25	**27**	**620**
Methylcyclohexane	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**44**	**1,081**	**3,081**	<25	<25	<25	<25	<25	<25	<25	**1,202**
2-Hexanone	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
cis-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**25**	**30**	<25	<25	<25	<25	<25	<25	<25	**83**
Ethylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**1,109**	**76**	<25	<25	<25	<25	<25	<25	<25	**1,242**
p & m-Xylene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**29**	**38**	<25	<25	<25	<25	<25	<25	<25	**106**
Styrene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**37**	**37**	<25	<25	<25	<25	<25	<25	<25	**80**
o-Xylene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**46**
Isopropylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**4,255**	**517**	<25	<25	<25	<25	<25	<25	<25	**6,143**
n-Propylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**375**	<25	<25	<25	<25	<25	<25	<25	<25	**194**
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
tert-Butylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**27**	<25	<25	<25	<25	<25	<25	<25	<25	**52**
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**31**	<25	<25	<25	<25	<25	<25	<25	<25	**32**
sec-Butylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**572**	<25	<25	<25	<25	<25	<25	<25	<25	**755**
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25	<25	**107**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
n-Butylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**395**	<25	<25	<25	<25	<25	<25	<25	<25	**136**
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**345**	<25	<25	<25	<25	<25	<25	<25	<25	**127**
TPH c5-c9	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	**5,457**	**10,837**	**126,857**	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	**155,854**
TPH c10-c15	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	**5,542**	<5,000	<5,000	<5,000	<5,000	<5,000	**36,768**	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	**55,641**
TPH c9-c10	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**5,307**	**592**	<25	<25	<25	<25	<25	<25	<25	**7,374**
Total VOCs	0	**37**	0	0	0	0	0	**5,649**	0	0	0	0	**5,590**	**61,739**	**131,919**	0	0	**46**	0	**29**	**39**	**27**	**229,810**
Total BTEX	0	0	0	0	0	0	0	0	0	0	0	0	0	**1,208**	**770**	0	0	0	0	0	0	**27**	**2,097**
Total TPH	0	0	0	0	0	0	0	**5,542**	0	0	0	0	**5,457**	**52,911**	**127,449**	0	0	0	0	0	0	0	**218,869**

Bold - detected above reporting limit
BTEX - Benzene, toluene, ethylbenzene, total xylenes
ng - nanograms
TPH - Total petroleum hydrocarbons
VOCs - Volatile Organic Compounds
< - Not detected

Passive Soil Gas Results for Lot 6 and Lot 7
Brine Service Company Superfund Site

