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# Computation of Exposure Point Concentrations for Waste Management Area C Phase 2 Soil Characterization Data

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**Abstract:** This document details the description of the computation of exposure point concentrations for both radiological and non-radiological analytes based on selected characterization data collected as part of the Phase 2 Resource Conservation and Recovery Act of 1976 facility investigation/corrective measures study at Waste Management Area C. The results of the exposure point concentrations calculations are used in the Baseline Risk Assessment at Waste Management Area C.

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**Revision 0**

# **Computation of Exposure Point Concentrations for Waste Management Area C Phase 2 Soil Characterization Data**

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**EXECUTIVE SUMMARY**

This report presents a detailed description of the computation of exposure point concentrations (EPCs) for both radiological and non-radiological analytes based on selected soil characterization data collected as part of the Phase 2 *Resource Conservation and Recovery Act of 1976* (RCRA) facility investigation/corrective measures study (RFI/CMS) at Waste Management Area C (WMA C). The results of these EPC calculations are being used in an RFI/CMS Baseline Risk Assessment at WMA C.

The WMA C is part of the single-shell tank (SST) system in the 200 East Area of the Hanford Site and is one of the first four of the tank farm areas built at the Hanford Site in 1944. Environmental releases have occurred in the past to the underlying vadose zone in vicinity of WMA C. Notable facilities to be addressed in the closure of WMA C include 12 large SSTs, each with a capacity of  $2 \times 10^6$  L (530,000 gal), 4 smaller SSTs each with a capacity of  $2 \times 10^5$  L (55,000 gal), a catch tank, a vault with 4 tanks, 7 diversion boxes, and about 7 miles of pipelines (Figure ES-1). Past releases in previous operational periods include 14 unplanned releases to the soil. To date, 10 of the 16 SSTs at WMA C have had the previously-stored waste removed (retrieved) including 241-C-103, 241-C-104, 241-C-106, 241-C-108, 241-C-109, 241-C-110, 241-C-201, 241-C-202, 241-C-203, and 241-C-204. The retrieval status of three other tanks (241-C-101, 241-C-107, and 241-C-112) are under review, and three other remaining tanks (241-C-102, 241-C-105, and 241-C-111) are in varying phases of retrieval.

Five major steps are performed in the process of computing the EPCs from the Phase 2 RFI/CMS soil data. They include (1) identification of Phase 2 site characterization data to be considered in the evaluation; (2) organization and preliminary evaluation of site characterization data based on exposure scenarios; (3) data reduction and screening of analytical data to identify analytes for which the EPCs will be computed; (4) calculation of the 95% upper confidence limit (UCL) of the arithmetic mean; and (5) computation and selection of the EPCs.

In the first step, soil sampling results from 13 Phase 2 sampling locations (A, B, C, E, F, G, H, I, J, L1/L2, P, R, and U) and from a limited set of soil samples collected during installation of two nearby monitoring wells (299-E27-20 and 299-E27-24) were identified for consideration in the evaluation. The initial data set processed contained 25,595 records for 365 analytes. In addition to those analytes, concentrations for two additional analytes – total uranium and plutonium-241 ( $^{241}\text{Pu}$ ) – which were calculated from results of other constituents, were also included in the analysis.

In the second step, the 13 sampling locations were grouped together into 10 exposure areas (EAs) based on common Phase 2 characterization objectives and evaluated as single EAs. The grouped sampling locations (EAs), their general locations within WMA C, and their Phase 2 characterization objectives are identified in Table ES-1. Due to the limited nature of the analytical data associated with the samples from wells 299-E27-20 and 299-E27-24, and because they are located outside the 10 EAs, those two well locations were not considered for assignment to a grouped location and are not shown in Table ES-1. In addition, based on the exposure scenarios for human receptors considered for the Site, the analytical data sets for each EA are segregated into two subsets, one set representing a shallow vadose zone soil (0 to 15 ft below

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ground surface) and the other set representing the deep vadose zone (>15 ft below ground surface). A separate set of EPCs is calculated for each data subset at each of the EAs.

During the third step of data processing two types of screenings were performed to select analytes for which the EPCs were computed: 1) a data reduction and exclusion criteria screening, and 2) a weight-of-evidence screening. Analytes that did not meet the criteria for each screen were eliminated from further consideration. The number of records associated with and removed in each of the steps are presented in Figure ES-2. The data reduction screen and application of exclusion criteria eliminated 9,716 records and the weight of evidence screen eliminated 7,591 records. The net effect of both screenings resulted in the removal of 17,307 records and 283 analytes from the initial dataset. The remaining 8,288 records associated with 82 analytes provided the basis for further calculation of final EPCs calculated in Steps 4 and 5.

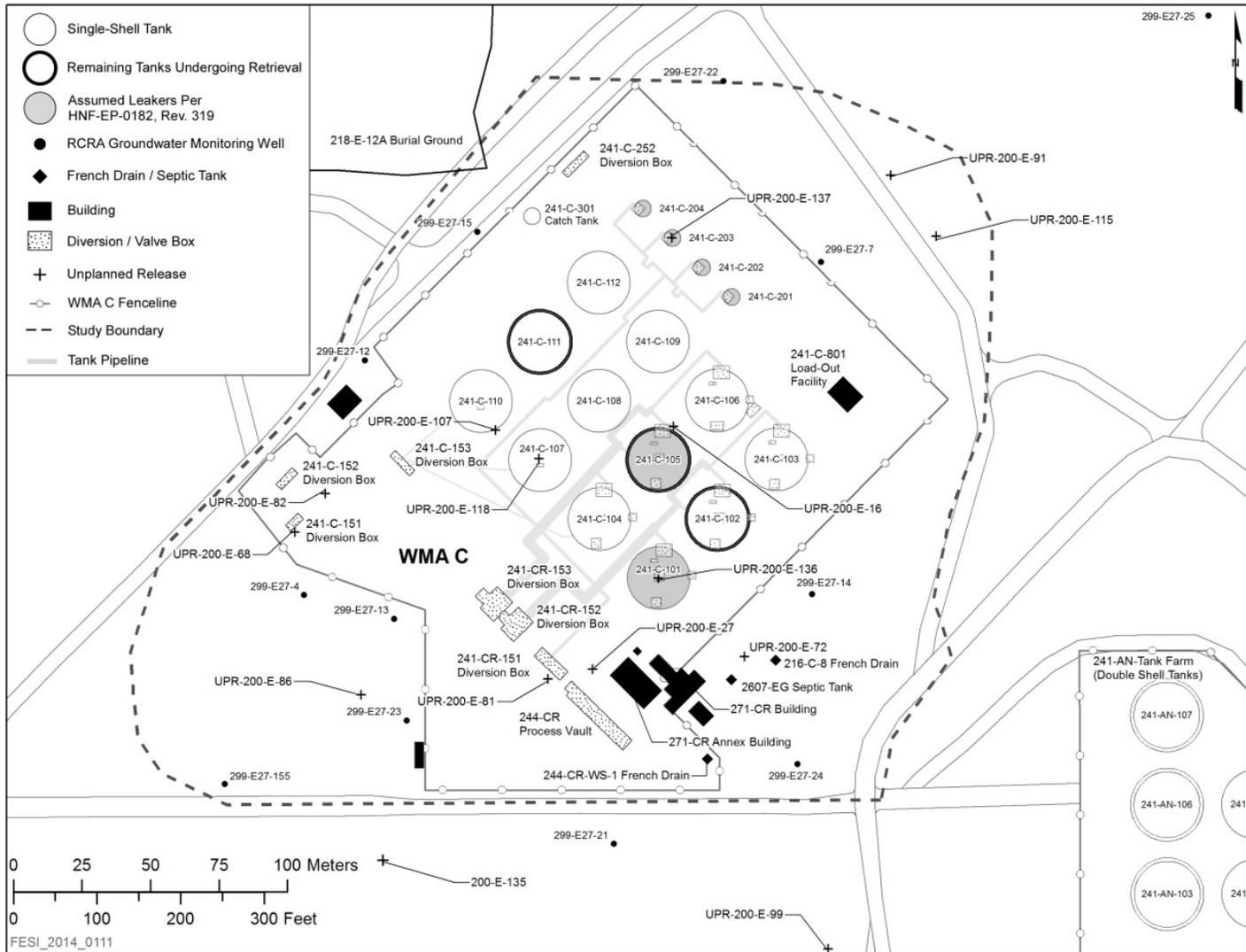
In the fourth step, the most recent U.S. Environmental Protection Agency (EPA) guidance document, OSWER Publication 9285.6-10, *Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites*, and EPA software, ProUCL 4.00.05<sup>1</sup> were used to calculate the 95% UCL for analytes that passed through the screening processes.

During the fifth and final step, the EPCs for both detected radiological and non-radiological analytes were computed and selected using the logic described in Section 7.0 and EPCs for all analytes are summarized in Section 8.3 for each EA and for wells 299-E27-20 and 299-E27-24.

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<sup>1</sup> ProUCL software was developed by Lockheed Martin Environmental Services, Las Vegas, Nevada, under a contract with the U.S. Environmental Protection Agency, Office of Research and Development, National Exposure Research Laboratory, Environmental Sciences Division.

Figure ES-1. Single-Shell Tanks and Related Facilities in Waste Management Area C



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RCRA = Resource Conservation and Recovery Act of 1976

WMA = Waste Management Area

Reference: HNF-EP-0182, Waste Tank Summary Report for Month Ending July 31, 2014, Rev. 319.

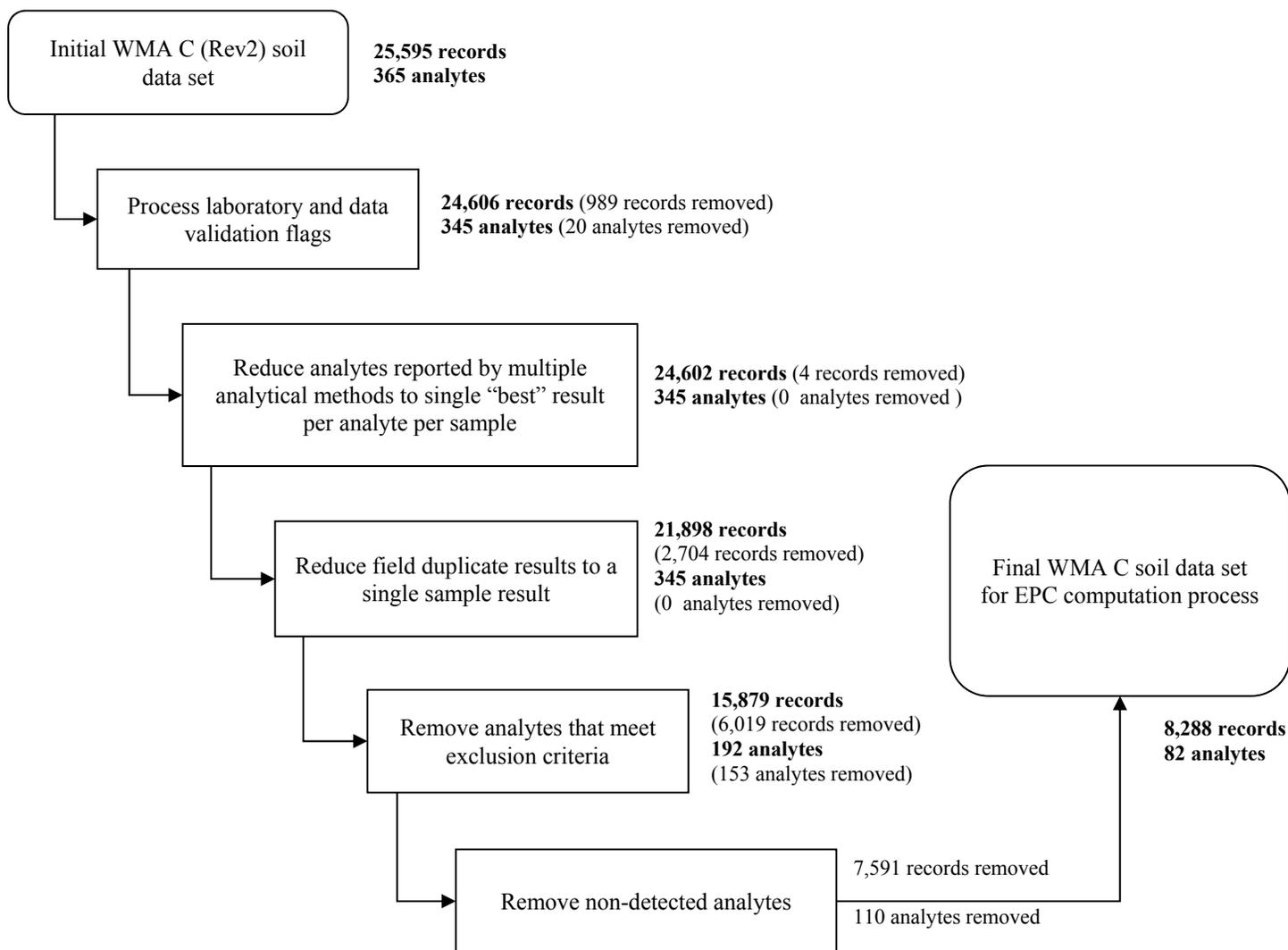
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**Table ES-1. Waste Management Area C Exposure Areas**