Client Sample ID:	SG-23	SG-24	SG-25	SG-26	SG-27	SG-28	SG-29	SG-30	SG-31	SG-31 DUP	SG-31-FD	SG-32	SG-33	SG-34	SG-35	SG-36	SG-37	SG-38	SG-39	SG-40
Received Date:	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012	1/4/2012
Analysis Date:	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/6/2012	1/9/2012	1/9/2012	1/9/2012	1/9/2012
Analysis Time:	13:49	14:11	14:32	14:53	15:14	15:35	15:57	16:18	16:39	17:01	17:22	17:43	18:05	18:26	18:47	19:08	12:00	12:21	12:43	13:04
Units:	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng
COMPOUNDS																				
Acetone	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500
Methylene Chloride	<25	<25	<25	**28**	<25	<25	**35**	<25	<25	<25	<25	<25	**56**	<25	<25	<25	<25	<25	<25	<25
Carbon disulfide	**34**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
2-Butanone (MEK)	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Cyclohexane	<25	**176**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Benzene	**469**	**123**	<25	<25	<25	**26**	**128**	<25	<25	<25	**27**	<25	**116**	<25	<25	<25	**31**	<25	<25	**30**
Methylcyclohexane	**6,139**	**377**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**47**	<25	<25	<25	<25	<25	<25	<25
2-Hexanone	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
cis-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Toluene	**50**	**51**	<25	<25	<25	<25	**36**	<25	<25	<25	<25	<25	**28**	<25	<25	<25	<25	<25	<25	<25
Ethylbenzene	**1,346**	**281**	<25	<25	<25	<25	**35**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
p & m-Xylene	**45**	**48**	<25	<25	<25	<25	**56**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Styrene	<25	**56**	<25	<25	<25	<25	**55**	<25	<25	<25	<25	<25	**46**	<25	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Isopropylbenzene	**2,870**	**993**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
n-Propylbenzene	**156**	**90**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
tert-Butylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	**45**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
sec-Butylbenzene	**329**	**132**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
n-Butylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Naphthalene	**414**	**110**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	**473**	**79**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
TPH c5-c9	**59,325**	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000
TPH c10-c15	**24,911**	**11,245**	<5,000	<5,000	<5,000	<5,000	**6,318**	<5,000	<5,000	<5,000	<5,000	<5,000	**8,632**	<5,000	<5,000	<5,000	**5,811**	<5,000	<5,000	**8,378**
TPH c9-c10	**3,399**	**1,326**	<25	<25	<25	<25	**109**	<25	<25	<25	<25	<25	**92**	<25	<25	<25	<25	<25	<25	<25
Total VOCs	**100,003**	**15,087**	0	**28**	0	**26**	**6,771**	0	0	0	**27**	0	**9,016**	0	0	0	**5,841**	0	0	**8,408**
Total BTEX	**1,900**	**503**	0	0	0	**26**	**255**	0	0	0	**27**	0	**144**	0	0	0	**31**	0	0	**30**
Total TPH	**87,635**	**12,571**	0	0	0	0	**6,428**	0	0	0	0	0	**8,724**	0	0	0	**5,811**	0	0	**8,378**

Bold - detected above reporting limit
BTEX - Benzene, toluene, ethylbenzene, total xylenes
ng - nanograms
TPH - Total petroleum hydrocarbons
VOCs - Volatile Organic Compounds
< - Not detected

Passive Soil Gas Results for Lot 4
Brine Service Company Superfund Site

Client Sample ID:	SG-41	SG-43	SG-44	SG-45	SG-46	SG-47	SG-48	SG-49	SG-49 DUP	SG-49-FD	SG-50	SG-51	SG-52
Units:	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng	ng
COMPOUNDS													
Acetone	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500
Methylene Chloride	<25	**29**	<25	**29**	**45**	<25	<25	**84**	**42**	**123**	<25	<25	<25
Carbon disulfide	<25	<25	**29**	<25	<25	**56**	<25	<25	<25	**184**	**29**	<25	<25
2-Butanone (MEK)	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Cyclohexane	<25	<25	<25	<25	<25	<25	**32**	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Methylcyclohexane	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
2-Hexanone	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
cis-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	**35**	<25	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Styrene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
n-Propylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
tert-Butylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
sec-Butylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
n-Butylbenzene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
TPH c5-c9	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000
TPH c10-c15	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000
TPH c9-c10	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Total VOCs	0	**29**	**29**	**29**	**45**	**91**	**32**	**84**	**42**	**307**	**29**	0	0
Total BTEX	0	0	0	0	0	0	0	0	0	0	0	0	0
Total TPH	0	0	0	0	0	0	0	0	0	0	0	0	0

Bold - detected above reporting limit
BTEX - Benzene, toluene, ethylbenzene, total xylenes
ng - nanograms
TPH - Total petroleum hydrocarbons
VOCs - Volatile Organic Compounds
< - Not detected

Summa Canister Data for Vapor Intrusion Pathway
Brine Service Company Superfund Site