<b>Exposure Area</b>	<b>General Location Within Waste Management Area C</b>	<b>Phase 2 Characterization Objective<sup>a</sup></b>
A + B	Area near tank 241-C-101	Characterize releases and refine conceptual models 1, 2 and 4
C	Area near 241-C-200 series tanks	Determine if C-200s actually leaked, refine conceptual models 1, 2, and 4, and determine if any C-200 tank leaked during retrieval
E	Area between tanks 241-C-106 and 241-C-109	Assess <sup>60</sup> Co and refine conceptual models 1, 2, and 4
F + G	Area near tank 241-C-103 and Bldg. C-801, and Bldg. C-801 chemical drain	Assess release of Plutonium Uranium Extraction plant waste, <sup>137</sup> Cs and <sup>99</sup> Tc, and <sup>60</sup> Co and refine conceptual models 1, 2, and 4
H + I	Area northeast of UPR-200E-91 and UPR-200E-115	Assess surface exposures, and assess <sup>60</sup> Co and surface release conceptual models
J	Area near tank 241-C-104	Assess suspected release and refine conceptual models 1, 2 and 4
L1 + L2	Area between tanks 241-C-103 and 241-C-106	Updated logging data for <sup>60</sup> Co, <sup>137</sup> Cs, Uranium, and moisture and assess potential release and refine conceptual models 1, 2, and 4
P	Area near UPR-81	Characterize release and refine conceptual models 1, 2, and 4
R	Area near 241-C-301 catch tank	Assess potential catch tank release and refine conceptual models 1, 2, and 4
U	Area near tank 241-C-110	Characterize tank 241-C-110 release and conceptual models 1, 2, and 4

<sup>a</sup> Conceptual models 1, 2, and 4 refer to alternative conceptualizations of contaminant release and subsequent migration from Waste Management Area C infrastructure. Conceptual model descriptions are provided in Section 3.3 of RPP-PLAN-39114, *Phase 2 RCRA Facility Investigation/Corrective Measures Study Work Plan for Waste Management Area C*.

**Figure ES-2. Analytical Data Processing for Exposure Point Concentration Computation**



EPC = exposure point concentration

WMA = Waste Management Area

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**LIST OF TERMS****Abbreviations and Acronyms**

3D	three-dimensional
bgs	below ground surface
BRA	baseline risk assessment
CAS	Chemical Abstracts Service
CHPRC	CH2M HILL Plateau Remediation Company
CLT	Central Limit Theorem
CMS	corrective measures study
DOE	U.S. Department of Energy
DQO	data quality objectives
EA	Exposure Area
Ecology	State of Washington Department of Ecology
EPA	U.S. Environmental Protection Agency
EPC	exposure point concentration
ERMA	Environmental Risk Management Archive
FY	fiscal year
HEIS	Hanford Environmental Information System
HFFACO	<i>Hanford Federal Facility Agreement and Consent Order</i>
MDL	method detection limit
PCB	polychlorinated biphenyl
ProUCL	software used to calculate upper confidence limits
PUREX	Plutonium Uranium Extraction (plant)
QC	quality control
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
RFI/CMS	RCRA facility investigation/corrective measures study
ROS	regression on order statistics
SGE	surface geophysical exploration
SGLS	spectral gamma logging system
SST	single-shell tank
SVOC	semi-volatile organic compound
TBD	to be determined
UCL	upper confidence limit
UPR	unplanned release
VOC	volatile organic compound
WAC	<i>Washington Administrative Code</i>
WIDS	Waste Information Data System
WMA	Waste Management Area

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**1.0 INTRODUCTION**

The U.S. Department of Energy, Office of River Protection (DOE-ORP) is pursuing closure on Waste Management Area C (WMA C) under Federal requirements and forthcoming State-approved closure plans and permits in accordance with the *Hanford Federal Facility Agreement and Consent Order* (HFFACO) (Ecology et al. 1989), Action Plan, Appendix I. Current baseline plans at the Hanford Site call for closure of WMA C in the year 2019.

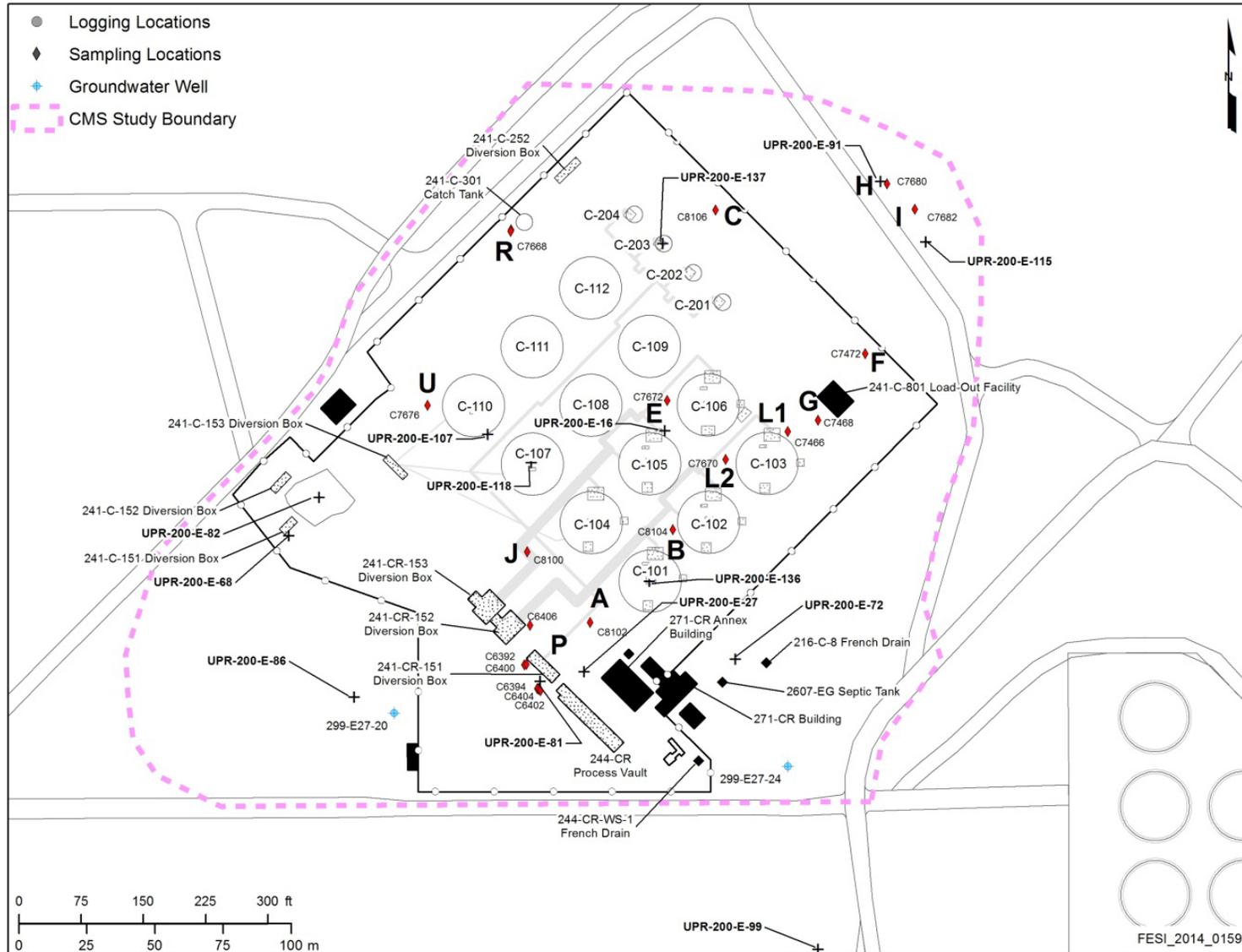
Waste Management Area C is part of the single-shell tank (SST) system in the 200 East Area of the Hanford Site and is one of the first four of the tank farm areas built at the Hanford Site in 1944. Environmental releases have occurred in the past to the underlying vadose zone in vicinity of WMA C. Notable facilities to be addressed in the closure of WMA C include 12 large SSTs, each with a capacity of  $2 \times 10^6$  L (530,000 gal), 4 smaller SSTs each with a capacity of  $2 \times 10^5$  L (55,000 gal), a catch tank, a vault with 4 tanks, 7 diversion boxes, and about 7 miles of pipelines (Figure 1-1). Past releases in previous operational periods include 14 unplanned releases to the soil.

This report presents a detailed description of the process and results of the computation of exposure point concentrations (EPCs) for both radiological and non-radiological analytes from selected soil characterization data collected at 13 locations (see Figure 1-2) in vicinity of WMA C. These characterization data were collected as a part of the Phase 2 *Resource Conservation and Recovery Act of 1976* (RCRA) facility investigation/corrective measures study (RFI/CMS) at WMA C.

The results of the EPC calculations are being used in a baseline risk assessment (BRA) being prepared to support the development of the RFI/CMS at WMA C. The methodology used to compute the EPCs at WMA C is consistent with the methodology used in recent Remedial Investigation/Feasibility Study risk assessments for River Corridor soil operable units (e.g., DOE/RL-2012-15, *Remedial Investigation/Feasibility Study for the 100-NR-1 and 100-NR-2 Operable Units*; ECF-100NR1-12-0041, *Computation of Exposure Point Concentrations for the 100-NR-1 Source Operable Unit*) to support decisions on whether additional remediation is needed for sites remediated under interim records of decision. Those methodologies were established in accordance with requirements specified in CH2M HILL Plateau Remediation Contractor management directives and procedures and have been adapted and applied in this report for computation of EPCs at WMA C to provide for ease of comparison and integration of the work.



**Figure 1-2. Soil Characterization and Sampling Locations in Vicinity of Waste Management Area C**



CMS = corrective measures study

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**2.0 EXPOSURE POINT CONCENTRATION COMPUTATION METHODOLOGIES**

The following data processing and evaluation steps are performed on the WMA C Phase 2 soil characterization data to compute the EPCs for both radiological and non-radiological analytes. These steps include the:

- Identification of the WMA C soil characterization data to be considered in the EPC calculations (see Section 3.0);
- Organization and preliminary evaluation of Phase 2 soil characterization data for the purpose of performing the BRA (see Section 4.0);
- Performance of 1) data reduction and exclusion screening and 2) weight of evidence screening to identify radiological and nonradiological analytes to be used in the calculation of the 95% upper confidence limit (UCL) of the arithmetic mean (see Section 5.0);
- Calculation of the 95% UCL values for detected radiological and nonradiological analytes using the EPA ProUCL software package (see Section 6.0); and
- Computation and selection of the EPCs for radiological and nonradiological analytes detected in the soil characterization data (see Section 7.0).

Each of these steps is summarized in the following sections. The results of the evaluations are presented in Section 8.0.

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### 3.0 IDENTIFICATION OF CHARACTERIZATION SAMPLING DATA TO BE CONSIDERED IN CALCULATION OF EXPOSURE POINT CONCENTRATIONS

This EPC evaluation was largely based on analytical soil characterization data collected as a part of Phase 2 characterization data to support the RFI/CMS at WMA C. The characterization is based on RPP-RPT-38152, *Data Quality Objectives Report Phase 2 Characterization for Waste Management Area C RCRA Field Investigation/Corrective Measures Study*; RPP-PLAN-39114, *Phase 2 RCRA Facility Investigation/Corrective Measures Study Work Plan for Waste Management Area C*; and RPP-PLAN-38777, *Sampling and Analysis Plan for Phase 2 Characterization of Vadose Zone Soil in Waste Management Area C*. The HFFACO Action Plan (Ecology et al. 1989) and the Phase 2 work plan (RPP-PLAN-39114) provide information on how the Phase 2 RFI/CMS processes will be conducted and eventually lead to proposed remedies for WMA C fulfilling HFFACO Milestone M-045-60 (*Federal Facility Agreement and Consent Order Change Control Form Change No. M-45-06-03, Modification of Tank Farm Corrective Measures and Interim Measures Milestones* [Ecology and DOE 2007]).

The Phase 2 work plan (RPP-PLAN-39114) defines WMA C as the area that includes equipment and soil contaminated by 241-C Tank Farm operations, located in the east central portion of the 200 East Area. In general, the WMA C boundary is represented by the fence line surrounding the 241-C Farm tanks. The boundary for vadose zone soil sampling, as defined through a 2008 Phase 2 data quality objectives (DQO) process (RPP-RPT-38152), includes the WMA and the immediate surrounding areas. In support of the RFI/CMS effort, the Phase 2 DQO report (RPP-RPT-38152) and the resultant Phase 2 work plan (RPP-PLAN-39114) called for site characterization to be performed at the candidate locations listed in Table 3-1 and shown in Figure 3-1. Table 3-1 includes the sampling method, implementation design, and the main sampling objective for each of the candidate locations. Figure 1-2 shows the final sampling locations in relationship to existing surface features. The final sampling locations were established based on collected geophysical data and facility walk-downs conducted prior to deployment of the sampling equipment to the sample site.

To date, implementation of characterization activities under these two plans has resulted in the collection and analysis of soil samples at 13 sampling locations (A, B, C, E, F, G, H, I, J, L1/L2, P, R, and U) (Table 3-1, Figure 1-2). The analysis of soil samples from those 13 sampling locations provided the primary data utilized during the computation of the EPCs for both radiological and non-radiological analytes.

In addition to the Phase 2 characterization data, the EPC computations also considered analytical results from a limited set of soil samples collected during installation of two nearby monitoring wells (299-E27-20 and 299-E27-24). Analytical results from all of the locations considered in this evaluation were downloaded from the Hanford Environmental Information System database.

In addition to the analytes contained within the soil characterization data obtained from the 13 locations and the two groundwater wells, two additional analytes, total uranium and plutonium-241 ( $^{241}\text{Pu}$ ) are also included in the final site characterization data set prior to preparing the data for the calculation of 95% UCL. Results for those two analytes were

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calculated by using the sampling results of other analytes. These calculations are summarized in the following subsections.

A screening-level assessment was performed by (1) computing total polychlorinated biphenyl (PCB) congener concentration using concentrations of the PCB congeners collected from 10 soil sampling locations in and around WMA C and (2) comparing the result of total PCB congeners with respect to its published cleanup standard (*Revised Code of Washington* 70.105D, “Hazardous Waste Cleanup — Model Toxics Control Act”) of 0.5 mg/kg (RPP-RPT-58056, *Summary of Polychlorinated Biphenyls (PCBs) Results from Analysis of Selected Soil Samples Collected Within WMA C*). The results of the comparison showed that sampling results for total PCB congeners were several orders of magnitude lower than the published cleanup standard. Therefore, a recommendation was made to eliminate analysis of PCB congeners in further WMA C sampling activities and it was approved by the State of Washington Department of Ecology [Letter 11-NWP-053, “Re: Organic Analyses Optimization for Waste Management Area (WMA) C”]. Therefore, sampling results for PCB congeners were not included in this report.

### 3.1 CALCULATION OF TOTAL URANIUM CONCENTRATIONS AT SAMPLING LOCATIONS

Analytical data associated with uranium were reported for most WMA C sampling locations as isotopic uranium (pCi/g) and not as total uranium (µg/kg). Because total uranium (µg/kg) is needed to support the WMA C RFI/CMS process, an additional step was performed to calculate a mass-based total uranium concentration (µg/kg) from the activity-based isotopic uranium concentrations (pCi/g) reported for those sampling locations that do not have an analytical total uranium result. This step entails extracting the uranium isotope analytical data for each sample, converting the data from activity to mass-based concentrations, and then summing the converted values *for detected concentrations* to produce a mass-based total uranium value. For samples where all uranium isotope results are reported as non-detects, the individual values are not summed, but the maximum value is retained and flagged as a non-detect.

If both converted isotopic and analytical total uranium EPCs are available for an exposure area (EA), then the EPC based on analytical total uranium concentrations is carried through as the final EPC for that EA.

The pCi/g to µg/kg conversions and subsequent summations are performed using specific activities for the uranium isotopes and appropriate conversion factors, as shown in the calculation example provided in Table 3-2. As mentioned previously, only detected concentrations are included in the summations. In the Table 3-2 example, both  $^{233}\text{U}$  and  $^{236}\text{U}$  are non-detects and are not included in the summation.

**Table 3-1. Sampling Plan for Waste Management Area C Phase 2 Vadose Zone Characterization (RPP-PLAN-39114) (Sheet 1 of 3)**

Sampling Site Designation	Group <sup>a</sup>	Location	Deployment	Number of Sampling Direct Pushes	Average Number of Samples <sup>b</sup>	Known or Suspected Event	Objective	Accessibility	Ecology/ Stakeholder Interest	Status as of November 2011
A	G3	Spare inlet 241-C-101	Direct push, slant	1-2	8	Tank over fill. Loss through spare inlet	Characterize C-101 release and refine conceptual models 1, 2 and 4	Fair	High	Soil sampled in FY 2011 for laboratory analysis
B	G2	241-C-101 south side	Direct push, vertical or slant	1	8	Tank release	Characterize C-101 release and refine conceptual models 1 and 2	Good	High	Soil sampled in FY 2011 for laboratory analysis
C	G4	241-C-203 and 200-URP-E-137	(1) Direct push, slant; (2) 4 adjacent vertical direct pushes at sites C and D SGE; (3) Direct push slant, depending on SGE results <sup>c</sup>	1 or more, based on SGE results	8	Tank leak and/or tank over fill. Loss through spare inlet	Determine if C-200s actually leaked and refine conceptual models 1, 2, and 4; determine if any C-200 tank leaked during retrieval	Fair	Moderate to high	One slant direct push was logged in FY 2011; its companion slant direct push was sampled in FY 2012; SGE planned in 2013; additional sampling dependent on SGE results
D	G4	241-C-201, 241-C-202 and 241-C-204	(1) 4 adjacent vertical direct pushes at sites C and D combined to support placement of deep electrodes for 3D SGE; (2) Direct push, slant, depending on SGE results <sup>c</sup>	TBD based on SGE results	TBD	200 series tank leaks	Determine if C-200s actually leaked and refine conceptual models 1, 2 and 4; determine if any C-200 tank leaked during retrieval	Fair	Moderate, depending on C-203 results	SGE planned in 2013; soil sampling dependent on SGE results
E	G2	Between 241-C-106 and 200-C-109	Direct push, vertical	1	8	Suspected release	Assess <sup>60</sup> Co and refine conceptual models 1, 2 and 4	Fair	High	Soil sampled in FY 2010 for laboratory analysis
F	G2	Bldg. C-801 chemical drain	Direct push, vertical	1	8	Suspected release	Assess release of PUREX waste, <sup>137</sup> Cs and <sup>99</sup> Tc, and <sup>60</sup> Co and refine conceptual models 1, 2 and 4	Good	Moderate to high	Soil sampled in FY 2010 for laboratory analysis
G	G2	Between bldg. C-801 and 241-C-103	Direct push, vertical	1	8	Suspected transfer line release site	Assess release and <sup>60</sup> Co and refine conceptual models 1, 2 and 4	Good	High	Soil sampled in FY 2009 for laboratory analysis
H	G5	Northeast side of E-91	Direct push, vertical	1	8	Surface release	Surface exposures and assess <sup>60</sup> Co and surface release conceptual model	Good	High	Soil sampled in FY 2010 for laboratory analysis
I	G5	Northeast side of E-115	Direct push, vertical or slant	1	8	Surface release	Surface exposures and assess <sup>60</sup> Co and surface release conceptual model, refine conceptual models 1, 2 and 4	Good	High	Soil sampled in FY 2010 for laboratory analysis
J	G3	241-C-104	Direct push, slant	1	8	Tank release	Assess suspected release and refine conceptual models 1, 2 and 4	Fair	High	Soil sampled in FY 2011 for laboratory analysis
K	G2	241-C-108	Direct push, vertical or slant	1	8	Transfer line leak, hot drywell (09-02)	Assess suspected release and refine conceptual models 1, 2 and 4	Poor due to retrieval operations	High	Deleted; replaced with site X to investigate C-105
L1 & L2	G2	241-C-103 and 241-C-106	Drywell logging and direct push, vertical	2	8	Potential transfer line leak and tank over fill	Updated logging data for <sup>60</sup> Co, <sup>137</sup> Cs, Uranium, and moisture and assess potential release and refine conceptual models 1, 2 and 4	Fair	Moderate	All drywells logged with SGLS; 73% moisture logged in FY 2009 through FY 2011. Soil sampled in FY 2009 and FY 2010 for laboratory analysis

**Table 3-1. Sampling Plan for Waste Management Area C Phase 2 Vadose Zone Characterization (RPP-PLAN-39114) (Sheet 2 of 3)**

Sampling Site Designation	Group <sup>a</sup>	Location	Deployment	Number of Sampling Direct Pushes	Average Number of Samples <sup>b</sup>	Known or Suspected Event	Objective	Accessibility	Ecology/ Stakeholder Interest	Status as of November 2011
M	G7	241-C-104, -108, -109, -110, -111, and -112	Drywell logging	N/A	N/A		Updated logging data for <sup>60</sup> Co, <sup>137</sup> Cs, uranium, and moisture	Fair to good	Moderate	44% of drywells logged with SGLS; 67% moisture logged in FY 2009 through FY 2011. Discontinue further logging
N	G8	UPR-86, UPR-82 and UPR-81	SGE	N/A	N/A		Test SGE, define plume at UPR-82 and -86; refine conceptual models 1, 2 and 4	Good	High	SGE work completed FY 2009 though FY 2011
O	G9	WMA C	SGE	N/A	N/A		3D vision of suspected releases- may lead to supplemental sample locations	Good	High	Reanalysis of well-to-well data completed in FY 2011. Additional SGE to be deployed selectively (e.g., at sites C/D).
P	G1	UPR-81	Balance of direct pushes to complete characterization	3	8	Known release site	Characterize release and refine conceptual models 1, 2 and 4	Good	High	Soil sampled in FY 2009 for laboratory analysis
Q	G6	UPR-82	(1) 4 Adjacent direct pushes to support placement of strings of deep electrodes for 3D SGE per site N; (2) Direct push through center depending on SGE results <sup>c</sup>	1	8	Known release site	Test SGE: resolve depth with deep electrodes; define plume at UPR-82; refine conceptual models 1, 2 and 4	Poor due to shotcrete cover	High	SGE completed in FY 2011; direct push through center deleted
R	G2	241-C-301 Catch Tank	Direct push vertical	1	8	Unlined concrete catch tank	Assess potential catch tank release and refine conceptual models 1, 2 and 4	Good	Moderate to high	Soil sampled in FY 2010 for laboratory analysis
S	G5	UPR-72 and C-8 Drain	Direct push vertical	1	8	Buried radioactive material and French drain from 241-CR Building are in this area	Assess presence of buried material and potential releases to C-8 drain and refine conceptual models 1, 2 and 4	Good	Moderate to high	Deleted
T	TBD	TBD, based on SGE data for entire WMA	TBD, direct push vertical and/or slant	TBD	TBD	Previously unknown release sites	TBD	TBD	Moderate to high	Sampling dependent on SGE results
U	G3	C-110	Direct push, slant or vertical	1	8	Tank leak and/or tank over fill. Loss through spare inlet	Characterize C-110 release and conceptual models 1, 2 and 4	Fair	High	Soil sampled in FY 2010 for laboratory analysis
V	G2	C-111	Direct push vertical	1	8	Tank leak and/or tank over fill. Loss through spare inlet	Characterize C-111 release and conceptual models 1, 2 and 4	Good	High	Deleted

**Table 3-1. Sampling Plan for Waste Management Area C Phase 2 Vadose Zone Characterization (RPP-PLAN-39114) (Sheet 3 of 3)**

Sampling Site Designation	Group <sup>a</sup>	Location	Deployment	Number of Sampling Direct Pushes	Average Number of Samples <sup>b</sup>	Known or Suspected Event	Objective	Accessibility	Ecology/Stakeholder Interest	Status as of November 2011
W	G9	299-E27-4, 299-E27-12, 299-E27-13, 299-E27-14, 299-E27-15	Log groundwater monitoring wells outside of WMA C	N/A	N/A		Log wells to collect data on U, <sup>60</sup> Co, <sup>137</sup> Cs, and moisture	Good	High	Logging data found for 229-E27-4 and -14. Logging of 299-E27-12, -13, and -15 deleted
299-E27-20	TBD	Well 299-E27-20, adjacent to 299-E27-23	Analysis of archived soil samples	N/A	4	Previously unknown release site	Assess presence of potential release ( <sup>99</sup> Tc) to soil column impacting groundwater and conceptual models 1, 2 and 4	N/A	Moderate to high	Analysis planned for FY 2013
X	TBD	C-105	Direct push, slant	1	8	Cascade line leak. Possible tank leak and/or tank over fill.	Investigate extent of high activity (10 <sup>7</sup> pCi/g) <sup>137</sup> Cs plume in drywell 30-05-07 near tank C-105 and refine conceptual models 1, 2 and 4	Fair	Moderate to high	Planned for 2013

<sup>a</sup> Group refers to the expected work package associated with the characterization effort broadly defined as follows:

- G1 = Direct push at UPR-81 (covered by existing work package).
- G2 = Vertical direct pushes at nine investigative sites around the 100-series single-shell tanks.
- G3 = Slant direct pushes at three investigative sites around the 100-series single-shell tanks.
- G4 = Slant direct push at the C-200 Series tanks.
- G5 = Outside the WMA, vertical direct push at the investigative sites.
- G6 = Vertical direct push through gunite cap at UPR-82.
- G7 = Drywell logging at select drywells.
- G8 = Three separate SGE areas at the following locations: UPR-81, UPR-82, and UPR-86.
- G9 = Deploy SGE at WMA C taking into account the results from testing at site N.

<sup>b</sup> Value includes one surface sample.

<sup>c</sup> Sampling design details for sites D and Q and for future work at site C are applicable only to probe holes installed for sampling. Additional probe holes will be placed to support logging/electrode placement.