					Sample Location	SG-04	SG-13	SG-22	SG-33	SG-49
					Sample Date	3/6/2012	3/6/2012	3/6/2012	3/6/2012	3/6/2012
Analyte	**CAS No.**	**Ambient Air Screening Criteria**	**Soil Gas Screening Criteria**	**Units**						
MA APH Analyses										
Benzene	71-43-2	1.60E+00	1.60E+03	ug/m^3		*<19*	**9.10E+02**	**3.60E+05**	**5.40E+05**	*<32*
Ethylbenzene	100-41-4	4.90E+00	4.90E+03	ug/m^3		*<26*	*<520*	**4.20E+04**	**3.20E+04**	*<43*
Naphthalene	91-20-3	3.60E-01	3.60E+02	ug/m^3		*<32*	*<630*	*<5100*	*<16000*	*<52*
Toluene	108-88-3	2.20E+04	2.20E+07	ug/m^3		*<23*	**5.10E+02**	**1.00E+04**	**3.30E+04**	*<37*
TPH (C_5-C_8 Aliphatics)	C5C8Aliphatic	3.30E+02	3.30E+05	ug/m^3		**2.70E+03**	**5.80E+05**	**7.20E+06**	**9.70E+06**	**7.50E+03**
TPH (C_9-C_{10} Aromatics)	C9C10Aromatic	4.40E+01	4.40E+04	ug/m^3		*<150*	**3.10E+03**	*<24000*	*<75000*	*<250*
TPH (C_9-C_{12} Aliphatics)	C9C12Aliphatic	2.20E+02	2.20E+05	ug/m^3		**3.40E+04**	**4.40E+04**	*<34000*	*<110000*	**2.20E+04**
TO-15 Analyses										
1,1,2-Trichloroethane	79-00-5	7.70E-01	7.70E+02	ug/m^3		*<33*	*<66*	*<2600*	*<4000*	*<110*
1,2,4-Trimethylbenzene	95-63-6	3.10E+01	3.10E+04	ug/m^3		*<30*	*<60*	*<2400*	*<3600*	*<98*
1,3,5-Trimethylbenzene	108-67-8	6.00E+00	6.00E+03	ug/m^3		*<30*	*<60*	*<2400*	*<3600*	*<98*
1,4-Dichlorobenzene	106-46-7	1.10E+00	1.10E+03	ug/m^3		*<36*	*<73*	*<2900*	*<4500*	*<120*
2-Butanone	78-93-3	2.20E+04	2.20E+07	ug/m^3		*<44*	*<90*	*<3500*	*<5500*	*<150*
2-Hexanone	591-78-6	1.30E+02	1.30E+05	ug/m^3		*<62*	*<120*	*<4900*	*<7600*	*<200*
Acetone	67-64-1	1.40E+05	1.40E+08	ug/m^3		**3.00E+03**	**4.60E+03**	*<29000*	*<44000*	**1.10E+04**
Benzene	71-43-2	1.60E+00	1.60E+03	ug/m^3		*<19*	**2.90E+02**	**2.60E+05**	**3.70E+05**	*<64*
Carbon disulfide	75-15-0	3.10E+03	3.10E+06	ug/m^3		*<47*	**3.00E+02**	*<3700*	*<5800*	**3.60E+02**
Carbon tetrachloride	56-23-5	2.00E+00	2.00E+03	ug/m^3		*<38*	*<76*	*<3000*	*<4700*	*<130*
cis-1,3-Dichloropropene	10061-01-5	3.10E+00	3.10E+03	ug/m^3		*<27*	*<55*	*<2200*	*<3400*	*<91*
Cyclohexane	110-82-7	2.60E+04	2.60E+07	ug/m^3		*<21*	*<42*	**1.90E+05**	**2.40E+05**	*<69*
Ethylbenzene	100-41-4	4.90E+00	4.90E+03	ug/m^3		*<26*	*<53*	**3.30E+04**	**2.50E+04**	*<87*
Isopropy benzene	98-82-8	1.80E+03	1.80E+06	ug/m^3		*<30*	*<60*	**2.70E+03**	*<3600*	*<98*
Methylene chloride	75-09-2	2.60E+01	2.60E+04	ug/m^3		*<52*	*<110*	*<4200*	*<6400*	*<170*
Naphthalene	91-20-3	3.60E-01	3.60E+02	ug/m^3		*<79*	*<160*	*<6300*	*<9700*	*<260*
n-Butylbenzene	104-51-8	1.40E+02	1.40E+05	ug/m^3		*<33*	*<67*	*<2600*	*<4100*	*<110*
n-Propylbenzene	103-65-1	4.40E+03	4.40E+06	ug/m^3		*<30*	*<60*	*<2400*	*<3600*	*<98*
sec-Butylbenzene	135-98-8	1.40E+02	1.40E+05	ug/m^3		*<33*	*<67*	*<2600*	*<4100*	*<110*
Styrene	100-42-5	4.40E+03	4.40E+06	ug/m^3		*<26*	*<52*	*<2000*	*<3200*	*<85*
tert-Butylbenzene	98-06-6	1.40E+02	1.40E+05	ug/m^3		*<33*	*<67*	*<2600*	*<4100*	*<110*
Toluene	108-88-3	2.20E+04	2.20E+07	ug/m^3		*<23*	*<46*	**6.50E+03**	**1.90E+04**	*<75*
Xylenes, Total	1330-20-7	4.40E+02	4.40E+05	ug/m^3		*<26*	*<53*	**2.60E+03**	**7.40E+03**	*<87*