3D = three-dimensional

Ecology = State of Washington Department of Ecology

FY = fiscal year

N/A = Not Applicable

PUREX = Plutonium Uranium Extraction (plant)

RCRA = *Resource Conservation and Recovery Act of 1976*

RFI/CMS = RCRA facility investigation/corrective measures study

SGE = surface geophysical exploration

SGLS = spectral gamma logging system

TBD = to be determined

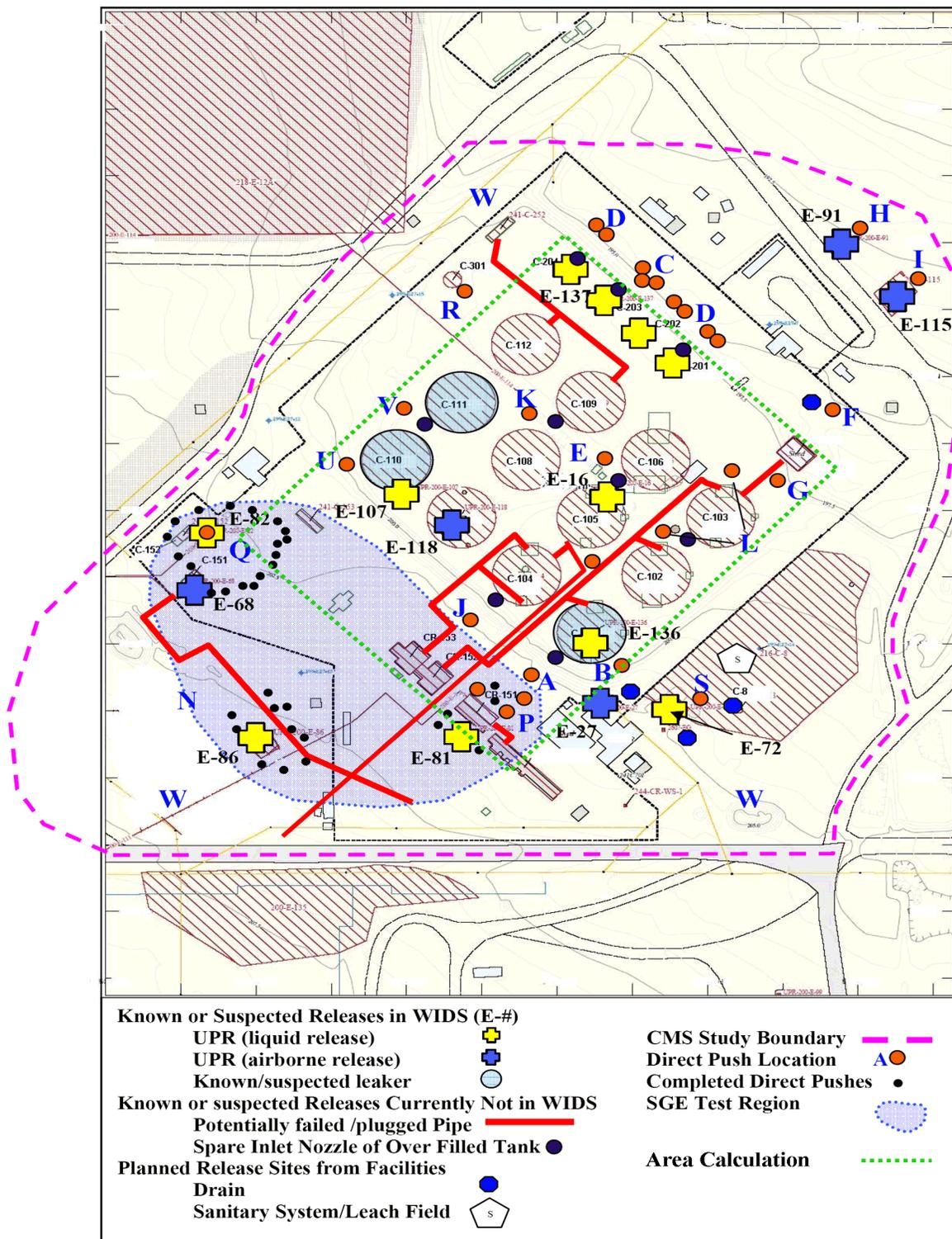
UPR = unplanned release site

WMA = Waste Management Area

Reference: RPP-PLAN-39114, *Phase 2 RCRA Facility Investigation/Corrective Measures Study Work Plan for Waste Management Area C*, Rev. 2.

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**Figure 3-1. Candidate Sampling Locations for Waste Management Area C RCRA Facility Investigation/Corrective Measures Study Phase 2 Characterization**



CMS = corrective measures study

RCRA = Resource Conservation and Recovery Act of 1976

SGE = surface geophysical exploration

UPR = unplanned release site

WIDS = Waste Information Data System

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**Table 3-2. Example Conversion from Activity- to Mass-Based Concentration (pCi/g to µg/kg) for Uranium Isotopes and Summation to Produce a Mass-Based Total Uranium Concentration (µg/kg)**

Uranium Isotope	Measured Activity (pCi isotope/g soil) <sup>a</sup> (ND or D)	Specific Activity (Bq isotope/g isotope) <sup>b</sup>	Specific Activity (pCi isotope/g isotope) <sup>c</sup>	Conversion Factor (µg isotope/g isotope)	Conversion Factor (g soil/kg soil)	Calculated Concentration (µg isotope/kg soil) <sup>d</sup>
U-233	8.58 (ND)	3.566E+08	9.638E+09	1,000,000	1,000	0.88 (not summed)
U-234	0.242 (D)	2.302E+08	6.222E+09	1,000,000	1,000	0.04
U-235	0.0088 (D)	7.995E+04	2.161E+06	1,000,000	1,000	4.06
U-236	0.0012 (ND)	2.393E+06	6.468E+07	1,000,000	1,000	0.02 (not summed)
U-238	0.19 (D)	1.243E+04	3.359E+05	1,000,000	1,000	565.6
Total Uranium Concentration (Total_U_Isotopes) (µg total uranium/kg soil) =						569.7

<sup>a</sup> Example analytical data shown for illustration purposes only (Waste Management Area C HEIS Sample Number: B2D1X2).

<sup>b</sup> *Table of Isotopes* (Firestone and Shirley, 1998); HEIS Specific Activities List.

<sup>c</sup> Formula = specific activity (Bq/g) / 3.7E + 10 Bq/Ci × 1.0E + 12 pCi/Ci.

<sup>d</sup> Formula = measured activity (pCi/g) / specific activity (pCi/g) × conversion factor (µg/g) × conversion factor (g/kg).

D = detect

HEIS = Hanford Environmental Information System

ND = non-detect

### 3.2 CALCULATION OF PLUTONIUM-241 CONCENTRATIONS AT SAMPLING LOCATIONS

During the analysis of Phase 2 soil characterization samples, the analytical laboratory did not specifically analyze for <sup>241</sup>Pu. However, analyses were performed for <sup>239/240</sup>Pu and calculated concentrations for <sup>241</sup>Pu were derived by multiplying the sampling results of <sup>239/240</sup>Pu with the scaling factor of 3.73 for each sample location (SVF-3009, *Pu241\_Soil\_Estimate.xls*).

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#### **4.0 ORGANIZATION AND PRELIMINARY EVALUATION OF CHARACTERIZATION DATA**

As mentioned in the previous section, analytical results from all soil samples collected from 13 Phase 2 sampling locations and a limited set of soil samples collected at wells 299-E27-20 and 299-E27-24 were used during the computation of the EPCs for both radiological and non-radiological analytes. The resulting EPCs will be utilized for the purpose of performing the WMA C BRA. A number of receptor scenarios are being considered for the WMA C BRA. Based on the exposure scenarios considered for those receptor scenarios, two additional data evaluations were performed to organize the analytical soil sampling results collected from those sampling locations. Each of the data evaluations is summarized below.

##### **4.1 DATA EVALUATION BASED ON EXPOSURE AREAS**

OSWER Publication 9285.6-10, *Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites* also states that “The EPC is determined for each individual exposure unit within a site. An exposure unit is the area throughout which a receptor moves and encounters an environmental medium for the duration of the exposure. Unless there is site-specific evidence to the contrary, an individual receptor is assumed to be equally exposed to media within all portions of the exposure unit over the time frame of the risk assessment.” Therefore, for the purposes of the BRA, several of the soil borings were grouped into a single EA based on common Phase 2 characterization objectives. Phase 2 site characterization data collected from 13 sampling locations are grouped into 10 primary EAs. The EAs, their general locations within WMA C, and their Phase 2 characterization objectives are identified in Table 4-1. Due to the limited nature of the analytical data associated with the samples from wells 299-E27-20 and 299-E27-24, and because they are located outside the 10 EAs, those two well locations were not considered for assignment to a grouped location and are not shown in Table 4-1.

##### **4.2 DATA EVALUATION BASED ON RECEPTOR EXPOSURE SCENARIOS**

Under the 2007 Washington State Model Toxics Control Act (*Revised Code of Washington 70.105D, “Hazardous Waste Cleanup — Model Toxics Control Act”*) cleanup regulations (*Washington Administrative Code 173-340-740, “Unrestricted Land Use Soil Cleanup Standards”*), the point of compliance for soil cleanup levels based on the direct contact pathway is defined as the zone extending from the ground surface to 15 ft below ground surface (bgs). A deep vadose zone (>15 ft bgs) exposure scenario may also be evaluated to screen for sites that pose a potential risk from inadvertent exposure through deep zone excavation activities and to allow institutional controls to be established at those sites to control access to deep zone

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contamination. To support the RFI/CMS BRA evaluation at WMA C, the analytical data sets for each EA listed in Table 4-1 and wells 299-E27-20 and 299-E27-24 are therefore segregated into the following two subsets:

1. Analytical results from samples collected from shallow vadose zone soil (0 to 15 ft bgs);
2. Analytical results from samples collected from deep vadose zone soil (>15 bgs).

A separate set of EPCs is calculated for each data subset at each EA in Table 4-1 and at wells 299-E27-20 and 299-E27-24.

**Table 4-1. Waste Management Area C Exposure Areas**

<b>Exposure Areas</b>	<b>General Location Within Waste Management Area C (See Figure 3-1)</b>	<b>Phase 2 Characterization Objective<sup>a</sup></b>
A + B	Area near tank 241-C-101	Characterize releases and refine conceptual models 1, 2 and 4
C	Area near 241-C-200 series tanks	Determine if C-200s actually leaked, refine conceptual models 1, 2, and 4, and determine if any C-200 tank leaked during retrieval
E	Area between tanks 241-C-106 and 241-C-109	Assess <sup>60</sup> Co and refine conceptual models 1, 2, and 4
F + G	Area near tank 241-C-103 and Bldg. C-801, and Bldg. C-801 chemical drain	Assess release of Plutonium Uranium Extraction plant waste, <sup>137</sup> Cs and <sup>99</sup> Tc, and <sup>60</sup> Co and refine conceptual models 1, 2, and 4
H + I	Area northeast of UPR-200E-91 and UPR-200E-115	Assess surface exposures, and assess <sup>60</sup> Co and surface release conceptual models
J	Area near tank 241-C-104	Assess suspected release and refine conceptual models 1, 2 and 4
L1 + L2	Area between tanks 241-C-103 and 241-C-106	Updated logging data for <sup>60</sup> Co, <sup>137</sup> Cs, Uranium, and moisture and assess potential release and refine conceptual models 1, 2, and 4
P	Area near UPR-81	Characterize release and refine conceptual models 1, 2, and 4
R	Area near 241-C-301 catch tank	Assess potential catch tank release and refine conceptual models 1, 2, and 4
U	Area near tank 241-C-110	Characterize tank 241-C-110 release and conceptual models 1, 2, and 4

<sup>a</sup> Conceptual models 1, 2, and 4 refer to alternative conceptualizations of contaminant release and subsequent migration from Waste Management Area C infrastructure. Conceptual model descriptions are provided in Section 3.3 of RPP-PLAN-39114, *Phase 2 RCRA Facility Investigation/Corrective Measures Study Work Plan for Waste Management Area C*.

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## 5.0 DATA REDUCTION AND SCREENING OF ANALYTICAL DATA

Two types of data screening processes were performed to identify both radiological and non-radiological analytes for which 95% UCL values are calculated. The data reduction steps and exclusion criteria are applied to the data set and then a weight of evidence screening is performed. Two subset datasets from the 10 primary EAs and wells 299-E27-20 and 299-E27-24 were utilized during the screening processes. The 95% UCL values were calculated for those analytes that passed both screens.

### 5.1 DATA REDUCTION AND EXCLUSION CRITERIA SCREENING

Three data reduction steps and four exclusion criteria were considered during this screening process. Each of them are summarized in the following.

#### 5.1.1 Data Reduction Steps

Data reduction steps include evaluations of:

- Data qualification and data validation flags
- Results reported by more than one analytical method
- Parent and field duplicate samples.

**Step 1: Evaluation of Data Qualification and Data Validation Flags.** Once the laboratory has completed their analysis, the data are received with data qualification flags and validation qualifiers assigned during the data validation process. The following rules are applied to determine how flagged and qualified sample results are used in computing EPCs.

- All sample results flagged with a “U” qualifier, or combination of qualifiers that include a “U,” such as a “UJ,” are considered non-detected concentrations.
- All sample results without a “U” qualifier are considered detected concentrations, including results without a qualifier or with an “E” or a “J” qualifier.
- Samples that are rejected and flagged with an “R” validation qualifier are not used for calculating UCLs.