Notes:

Bolded value	Concentration was reported above the sample detection limit (SDL)

Bold - detected above reporting limit
MA APH - Massachusetts Air Petroleum Hydrocarbons
ug/m^3 - microgram per cubic meter
< - Not detected

APPENDIX L

TOXICITY PROFILES

BASELINE HUMAN HEALTH RISK ASSESSMENT
BRINE SERVICE COMPANY SUPERFUND SITE

Brief toxicity profiles are provided for the detected chemicals of potential concern (COPCs) at the Site that were identified as primary contributors to the overall cancer risk due to cancer risk greater than $1x10^{-6}$ and/or non-cancer hazard quotient greater than 1.0 for reasonable maximum exposure (RME) scenarios. These detected Site COPCs are: alpha-BHC, arsenic, benzene, benzo(a)pyrene, dieldin, ethylbenzene, heptachlor epoxide, and 3&4-methylphenol.

Alpha-BHC

alpha-BHC **(**alpha-hexachlorocyclohexane or α-BHC) was identified as a COPC contributing to the overall cancer risk for human receptors (construction worker) assumed to be exposed to groundwater in the upper transmissive unit (UTU) in the South Pit Exposure Area.

Hexachlorocyclohexane is a synthetic chemical consisting of eight isomers; only four of these isomers (α-BHC, β-BHC, γ-BHC, and δ-BHC) are of commercial significance (Agency for Toxic Substances and Disease Registry [ATSDR], 2005). Hexachlorocyclohexane isomers were used either as fungicides or in the synthesis of other chemicals (ATSDR, 2005). Since alpha-BHC is no longer produced or used in the United States, exposure to alpha- BHC should be very low; however due to its long persistence time and the propensity to bioaccumulate, the general population may still be exposed to alpha-BHC (HSDB, 2014). If released to soil, alpha-BHC is expected to have low mobility based upon K_{oc} values of 1,780 and 1,995 (HSDB, 2014). If released into water, alpha-BHC is expected to adsorb to suspended solids and sediment in the water column based upon K_{oc} values of 641 and 694 measured in sediment (HSDB, 2014).