Where:

- U = Analyzed for but not detected above limiting criteria.
- J = Estimated value.
- E = Reported value is estimated because of interference (inorganics).
- R = Do not use. Further review indicates the result is not valid.

**Step 2: Evaluation of Analytical Results Reported by Numerous Analytical Methods.**

Often, a sample is analyzed for an analyte using more than one analytical method, resulting in multiple results for the analyte from the same location and sample date. Because multiple sets of

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analytical results cannot be used to quantify risk (i.e., this would result in multiple-counting of a chemical), the set of data that best represents the actual concentrations are retained. When analytes are reported by more than one analytical method for a sample, the results are processed to select the method that provides the most reliable results. Considerations for determining data to be retained include method-associated sample size, detection frequency, and detection limits. The most conservative (i.e., health-protective) use of these types of data is the goal. Larger sample size, higher detection frequencies, and lower detection limits are given higher priority for method selection.

For example, lead may be analyzed using EPA Method 200.8, “Determination of Trace Elements in Water and Wastes by Inductively Coupled Plasma - Mass Spectrometry” (EPA-600/R-94/111, *Methods for the Determination of Metals in Environmental Samples, Supplement 1*) with an estimated quantitation limit of 500 µg/kg or EPA Method 6010C, “Inductively Coupled Plasma-Atomic Emission Spectrometry” (EPA 2007) with an estimated quantitation limit of 5,000 µg/kg. For a sample with lead concentrations reported using both methods, the results reported by EPA Method 200.8 are chosen over EPA Method 6010 because of the more sensitive detection limit.

**Step 3: Evaluation of Field Duplicate Results.** Field quality control (QC) samples (field duplicates) are collected in the field and analyzed by the laboratory as unique samples. The parent sample and field QC samples are collected from the same location and on the same date, resulting in more than one sample per location and date. Because multiple sets of analytical results cannot be used to quantify risk (i.e., this would result in multiple-counting of a chemical), the results for the same location and date are reduced to a single result for each reported analyte. The following criteria are used to reduce multiple sample results for one location and date to a single result per analyte. The most conservative (i.e., health-protective) result is the goal.

- If two or more detections are reported, the maximum concentration is used.
- If one detection and one or more non-detections are reported, the detected concentration is used.
- If two or more non-detections are reported, the lowest detection limit is used.

### 5.1.2 Apply Exclusion Criteria

Exclusion criteria were used to identify analytes that require a UCL calculation. Analytes that meet exclusion criteria are eliminated from further consideration. Analytes that do not meet the exclusion criteria are carried forward into the next step of the process. The following defines the exclusion criteria that were applied.

**Criteria 1: Essential Nutrients.** These chemicals are considered to be human nutrients essential to a well-balanced diet, and as such are often added to foods as supplements. For this reason they typically are not considered hazardous to humans. Therefore, the essential nutrients (minerals) are not considered for UCL calculations.

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**Criteria 2: Background Radionuclides.** The radionuclides considered to be naturally occurring and not directly related to Hanford Site operations or processes are eliminated from further consideration for UCL calculations

**Criteria 3: Radionuclides with Half-Lives of Less than 3 Years.** Radionuclides with half-lives of less than 3 years are eliminated from further consideration for UCL calculation. They are either insignificant dose and risk contributors or their contributions are already included within their parent.

**Criteria 4: Analytes Without Known Toxicity Information.** Analytes without known toxicity information are eliminated from further consideration for UCL calculations.

## 5.2 WEIGHT OF EVIDENCE SCREENING

The next step used to identify analytes that require a 95% UCL calculation is to identify non-detected analytes. Analytes that have been collected from appropriate locations, have adequate detection limits, and have not been detected in any of the samples are eliminated from further consideration. Any analyte that is detected at least once within the WMA C Phase 2 soil data sets is carried forward to the next step of the process.

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**6.0 CALCULATION OF 95% UPPER CONFIDENCE LIMIT OF THE MEAN**

During this step, analytes that passed through two screening processes (data reduction steps and exclusion criteria screen and weight-of-evidence screen) for two subset datasets from 10 EAs and wells 299-E27-20 and 299-E27-24 were used to calculate the 95% UCL. The following sub-sections summarize the 95% UCL calculation process.

OSWER Publication 9285.6-10 is the most recent EPA guidance for UCL calculation, and ProUCL 4.00.05 serves as the companion software package for this guidance. ProUCL software was developed by Lockheed Martin Environmental Services, Las Vegas, Nevada, under a contract with the U.S. Environmental Protection Agency, Office of Research and Development, National Exposure Research Laboratory, Environmental Sciences Division and is made available through the EPA Technical Support Center in Las Vegas, Nevada. This statistical software package, developed by EPA, is designed to provide statistical calculations in support of risk assessment activities. It is distributed free of charge and made available for download at [http://www.epa.gov/nerlesd1/tsc/TSC\\_form.htm](http://www.epa.gov/nerlesd1/tsc/TSC_form.htm).

ProUCL 4.00.05 contains rigorous parametric and nonparametric statistical methods (including bootstrap methods) that can be used on data sets without non-detect results and on data sets with non-detect results (results reported below detection limits). Both ProUCL and OSWER Publication 9285.6-10 were used to calculate UCLs for the final WMA C Phase 2 soil data. ProUCL 4.00.05 user guidance is provided in EPA/600/R-07/038, *ProUCL Version 4.00.05 User Guide*. A couple of factors are considered prior to ProUCL runs.

**Minimum Data Set Size Requirements:** Some decision statistics computed by ProUCL 4.00.05 require a minimum sample size. The following limitations of ProUCL apply to data sets with non-detects (i.e., censored data sets):

- A UCL is not calculated for data sets with less than five results
- For data sets of at least five results, a UCL is not calculated when there is only one detected result in the data set
- For data sets of at least five results, only Kaplan-Meier method-based UCLs are generated when there are only two detected results
- For data sets of at least five results, most parametric and nonparametric (except for gamma distribution-based) UCLs are generated when there are at least three detected values
- For data sets of at least five results, all parametric and nonparametric UCLs are generated when there are four or more detected values.

ProUCL generates warning messages for all small (sample size <8-10) data sets processed, informing the user about potential deficiencies in the data set.

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**Non-Detect Results:** Data sets that contain non-detect results are referred to as censored data sets. Usually, a substitution is made, using an estimate of the concentration in samples that were reported as non-detect. OSWER Publication 9285.6-10 indicates that, because of the complicated formulas used to compute UCLs, no general rule exists about which substitution rule (half the detection limit or the full detection limit for non-detect results) will yield an appropriate UCL. OSWER Publication 9285.6-10 further indicates that the appropriate method for calculating UCLs depends on the severity of the censoring, the size of the data set, and which assumptions are reasonable regarding the distribution of the data (e.g., normal, lognormal). OSWER Publication 9285.6-10 also warns that if the proportion of non-detects is high (>75%), or the number of samples is small ( $n < 5$ ), no UCL calculation method will work well.

In the UCL calculations presented in this report, the (full) method detection limit (MDL) is taken as the concentration of an analyte (i.e., the result) in non-detect samples.

## 6.1 METHODOLOGIES FOR CALCULATION OF 95% UPPER CONFIDENCE LIMIT

There are two common methodologies used to calculate UCLs: 1) distributional methods and 2) distribution-free or nonparametric methods. OSWER Publication 9285.6-10 recommends using a distributional method for computing UCLs if the data can be shown to reasonably fit a specific distribution. Distribution-free or nonparametric methods are applied if reasonable assumptions about the data distribution cannot be made. For purposes of this evaluation, ProUCL 4.00.05 is used to determine the recommendations regarding reasonableness of the fit of data sets to various distributions.

### 6.1.1 Distributional Methods

Normal and lognormal are the most common data distributions for calculating UCLs. The following are brief descriptions of recommended UCL calculation methods for these distribution types, as described in OSWER Publication 9285.6-10.

**Normal Distribution.** If the data are normally distributed, then the one-sided ( $1-\alpha$ ) UCL of the arithmetic mean should be computed using the Student's t-statistic.

**Lognormal Distribution.** The EPA had recommended the Land method to compute the UCL of the arithmetic mean for lognormally distributed data. This method uses the H-statistic, tables for which were published by Land. Land's approach is known to be sensitive to deviations from lognormality, and to commonly yield estimated UCLs substantially larger than appropriate when distributions are not truly lognormal (i.e., if variance or skewness is large).

The EPA also suggests the use of the Chebyshev inequality method to estimate UCLs, which should be appropriate for a variety of distributions so long as the skewness is not very large. The one-sided version of the Chebyshev inequality is appropriate in this context. It can be applied to the sample mean to obtain a distribution-free estimate of the UCL for the population mean when

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the population variance or standard deviation is known. In practice, however, these values are not known and must be estimated from data.

For lognormally distributed data sets, use of the minimum-variance unbiased estimators for the mean and variance is suggested to obtain a UCL of the arithmetic mean. This approach may yield an estimated UCL that is more useful than that obtained from the Land method (when the underlying distribution of concentrations is lognormal). The EPA points out that for highly skewed lognormal data with small sample size and large standard deviation, the Chebyshev 99% UCL may be more appropriate than the 95% UCL, because the Chebyshev 95% UCL may not provide adequate coverage of the mean. As skewness increases further, the Chebyshev method is not recommended.

### 6.1.2 Non-Parametric or Distribution-Free Methods

There are distribution-free approaches to computing UCLs that do not make specific assumptions about the shape of the underlying distribution of concentrations. The following are brief descriptions of recommended methods that are described in OSWER Publication 9285.6-10.

**Central Limit Theorem (Adjusted).** If the sample size is sufficiently large, the Central Limit Theorem (CLT) implies that the mean will be normally distributed, no matter how complex the underlying distribution of concentrations might be. This is the case even if the underlying distribution is strongly skewed, has outliers, or is a mixture of different populations, so long as it is stationary (not changing over time), has finite variance, and the samples are collected independently and randomly. However, the theorem does not say how many samples are sufficient for normality to hold. When sample size is moderate or small, the mean generally will not be normally distributed, and this non-normality is intensified by the skewness of the underlying distribution. "Testing the Mean of Skewed Distributions" (Chen 1995) suggested an approach that accounts for positive skewness. EPA/600/S-97/006, *Technology Support Center Issue, The Lognormal Distribution in Environmental Applications* and OSWER Publication 9285.6-10 call this approach the "adjusted CLT" method. They suggest that it is an appropriate alternative to the distribution-specific Land's method, even if the distribution is lognormal, when the standard deviation is less than one and sample size is larger than 100.

**Bootstrap Resampling.** Bootstrap procedures are robust, nonparametric statistical methods that can be used to construct approximate confidence limits for the population mean. In these procedures, repeated samples of size  $n$  are drawn with replacement from a given set of observations. The process is repeated a large number of times (e.g., thousands), and each time an estimate of the desired unknown parameter (e.g., the sample mean) is computed. There are different variations of the bootstrap procedure available.

**Jackknife Procedure.** Like bootstrap, the jackknife technique is a robust procedure based on resampling. In this procedure, repeated samples are drawn from a given set of observations by omitting each observation in turn, yielding  $n$  data sets of size  $n-1$ . An estimate of the desired unknown parameter (e.g., sample mean) is then computed for each sample. When the standard estimators are used for the mean and standard deviation, this procedure reduces to the UCL based on the Student's  $t$ -statistic. However, when other estimators (such as minimum-variance

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unbiased estimators) are used, this jackknife procedure does not reduce to the UCL based on Student's t-statistic.

**Chebyshev Inequality Method.** As described previously, EPA suggests the use of the Chebyshev inequality to estimate UCLs, which should be appropriate for a variety of distributions, as long as the skewness is not very large. The one-sided version of the Chebyshev inequality is appropriate in this context. It can be applied to the sample mean to obtain a distribution-free estimate of the UCL for the population mean, when the population variance or standard deviation is known. In practice, however, these values are not known and must be estimated from the data.

## 6.2 PROJECT-SPECIFIC APPLICATION OF ProUCL FOR COMPUTING 95% UPPER CONFIDENCE LIMIT

Software used for this evaluation includes the Microsoft Access<sup>®2</sup> database software, ProUCL version 4.00.05 statistical software, and Microsoft Excel<sup>®</sup>. ProUCL as it has been used in this evaluation has been implemented within the range of its limitations.

As described in Section 4, sampling results from 10 EAs and wells 299-E27-20 and 299-E27-24 were divided into shallow zone and deep zone datasets. The final Phase 2 data for each data set are written to an Excel<sup>®</sup> file in a \*.xls format. These files contain a results column for each analyte and a corresponding column that denotes the detection status of the result (1 = detect and 0 = non-detect). For samples reported as non-detected, the MDL is taken as the concentration (i.e., the result) and used in calculating UCLs. The \*.xls files are then imported directly into ProUCL for calculation of UCLs and summary statistics. Therefore, a separate ProUCL input file is generated for shallow zone and deep zone data sets at each sampling location by extracting the sampling results in the final data sets into an Excel<sup>®</sup> file. Figure 6-1 presents the outline for calculating project-specific 95% UCL using ProUCL version 4.00.05.