An oral reference dose (RfD) is not available for alpha-BHC in the United States Environmental Protection Agency's (USEPA's) Integrated Risk Information System (IRIS) database. ATSDR (2005) indicates an oral RfD of 8.0×10^{-3} mg/kg-day for alpha-BHC, which is based on effects on the liver, and includes an uncertainty factor (UF) of 100. No inhalation reference concentrations (RfCs) were identified for alpha-BHC. USEPA (2014a) has classified alpha-BHC as a B2 carcinogen, a probable human carcinogen, based on sufficient evidence of carcinogenicity in animals. Per USEPA (2014a), dietary alpha-BHC showed an increased incidence of liver tumors in five mouse strains and in Wistar rats. USEPA (2014a) has calculated an oral cancer slope (CSF) of 6.3 $(mg/kg/day)^{-1}$ and an inhalation unit risk (IUR) of 1.8×10^{-3} $(\mu g/m^3)^{-1}$ for alpha-BHC.

Arsenic

Arsenic was identified as a COPC contributing to the overall cancer risk and/or non-cancer hazard for human receptors (outdoor worker, construction worker, and adolescent trespasser) assumed to be exposed to surface soil in the South and North Pit Exposure Areas, groundwater in the UTU in the

South Pit Exposure Area and second transmissive unit (STU) in the South Pit, North Pit, and Off-Site Exposure Areas, and surface water in the East Ditch.

Arsenic is a naturally occurring element with widespread distribution in the environment (ATSDR, 2007a). The toxicity of inorganic arsenic (As) depends on its valence state (As^{-3}, As^{+3}, or As^{+5}) and its form. Trivalent (As^{+3}) compounds are generally more toxic than pentavalent (As^{+5}) compounds; however, the differences in the relative toxicity potency are reasonably small (about 2 to 3 fold) (ATSDR, 2007a).

The primary target organs for inorganic arsenic are the skin (hyperpigmentation and hyperkeratosis) and vascular (i.e., circulatory/cardiovascular) system (USEPA, 2014a). The USEPA's IRIS database includes an oral RfD of 3.0 $x10^{-4}$ mg/kg-day for arsenic, based on pathological changes in skin as well as lesions in blood vessels, and includes an UF of 3 (USEPA, 2014a). An inhalation RfC is not currently available for arsenic in IRIS; the California Environmental Protection Agency (CalEPA) has published an inhalation RfC of 1.5 x 10^{-5} mg/m^3 for arsenic, which is based on developmental, cardiovascular, and nervous system health effects, and includes an UF of 30 (CalEPA, 2014).

Arsenic is a known human carcinogen (ATSDR, 2007a; USEPA, 2014a). The International Agency for Research on Cancer (IARC) indicates there is sufficient evidence of a relationship between exposure to arsenic and human cancer and has classified arsenic as a Group 1 carcinogen (IARC, 1987). USEPA (2014a) has classified arsenic as a Group A carcinogen [human carcinogen (i.e., sufficient evidence of carcinogenicity in humans)]. By the inhalation route, respiratory system cancers are the primary tumor types; however, a few reports have indicated increased incidence of tumors at other sites, including the liver, skin, and digestive tract (ATSDR, 2007a). Skin tumors are most commonly reported in humans exposed chronically by the oral route. A number of epidemiological studies also indicate that ingestion of arsenic increases the risk of internal tumors (mainly of bladder and lung, and to a lesser extent, liver, kidney, and prostate) (ATSDR, 2007a). USEPA (2014a) has calculated an oral CSF of 1.5 $(mg/kg/day)^{-1}$ and IUR of 4.3 $x10^{-3}(\mu g/m^3)^{-1}$ for arsenic. Arsenic has a maximum contaminant level (MCL) of 0.01 mg/L (USEPA, 2014b).

Benzene

Benzene was identified as a COPC contributing to the overall cancer risk and/or non-cancer hazard for human receptors (outdoor and indoor workers) assumed to be exposed to waste materials and soil gas in the South Pit Exposure Area, and groundwater in the South Pit Exposure Area UTU and Off-Site Exposure Area UTU and STU.

Benzene is a volatile organic compound (VOC). Benzene is widely distributed in the environment (ATSDR, 2007b). Benzene is primarily produced from petroleum products, and is commonly is used as an intermediate in the manufacture of a number of chemicals, including ethylbenzene (used in the synthesis of styrene), cumene (used in the synthesis of phenol and manufacture of phenolic resins and nylon intermediates), cyclohexane (used to make nylon resins), and nitrobenzene (used in the synthesis of aniline) (HSDB, 2014). If released to air, a vapor pressure of 94.8 mmHg at 25 ^oC indicates benzene will exist solely as a vapor in ambient air (HSDB, 2014). If released to soil,

benzene is expected to have high mobility based upon a K_{oc} of 85 (HSDB, 2014). Biodegradation in environmental media is expected to be an important fate process.

Inhalation is the primary route of exposure for benzene; dermal contact is most often only a minor source of exposure, and oral exposures are uncommon (HSDB, 2014). Acute human exposures to high concentrations of benzene in air may result in neurological toxicity (HSDB, 2014). Chronic exposure to benzene may cause hematotoxicity, including aplastic anemia, pancytopenia, or any combination of anemia, leukopenia, and thrombocytopenia (HSDB, 2014). Chronic exposure to benzene is associated with an increased risk of leukemia (HSDB, 2014). The USEPA's IRIS database includes an oral RfD of 4.0 $x10^{-3}$ mg/kg-day for benzene, based on effects on the blood, and includes an UF of 300 (USEPA, 2014a). An inhalation RfC of 3.0 x 10^{-2} mg/m^3 is also available for benzene in IRIS, which is based on effects on the blood, and includes an UF of 300 (USEPA, 2014a).

Benzene is a known human carcinogen for all exposure routes (based upon human evidence as well as supporting evidence from animal studies) (ATSDR, 2007b; USEPA, 2014a). The IARC indicates there is sufficient evidence of a relationship between exposure to benzene and human cancer and has classified benzene as a Group 1 carcinogen (IARC, 1987). USEPA (2014a) has classified benzene as a Group A carcinogen [human carcinogen (i.e., sufficient evidence of carcinogenicity in humans)]. Epidemiologic studies indicate clear evidence of a causal association between exposure to benzene and acute nonlymphocytic leukemia and also suggest evidence for chronic nonlymphocytic leukemia and chronic lymphocytic leukemia (USEPA, 2014a). Experimental animal data also support that exposure to benzene increases the risk of cancer in multiple species at multiple organ sites (e.g., hematopoietic, liver, forestomach, lung, ovary, and mammary gland) (USEPA, 2014a). USEPA (2014a) has calculated oral CSFs ranging from 1.5 $x10^{-2}$ to 5.5 x 10^{-2} $(mg/kg/day)^{-1}$ for benzene. A range of IURs [2.2 $x10^{-6}$ to 7.8 x 10^{-6} $(\mu g/m^3)^{-1}$] are included for benzene in IRIS (USEPA, 2014a). Benzene has a MCL of 0.005 mg/L.

Benzo(a)pyrene

Benzo(a)pyrene was identified as a COPC contributing to the overall cancer risk for human receptors (outdoor worker and adolescent trespasser) potentially exposed to surface soil in the South Pit Exposure Area and sediment in the East Ditch.

Benzo(a)pyrene is a polycyclic aromatic hydrocarbon (PAH). PAHs enter the environment mostly as releases to air from volcanoes, forest fires, residential wood burning, and exhaust from automobiles and trucks (ATSDR, 1995). PAHs in general do not easily dissolve in water and, in soils, are most likely to adhere tightly to particles (ATSDR, 1995). PAHs can enter the body through the lungs via inhalation (primarily as particulate). Ingestion of water, food, soil, or dust particles that contain PAHs are other routes for these chemicals to enter your body, but absorption is generally slow when PAHs are swallowed. PAHs may also enter the body if skin is in contact with soil that contains high levels of PAHs. Data from animal studies show that PAHs do not tend to be

stored in your body for a longtime. Most PAHs that enter the body leave within a few days, primarily in the feces and urine (ATSDR, 1995).