### 6.2.1 Software Description

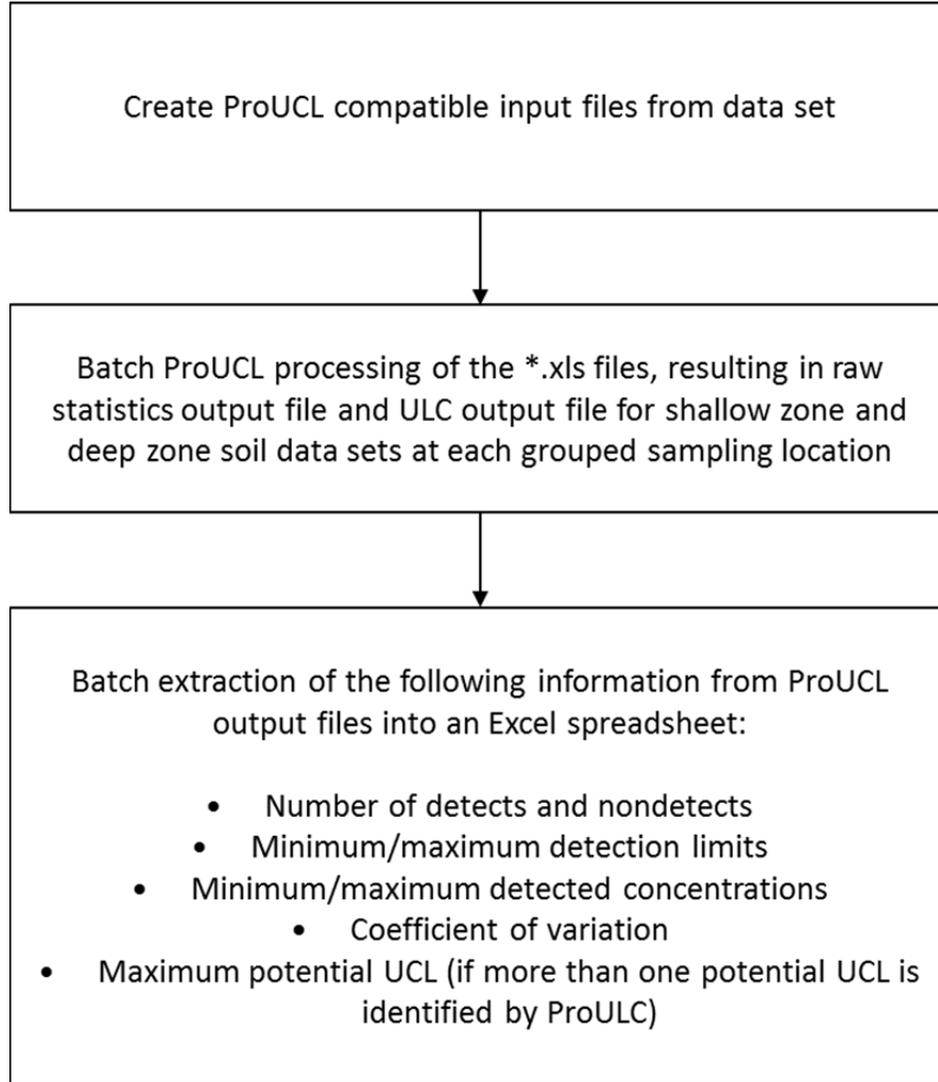
The following presents the description of ProUCL used for this report. See Revision 0 of CHPRC-01270, *ProUCL Software Management Plan* for further details regarding the use of this software:

- ProUCL,
- Version 4.00.05
- HISI Identification Number: 2831
- Workstation type and property number: HP Pavilion laptop/INTERA-00470.

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<sup>2</sup> Access<sup>®</sup> and Excel<sup>®</sup> are trademarks of Microsoft Corporation, Redmond, Washington in the U.S. and other countries.

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**Figure 6-1. Batch Processing of Excel® Files for ProUCL Calculations**

UCL = upper confidence limit

Excel® is a registered trademark of Microsoft Corporation in the U.S. and other countries.

## 6.2.2 Software Installation and Checkout

The software installation and checkout form for ProUCL is provided as an attachment to this report.

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**6.2.3 Statement of Valid Software Application**

The following presents the statement that ProUCL is a valid software application.

- ProUCL was developed by EPA to provide statistical calculations in support of risk assessment activities.
- ProUCL as it has been used in this report has been implemented within the range of its limitations. The input files used with and the output files generated by ProUCL are archived in the Environmental Risk Management Archive (ERMA) under this report number (RPP-RPT-57218).<sup>3</sup>

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<sup>3</sup> CH2M HILL Plateau Remediation Company (CHPRC) maintains ERMA as a repository for electronic risk assessment calculations. The repository is maintained in access-restricted Hanford local area network-accessible disk space in a file directory structure organized by environmental calculation number (or, for work supporting Washington River Protection Solutions, LLC such as in this case, by RPP report number) to support traceability, maintenance, and retrievability of risk assessment supporting calculation files. Content is included when identified by the risk assessor preparing a calculation who identifies files that are typically too large for ready display or replication as part of a printed document (such as an electronic calculation file) and/or should be preserved for future reference, and added to ERMA upon completion of the calculation. Content of ERMA is periodically synchronized with INTERA off-site server disk space to make files available to CHPRC's risk assessment and modeling support subcontractor as well as providing for off-site redundant backup.

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**7.0 COMPUTATION AND SELECTION OF EXPOSURE POINT CONCENTRATIONS**

OSWER Publication 9285.6-10 states that an “exposure point concentration (EPC) is a conservative estimate of the average chemical concentration in an environmental medium.” OSWER Publication 9285.7-081, *Supplemental Guidance to RAGS: Calculating the Concentration Term*, states that “because of the uncertainty associated with estimating the true average concentration at a site, the 95 percent upper confidence limit (UCL) of the arithmetic mean should be used for this variable.” (OSWER Publication 9285.6-10 is the update to OSWER Publication 9285.7-081).

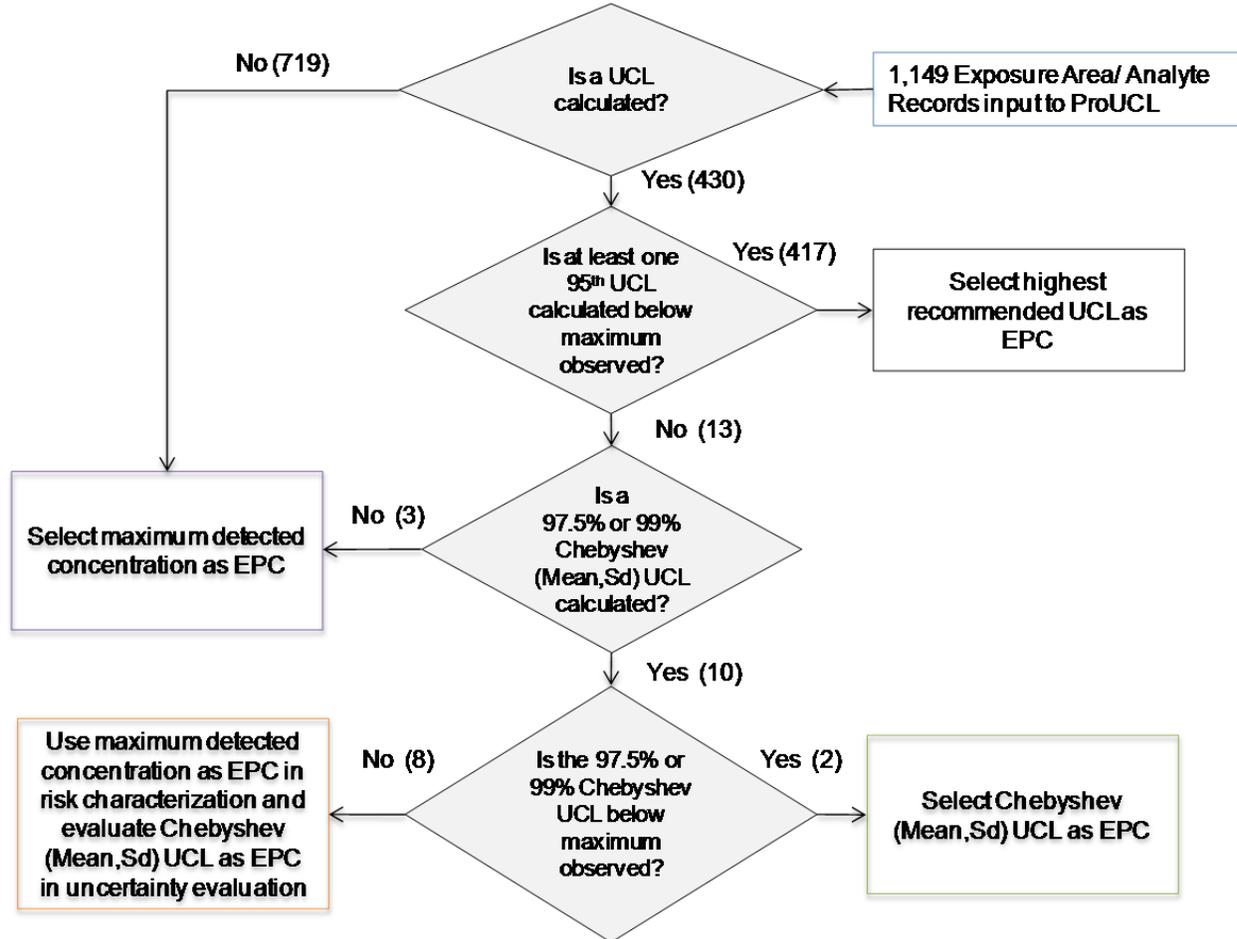
For each detected analyte, the EPC is selected using the following logic.

1. If a valid UCL cannot be calculated, then the maximum detected concentration is selected as the EPC.
2. If a valid UCL can be calculated, the highest potential UCL value (if multiple valid UCLs were calculated) is selected.
3. If the selected UCL is greater than the maximum detected concentration, then:
  - The 97.5% Chebyshev (Mean, Sd) UCL was selected as the EPC;
    - However, if the 97.5% Chebyshev (Mean, Sd) UCL is greater than the maximum detected concentration, the maximum detected concentration is selected as the EPC.

Selection of the EPC value using the above decision logic is presented in Figure 7-1.

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Figure 7-1. Decision Logic for Exposure Point Concentration Selection



EPC = exposure point concentration

UCL = upper confidence limit

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## 8.0 RESULTS OF DATA PROCESSING AND EXPOSURE POINT CONCENTRATION COMPUTATIONS

The methodologies for computing EPCs for both radiological and non-radiological analytes are presented in Section 2 of this report. The inputs, assumptions, and results associated with steps 3 through 5 of the EPC computation process are summarized below.

### 8.1 DATA REDUCTION AND SCREENING OF ANALYTICAL DATA

A total of 25,595 records and 365 analytes were reported in the WMA C Phase 2 soil data set. Two types of data reduction and screenings are performed to select analytes to process through ProUCL for the UCL and raw statistics calculations. A number of analytes along with their sampling results were removed during each step of the screening processes. Figure 8-1 presents all steps associated with each screening process and provides the number of analytes and records associated with and removed in each of the steps. The results of each screen are summarized below.

#### 8.1.1 Data Reduction and Exclusion Criteria Screening

Data reduction screening involves the following three evaluations.

- **Evaluation of Data Qualification and Data Validation Flags:** During this step, all sampling results with validation qualifier “R” were removed from further consideration. This processing step removed 989 records and 20 analytes from the initial data set (see Figure 8-1).
- **Evaluation of Analytes Reported by Numerous Analytical Methods:** When multiple results are available for the same location and sample date, results that best represent the actual concentrations are retained. All other sampling results were removed from the dataset. This processing step removed 4 records from the initial data set (see Figure 8-1).
- **Evaluation of Field Duplicate Results:** The dataset includes both primary and field QC samples for the same sample at the same location and date. Therefore, three criteria (presented in Section 5.1.1) were used to select the most conservative result for one location and date to a single analyte. This processing step removed 2,704 records from the initial data set (see Figure 8-1).

During application of exclusion criteria screening, a total of 153 analytes met the exclusion criteria and were excluded from further consideration. Following are summaries of each exclusion criterion.

- **Criterion 1: Essential Nutrients.** The essential nutrients (minerals) calcium, magnesium, potassium, and sodium were eliminated from further consideration for UCL calculations.

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- **Criterion 2: Background Radionuclides.** The background radionuclides  $^{40}\text{K}$ ,  $^{226}\text{Ra}$ ,  $^{228}\text{Ra}$ ,  $^{228}\text{Th}$ ,  $^{230}\text{Th}$ , and  $^{232}\text{Th}$  were eliminated from further consideration for UCL calculations as those radionuclides are considered to be naturally occurring and not directly related to Hanford Site operations or processes.
- **Criterion 3: Radionuclides with Half-Lives of Less than 3 Years.** A total of 27 radionuclides that have half-lives of less than 3 years were eliminated from further consideration for UCL calculation.
- **Criterion 4: Analytes Without Known Toxicity Information.** A total of 57 analytes without known toxicity information were eliminated from further consideration for UCL calculations. This total included 8 anions, 1 cation, 6 general chemistry/physical property parameters, 18 metals, 4 pesticides, 2 radiological parameters (gross alpha and gross beta), 12 semi-volatile organic compounds (SVOCs), and 6 volatile organic compounds (VOCs).