No data are available on the systemic (non-cancer) effects of benzo(a)pyrene in humans and neither a chronic oral RfD nor an inhalation RfC has been derived for benzo(a)pyrene. USEPA (2014a) has classified benzo(a)pyrene as a B2 carcinogen, a probable human carcinogen based on sufficient evidence of carcinogenicity in animals. Human data specifically linking benzo(a)pyrene to a carcinogenic effect are lacking; however, there are multiple animal studies in many species demonstrating benzo(a)pyrene to be carcinogenic following administration by numerous routes (USEPA, 2014a). In addition, benzo(a)pyrene has produced positive results in numerous genotoxicity assays (USEPA, 2014a). Lung cancer has been indicated to be induced in humans by various mixtures of PAHs known to contain benzo(a)pyrene (including cigarette smoke, roofing tar, and coke oven emissions); however, it has not been possible to conclude from these data that benzo(a)pyrene is the primary agent that caused the effect (USEPA, 2014a). Benzo(a)pyrene has an oral CSF of 7.3 $(mg/kg\text{-}day)^{-1}$ available in the USEPA's IRIS database (USEPA, 2014a). An IUR is not currently available for benzo(a)pyrene in IRIS; the CalEPA (2014) has published an IUR of 1.1 $x10^{-3}(\mu g/m^3)^{-1}$ for benzo(a)pyrene. Benzo(a)pyrene has a MCL of 0.0002 mg/L.

Dieldrin

Dieldrin was identified as a COPC contributing to the overall cancer risk for human receptors (construction worker) assumed to be exposed to the UTU in the South Pit Exposure Area.

Dieldrin was formerly used as an insecticide (HSDB, 2014). Dieldrin is also a degradation product of the aldrin (HSDB, 2014). Although dieldrin is no longer registered for agricultural use in the United States, the general population continues to be exposed to this compound due to its long persistence time (HSDB, 2014). If released to soil, dieldrin is expected to have low to no mobility based upon K_{oc} values of 1,957 to 23,310 measured in soil and sediment (HSDB, 2014). If released into water, dieldrin is expected to adsorb strongly to sediments (HSDB, 2014).

The USEPA's IRIS database indicates an oral RfD of 5 $x10^{-5}$ mg/kg-day for dieldrin, which includes an UF of 100 and is based on effects on the liver. No inhalation RfCs were identified for dieldrin. USEPA (2014a) reports that dieldrin was carcinogenic in seven strains of mice when administered orally. USEPA (2014a) has classified dieldrin as a class B2 carcinogen, a probable human carcinogen based on sufficient evidence of carcinogenicity in animals. The USEPA (2014a) has calculated an oral CSF of 16 $(mg/kg/day)^{-1}$ and IUR of 4.6 x 10^{-3} $(\mu g/m^3)^{-1}$ for dieldrin.

Ethylbenzene

Ethylbenzene was identified as a COPC contributing to the overall cancer risk for human receptors (outdoor worker) assumed to be exposed to groundwater in the STU in the Off-Site Exposure Area. Ethylbenzene is a VOC. It is used in the manufacture of styrene and is present in fuels and crude oil (HSDB, 2014). If released to air, a vapor pressure of 9.6 mmHg at 25 ^{o}C indicates ethylbenzene will

exist solely as a vapor in ambient air (HSDB, 2014). If released to soil, ethylbenzene is expected to have moderate mobility based upon an estimated K_{oc} of 520 (HSDB, 2014). Biodegradation in environmental media is expected to be an important fate process.