The exclusion criteria screening step removed 6,019 records from the initial data set (see Figure 8-1). The excluded analytes are listed in Table 8-1. The table provides sampling dates, minimum and maximum detected concentrations, minimum and maximum MDLs, and the basis for exclusion for each analyte.

### 8.1.2 Weight of Evidence Screening

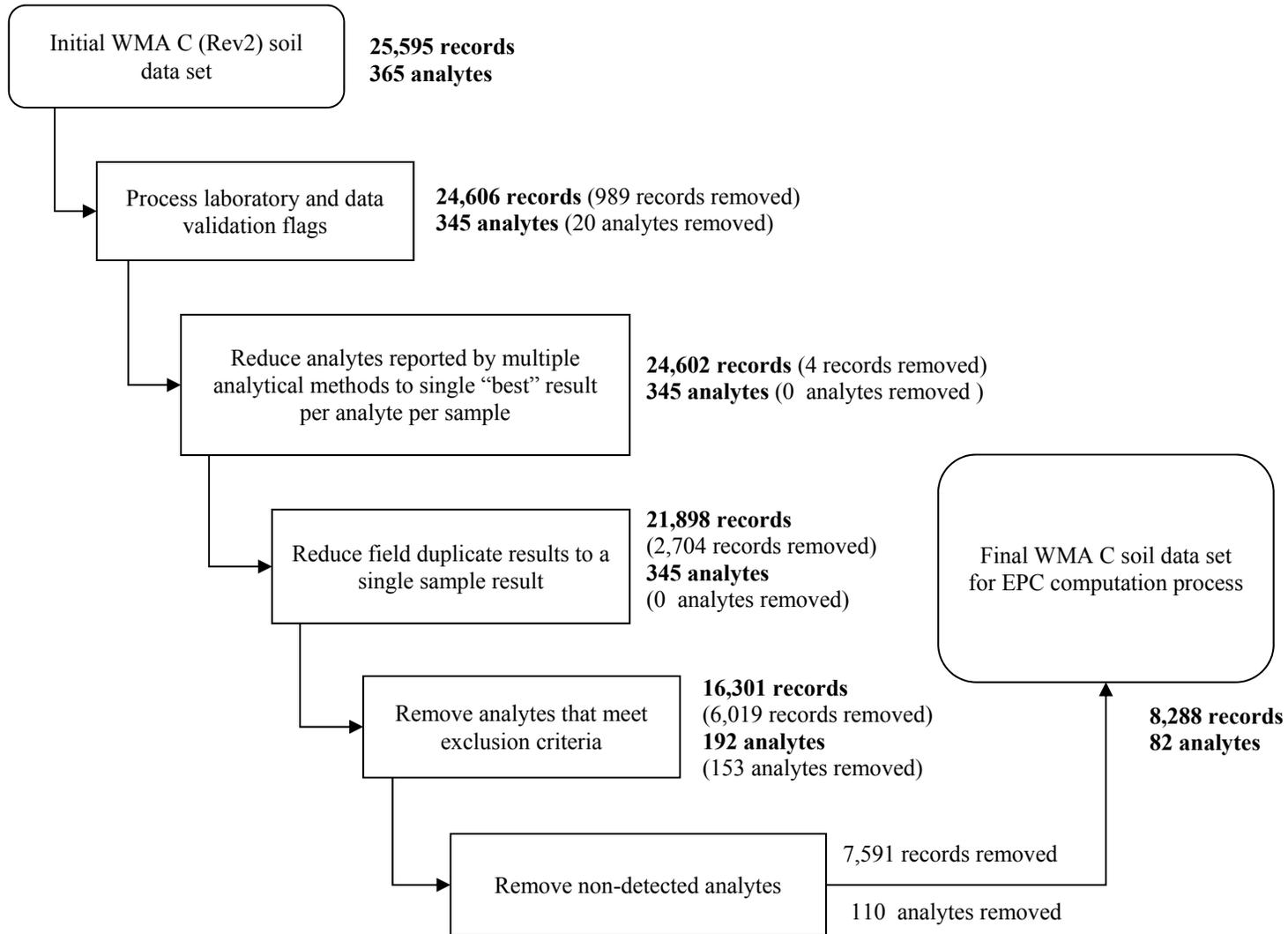
After removing the excluded analytes, a total of 110 of the analytes remaining were not detected in the WMA C Phase 2 soil samples. The non-detected analytes are listed in Table 8-2. The table provides sampling dates, total number of samples, and minimum and maximum MDLs for each analyte. Non-detected analytes in WMA C soil data included 1 metal, 5 PCB aroclors, 15 pesticides, 6 radionuclides, 32 SVOCs, and 50 VOCs. This processing step removed 7,591 records analytes from the initial data set (see Figure 8-1).

The initial data set processed contained 25,595 records with 365 analytes. Data reduction steps and application of exclusion criteria eliminated 3,697 and 6,019 records, respectively. The weight of evidence screen eliminated 7,591 records. That means that both screenings removed 17,307 records and 283 analytes. Therefore, the EPCs were calculated for 82 analytes by utilizing 8,288 records.

## 8.2 CALCULATION OF 95% UPPER CONFIDENCE LIMIT OF THE MEAN

The most recent EPA guidance document, OSWER Publication 9285.6-10 and EPA software, ProUCL 4.00.05 were used in the calculation of the 95% UCL for analytes that passed through the screening processes. The final two subset datasets for those analytes from 10 EAs and wells 299-E27-20 and 299-E27-24 were utilized during this step. The final Phase 2 data for each data set are written to an Excel<sup>®</sup> file in a \*.xls format. The \*.xls files are then imported directly into ProUCL for calculation of UCLs and summary statistics. Therefore, a separate ProUCL input file is generated for shallow zone and deep vadose zone soil data sets at each EA. A list of the ProUCL input file names is provided in Table 8-3.

**Figure 8-1. Analytical Data Processing for Exposure Point Concentration Computations**



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Excel<sup>®</sup> input files for each unique data set were imported into ProUCL, and corresponding raw statistics and UCL output files were generated as described in Figure 6-1. The resulting raw statistics and UCL output files were then converted to Excel<sup>®</sup> files and archived for access as needed to support WMA C RFI/CMS activities. The corresponding file names are listed in Table 8-4 for the raw statistics output files and Table 8-5 for the UCL output files.

### **8.3 CALCULATION AND SELECTION OF THE EXPOSURE POINT CONCENTRATIONS**

The EPCs for both detected radiological and non-radiological analytes were computed and selected using the logic described in Figure 7-1 and are summarized in Table 8-6 for all analytes in each EA.

Thirteen analytes had recommended UCLs greater than the maximum detected concentration. The UCL data and associated ProUCL comments for these thirteen analytes are provided in Table 8-7. The EPC defaults to the maximum detected concentration in such cases unless Chebyshev (Mean, Sd) UCLs were calculated, in which case the 97.5% Chebyshev (Mean, Sd) UCL is selected as the EPC (Section 7.0) if it is less than the maximum detected concentration.

For 3 of the 13 analytes, Chebyshev (Mean, Sd) UCLs were not calculated and the EPC defaulted to the maximum detected concentration (Table 8-7). For the remaining 10 analytes, Chebyshev (Mean, Sd) UCLs were calculated and 2 were less than the maximum detected concentration. The 97.5% Chebyshev (Mean, Sd) UCL was therefore selected as the EPC for those 2, and the maximum detected concentration was selected as the EPC for the remaining 8 (Table 8-7).

Table 8-1. Waste Management Area C Soil Analytes Excluded from Further Consideration (Sheet 1 of 6)

Analyte	Analyte Class	Chemical Abstracts Service Number	Units	First Sample Date	Last Sample Date	Total Samples	Total Detects	Frequency of Detection (%)	Detection Limit		Detected Result		Basis for Exclusion
									Minimum	Maximum	Minimum	Maximum	
Actinium-228	RAD	14331-83-0	pCi/g	5/15/2008	11/8/2011	38	34	89.47	0.82	1.3	0.53	1.9	Half-Life less than 3 years
Antimony-125	RAD	14234-35-6	pCi/g	5/15/2008	11/8/2011	134	3	2.24	0.15	7.5	0.31	2.1	Half-Life less than 3 years
Barium-133	RAD	13981-41-4	pCi/g	5/15/2008	7/19/2011	9	0	0	-0.028	0.42	--	--	Half-Life less than 3 years
Beryllium-7	RAD	13966-02-4	pCi/g	6/29/2011	7/19/2011	7	0	0	-0.050	0.18	--	--	Half-Life less than 3 years
Bismuth-212	RAD	14913-49-6	pCi/g	3/21/2011	10/25/2011	13	12	92.31	1.1	1.1	0.77	2.5	Half-Life less than 3 years
Bismuth-214	RAD	14733-03-0	pCi/g	5/15/2008	11/8/2011	56	55	98.21	0.54	0.54	0.34	1.2	Half-Life less than 3 years
Cadmium-109	RAD	14109-32-1	pCi/g	5/15/2008	6/5/2008	2	0	0	3.1	3.2	--	--	Half-Life less than 3 years
Cerium/Praseodymium-144	RAD	CE/PR-144	pCi/g	6/29/2011	7/19/2011	7	0	0	-0.43	0.11	--	--	Half-Life less than 3 years
Cerium-144	RAD	14762-78-8	pCi/g	5/15/2008	7/19/2011	9	0	0	-0.22	1.1	--	--	Half-Life less than 3 years
Cesium-134	RAD	13967-70-9	pCi/g	5/15/2008	7/21/2011	10	0	0	0.32	0.74	--	--	Half-Life less than 3 years
Chromium-51	RAD	14392-02-0	pCi/g	5/15/2008	6/5/2008	2	0	0	2.0	2.1	--	--	Half-Life less than 3 years
Cobalt-57	RAD	13981-50-5	pCi/g	5/15/2008	7/19/2011	9	0	0	-0.037	0.14	--	--	Half-Life less than 3 years
Curium-242	RAD	15510-73-3	pCi/g	4/14/2009	11/8/2011	132	0	0	0.010	0.79	--	--	Half-Life less than 3 years
Gross alpha	RAD	12587-46-1	pCi/g	6/29/2011	7/19/2011	7	0	0	-1.1	1.8	--	--	No Toxicity Value
Gross beta	RAD	12587-47-2	pCi/g	6/29/2011	7/19/2011	7	7	100	--	--	4.6	14.0	No Toxicity Value
Iodine-131	RAD	10043-66-0	pCi/g	5/15/2008	6/5/2008	2	0	0	0.25	0.25	--	--	Half-Life less than 3 years
Iron-59	RAD	14596-12-4	pCi/g	5/15/2008	6/5/2008	2	0	0	0.54	0.55	--	--	Half-Life less than 3 years
Lead-212	RAD	15092-94-1	pCi/g	5/15/2008	11/8/2011	82	77	93.9	0.39	0.57	0.36	1.5	Half-Life less than 3 years
Lead-214	RAD	15067-28-4	pCi/g	5/15/2008	11/8/2011	66	62	93.94	0.52	0.68	0.41	2.6	Half-Life less than 3 years
Manganese-54	RAD	13966-31-9	pCi/g	5/15/2008	7/19/2011	9	1	11.11	-0.00047	0.31	0.035	0.035	Half-Life less than 3 years
Potassium-40	RAD	13966-00-2	pCi/g	5/15/2008	11/8/2011	112	112	100	--	--	7.3	21.7	Background Radionuclide— not site-related
Radium-224	RAD	13233-32-4	pCi/g	5/15/2008	6/5/2008	2	0	0	5.8	5.9	--	--	Half-Life less than 3 years
Radium-226	RAD	13982-63-3	pCi/g	5/15/2008	7/19/2011	20	17	85	1.4	5.1	0.67	7.0	Background Radionuclide— not site-related
Radium-228	RAD	15262-20-1	pCi/g	6/29/2011	7/19/2011	7	7	100	--	--	0.71	1.4	Background Radionuclide— not site-related
Ruthenium-103	RAD	13968-53-1	pCi/g	5/15/2008	7/19/2011	9	0	0	-0.021	0.25	--	--	Half-Life less than 3 years
Ruthenium-106	RAD	13967-48-1	pCi/g	6/29/2011	7/19/2011	7	0	0	-0.067	0.076	--	--	Half-Life less than 3 years
Sodium-22	RAD	13966-32-0	pCi/g	5/15/2008	6/5/2008	2	0	0	0.31	0.33	--	--	Half-Life less than 3 years

Table 8-1. Waste Management Area C Soil Analytes Excluded from Further Consideration (Sheet 2 of 6)