Ethylbenzene is an irritant of mucous membranes and the eyes, and may cause effects on the central nervous system (HSDB, 2014). The USEPA's IRIS database includes an oral RfD of 0.1 mg/kg-day for ethylbenzene based on effects on the kidney and liver, and includes an UF of 1000 (USEPA, 2014a). An inhalation RfC of 1.0 mg/m^3 is also available for ethylbenzene in IRIS, which is based on developmental toxicity effects, and includes an UF of 300 (USEPA, 2014a). USEPA (2014a) has classified ethylbezenze as a Group D carcinogen (i.e., not classifiable as to human carcinogenicity). IARC (2000) has identified ethylbezenze as Group 2B, possibly carcinogenic to humans, based inadequate evidence in humans and sufficient evidence in experimental animals. An oral CSF and IUR are not currently available for ethylbenzene in IRIS. CalEPA has published an oral CSF of 1.1 $x10^{-2}$ $(mg/kg\text{-}day)^{-1}$ and IUR of 2.5 $x10^{-6}$ $(\mu g/m^3)^{-1}$ for ethylbenzene (CalEPA, 2014). Ethylbenzene has a MCL of 0.7 mg/L (USEPA, 2014b).

Heptachlor Epoxide

Heptachlor epoxide was identified as a COPC contributing to the overall cancer risk for human receptors (outdoor worker) assumed to be exposed to groundwater in the STU in the Off-Site Exposure Area.

Heptachlor epoxide is a pesticide. Heptachlor epoxide is not produced commercially, but rather is formed by the chemical and biological transformation of heptachlor in the environment (HSDB, 2014). Heptachlor epoxide adsorbs strongly to soil and is extremely resistant to biodegradation, persisting for many years in the upper soil layers (HSDB, 2014). If released into water, heptachlor epoxide is expected to adsorb strongly to sediments (HSDB, 2014).

The USEPA's IRIS database indicates an oral RfD of 1.3 $x10^{-5}$ mg/kg-day for heptachlor epoxide, which includes an UF of 1000 and is based on effects on the liver. No inhalation RfCs were identified for heptachlor epoxide. USEPA (2014a) reports that sufficient animal data support evidence of carcinogenicity based on rodent studies in which liver carcinomas were induced in two strains of mice of both sexes and in CFN female rats. USEPA (2014a) has classified heptachlor epoxide as a 2B carcinogen, a probable human carcinogen, based on sufficient evidence of carcinogenicity in animals. USEPA (2014a) has calculated an oral CSF of 9.1 $(mg/kg/day)^{-1}$ and IUR of 2.6 x 10^{-3} $(\mu g/m^3)^{-1}$ for heptachlor epoxide. Heptachlor epoxide has a MCL of 0.0002 mg/L (USEPA, 2014b).

3&4-Methyphenol

3&4-Methylphenol was identified as a COPC contributing to the overall non-cancer hazard for human receptors (construction worker) assumed to be exposed to groundwater in the UTU South Pit Exposure Area.

3-Methylphenol (m-cresol) and 4-methyphenol (p-cresol) are used as solvents, disinfectants and chemical intermediates in the production of synthetic resins, and as food flavoring additives (HSDB, 2014). They are also found in automobile exhaust, tobacco smoke, and in various plant lipid constituents (HSDB, 2014). If released to soil, 3- and 4-methylphenol are expected to have moderate to high mobility based upon log K_{oc} values of 1.69 to 2.81 (HSDB, 2014).

For the Baseline Human Health Risk Assessment (BHHRA), the lower of the published toxicity values for 3- and 4-methylphenol was used in the risk characterization step. An oral RfD of 5.0×10^{-3} mg/kg-day for 4-methylphenol included in the USEPA's Health Effects Assessment Summary Tables (HEAST) was selected, which is based on effects on the nervous system, respiratory system, and body weight, and includes an UF of 1000 (USEPA, 1997). CalEPA has published an inhalation RfC of 0.6 mg/m^3 for 4-methylphenol based on the nervous system and includes an UF of 300 (CalEPA, 2014). USEPA (2014a) has classified 3- and 4-methylphenol as Group C carcinogens (i.e., possible human carcinogen) based on an increased incidence of skin papillomas in mice in an initiation-promotion study. In addition, the cresol isomers produced positive results in genetic toxicity studies both alone and in combination (USEPA, 2014a). An oral CSF and IUR are not currently available for 3-methylphenol and 4-methyphenol in IRIS.

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