Analyte	Analyte Class	Chemical Abstracts Service Number	Units	First Sample Date	Last Sample Date	Total Samples	Total Detects	Frequency of Detection (%)	Detection Limit		Detected Result		Basis for Exclusion
									Minimum	Maximum	Minimum	Maximum	
Thallium-208	RAD	14913-50-9	pCi/g	5/15/2008	11/8/2011	37	36	97.3	0.27	0.27	0.20	1.2	Half-Life less than 3 years
Thorium-228	RAD	14274-82-9	pCi/g	5/15/2008	11/8/2011	134	0	0	7.9	137	--	--	Background Radionuclide— not site-related
Thorium-230	RAD	14269-63-7	pCi/g	4/14/2009	11/8/2011	134	29	21.64	0.49	1.8	0.50	1.9	Background Radionuclide— not site-related
Thorium-232	RAD	TH-232	pCi/g	4/14/2009	11/8/2011	134	134	100	--	--	0.18	1.8	Background Radionuclide— not site-related
Tin-113	RAD	13966-06-8	pCi/g	5/15/2008	7/19/2011	9	0	0	-0.031	0.31	--	--	Half-Life less than 3 years
Tin-117	RAD	13981-59-4	µg/kg	4/14/2009	11/8/2011	134	36	26.87	9.8	65.6	10.7	129	Half-Life less than 3 years
Zinc-65	RAD	13982-39-3	pCi/g	5/15/2008	7/19/2011	9	1	11.11	0.0036	0.76	0.11	0.11	Half-Life less than 3 years
Zirconium/Niobium-95	RAD	ZR/NB-95	pCi/g	5/15/2008	6/5/2008	2	0	0	0.53	0.59	--	--	Half-Life less than 3 years
Bismuth	METAL	7440-69-9	µg/kg	5/15/2008	11/8/2011	22	17	77.27	8,310	34,300	7,230	50,500	No Toxicity Value
Calcium	METAL	7440-70-2	µg/kg	5/15/2008	11/8/2011	136	136	100	--	--	3,660,000	32,200,000	Essential Nutrient
Cerium	METAL	7440-45-1	µg/kg	4/21/2009	11/8/2011	133	130	97.74	26,000	48,000	12,800	33,200	No Toxicity Value
Europium	METAL	7440-53-1	µg/kg	4/21/2009	6/8/2010	37	36	97.3	921	921	575	4,520	No Toxicity Value
Lanthanum	METAL	7439-91-0	µg/kg	4/14/2009	11/8/2011	134	134	100	--	--	4,770	17,300	No Toxicity Value
Magnesium	METAL	7439-95-4	µg/kg	5/15/2008	11/8/2011	136	136	100	--	--	2,650,000	8,620,000	Essential Nutrient
Neodymium	METAL	7440-00-8	µg/kg	4/14/2009	11/8/2011	56	55	98.21	16,000	16,000	8,910	33,400	No Toxicity Value
Palladium	METAL	7440-05-3	µg/kg	4/14/2009	8/11/2009	6	6	100	--	--	41,500	132,000	No Toxicity Value
Phosphorus	METAL	7723-14-0	µg/kg	5/15/2008	11/8/2011	136	136	100	--	--	354,000	1,350,000	Special Analysis – Method 6010 Artifact
Potassium	METAL	7440-09-7	µg/kg	5/15/2008	11/8/2011	136	136	100	--	--	586,000	1,600,000	Essential Nutrient
Praseodymium	METAL	7440-10-0	µg/kg	5/13/2009	6/30/2011	33	33	100	--	--	1,660	4,980	No Toxicity Value
Rhenium	METAL	7440-15-5	µg/kg	5/15/2008	6/5/2008	2	0	0	543	5,140	--	--	No Toxicity Value
Rubidium	METAL	7440-17-7	µg/kg	6/15/2009	6/15/2009	3	3	100	--	--	265,000	316,000	No Toxicity Value
Ruthenium	METAL	7440-18-8	µg/kg	5/21/2009	8/23/2010	4	4	100	--	--	8,170	18,200	No Toxicity Value
Samarium	METAL	7440-19-9	µg/kg	7/30/2009	10/25/2011	5	5	100	--	--	2,950	5,050	No Toxicity Value
Silicon	METAL	7440-21-3	µg/kg	5/15/2008	11/8/2011	136	134	98.53	8,570	8,570	10,800	2,330,000	No Toxicity Value
Sodium	METAL	7440-23-5	µg/kg	5/15/2008	11/8/2011	136	136	100	--	--	139,000	1,930,000	Essential Nutrient
Sulfur	METAL	7704-34-9	µg/kg	5/15/2008	11/8/2011	131	131	100	--	--	32,800	595,000	No Toxicity Value
Tantalum	METAL	7440-25-7	µg/kg	4/14/2009	4/4/2011	9	9	100	--	--	5,410	58,600	No Toxicity Value

Table 8-1. Waste Management Area C Soil Analytes Excluded from Further Consideration (Sheet 3 of 6)

Analyte	Analyte Class	Chemical Abstracts Service Number	Units	First Sample Date	Last Sample Date	Total Samples	Total Detects	Frequency of Detection (%)	Detection Limit		Detected Result		Basis for Exclusion
									Minimum	Maximum	Minimum	Maximum	
Tellurium	METAL	13494-80-9	µg/kg	7/30/2009	3/21/2011	4	4	100	--	--	5,980	25,800	No Toxicity Value
Thallium	METAL	7440-28-0	µg/kg	5/15/2008	11/8/2011	136	112	82.35	52.0	17,100	54.1	20,800	No Toxicity Value
Titanium	METAL	7440-32-6	µg/kg	5/15/2008	11/8/2011	136	136	100	--	--	505,000	3,410,000	No Toxicity Value
Tungsten	METAL	7440-33-7	µg/kg	6/3/2009	10/25/2011	17	15	88.24	36,200	36,600	31,800	102,000	No Toxicity Value
Yttrium	METAL	7440-65-5	µg/kg	4/14/2009	11/8/2011	134	134	100	--	--	3,750	15,900	No Toxicity Value
Zirconium	METAL	7440-67-7	µg/kg	5/15/2008	11/8/2011	136	136	100	--	--	1,280	30,700	No Toxicity Value
(m+p)-Xylene	VOC	179601-23-1	µg/kg	4/14/2009	9/1/2010	101	1	0.99	0.13	0.70	0.33	0.33	No Toxicity Value
1,3-Cyclopentadiene	VOC	542-92-7	µg/kg	7/21/2010	7/21/2010	1	1	100	--	--	2.7	2.7	No Toxicity Value
1,3-Dichlorobenzene	VOC	541-73-1	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200	--	--	No Toxicity Value
1,3-Diphenylbenzene	VOC	92-06-8	µg/kg	5/11/2010	5/11/2010	1	1	100	--	--	24.0	24.0	No Toxicity Value
2,3-Dimethylpentane	VOC	565-59-3	µg/kg	12/29/2009	7/21/2010	3	3	100	--	--	2.6	6.1	No Toxicity Value
2-Ethyl-1-hexanol	VOC	104-76-7	µg/kg	4/30/2009	8/25/2010	16	16	100	--	--	1.2	30.0	No Toxicity Value
2-Ethylhexyl Aldehyde	VOC	123-05-7	µg/kg	6/1/2009	7/29/2010	2	2	100	--	--	2.7	5.5	No Toxicity Value
2-Pentanone	VOC	107-87-9	µg/kg	7/29/2010	7/29/2010	1	1	100	--	--	6.8	6.8	No Toxicity Value
3,3-Dimethylpentane	VOC	562-49-2	µg/kg	12/29/2009	12/29/2009	1	1	100	--	--	4.3	4.3	No Toxicity Value
3,7-Dimethyldecane	VOC	17312-54-8	µg/kg	7/21/2010	7/29/2010	2	2	100	--	--	4.2	6.9	No Toxicity Value
3-Ethylpentane	VOC	617-78-7	µg/kg	12/29/2009	12/29/2009	1	1	100	--	--	2.7	2.7	No Toxicity Value
3-Heptanone	VOC	106-35-4	µg/kg	5/20/2010	8/25/2010	3	3	100	--	--	2.5	11.0	No Toxicity Value
5-Methylundecane	VOC	1632-70-8	µg/kg	7/29/2010	7/29/2010	1	1	100	--	--	52.0	52.0	No Toxicity Value
Butyraldehyde	VOC	123-72-8	µg/kg	7/29/2010	7/29/2010	1	1	100	--	--	2.3	2.3	No Toxicity Value
Diisobutyl Phthalate	VOC	84-69-5	µg/kg	6/9/2009	11/7/2011	70	70	100	--	--	180	4,900	No Toxicity Value
Hexanal	VOC	66-25-1	µg/kg	7/29/2010	7/29/2010	1	1	100	--	--	10.0	10.0	No Toxicity Value
Hexyl methyl ketone	VOC	111-13-7	µg/kg	8/25/2010	8/25/2010	1	1	100	--	--	4.6	4.6	No Toxicity Value
Isobutylene	VOC	115-11-7	µg/kg	7/21/2010	7/21/2010	1	1	100	--	--	3.7	3.7	No Toxicity Value
n-Heptyl Aldehyde	VOC	111-71-7	µg/kg	7/29/2010	7/29/2010	1	1	100	--	--	10.0	10.0	No Toxicity Value
Nonaldehyde (pelargonic aldehyde)	VOC	124-19-6	µg/kg	4/30/2009	6/4/2009	4	4	100	--	--	2.1	6.5	No Toxicity Value
Pentadecane	VOC	629-62-9	µg/kg	7/21/2010	7/21/2010	1	1	100	--	--	3.2	3.2	No Toxicity Value
1,2-Benzenedicarboxylic acid, butyl, 2-methylpropylester	SVOC	17851-53-5	µg/kg	12/30/2009	12/30/2009	1	1	100	--	--	210	210	No Toxicity Value

Table 8-1. Waste Management Area C Soil Analytes Excluded from Further Consideration (Sheet 4 of 6)

Analyte	Analyte Class	Chemical Abstracts Service Number	Units	First Sample Date	Last Sample Date	Total Samples	Total Detects	Frequency of Detection (%)	Detection Limit		Detected Result		Basis for Exclusion
									Minimum	Maximum	Minimum	Maximum	
1,2-Dichloro-3-isocyanatobenzene	SVOC	41195-90-8	µg/kg	2/24/2011	2/24/2011	1	1	100	--	--	340	340	No Toxicity Value
1,6-Dimethyl-4-(1-Methylethyl)Naphthalene	SVOC	483-78-3	µg/kg	2/24/2011	2/24/2011	1	1	100	--	--	840	840	No Toxicity Value
1-Docosene	SVOC	1599-67-3	µg/kg	2/24/2011	11/7/2011	4	4	100	--	--	340	1,200	No Toxicity Value
1-Eicosene	SVOC	3452-07-1	µg/kg	6/3/2010	5/25/2011	2	2	100	--	--	230	360	No Toxicity Value
1-Naphthaleneacetic acid, ethenyl ester	SVOC	74797-84-5	µg/kg	7/14/2011	7/14/2011	1	1	100	--	--	1.8	1.8	No Toxicity Value
1-Nonadecene	SVOC	18435-45-5	µg/kg	4/22/2010	4/22/2010	1	1	100	--	--	260	260	No Toxicity Value
1-Tricosene	SVOC	18835-32-0	µg/kg	3/1/2011	3/1/2011	1	1	100	--	--	330	330	No Toxicity Value
2-(2-ethylhexoxycarbonyl)benzoic acid	SVOC	4376-20-9	µg/kg	12/29/2009	10/26/2011	3	3	100	--	--	230	450	No Toxicity Value
2,3,5-Trimethylnaphthalene	SVOC	2245-38-7	µg/kg	2/24/2011	2/24/2011	1	1	100	--	--	270	270	No Toxicity Value
2,3,6-Trimethylnaphthalene	SVOC	829-26-5	µg/kg	2/24/2011	2/24/2011	1	1	100	--	--	290	290	No Toxicity Value
2,3-Epoxy-2-methylbutane	SVOC	5076-19-7	µg/kg	12/29/2009	12/30/2009	3	3	100	--	--	290	370	No Toxicity Value
2-Hexyldecan-1-ol	SVOC	2425-77-6	µg/kg	7/19/2010	7/19/2010	1	1	100	--	--	360	360	No Toxicity Value
2-Methylbut-3-en-2-ol	SVOC	115-18-4	µg/kg	7/19/2010	7/19/2010	1	1	100	--	--	250	250	No Toxicity Value
2-Nitrophenol	SVOC	88-75-5	µg/kg	4/14/2009	11/8/2011	131	0	0	44.1	200	--	--	No Toxicity Value
3,4-Dichlorophenyl isocyanate	SVOC	102-36-3	µg/kg	7/19/2010	2/24/2011	2	2	100	--	--	260	460	No Toxicity Value
3+4 Methylphenol (cresol, m+p)	SVOC	65794-96-9	µg/kg	4/14/2009	11/8/2011	129	0	0	42.2	200	--	--	No Toxicity Value
4-Bromophenylphenyl ether	SVOC	101-55-3	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200	--	--	No Toxicity Value
4-Chlorophenylphenyl ether	SVOC	7005-72-3	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200	--	--	No Toxicity Value
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione	SVOC	82304-66-3	µg/kg	8/4/2009	8/13/2009	2	2	100	--	--	200	220	No Toxicity Value
Acenaphthylene	SVOC	208-96-8	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200	--	--	No Toxicity Value
Benzo(ghi)perylene	SVOC	191-24-2	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200	--	--	No Toxicity Value
Butyl cyclohexyl phthalate	SVOC	84-64-0	µg/kg	10/25/2011	10/25/2011	1	1	100	--	--	970	970	No Toxicity Value
Cholesta-3,5-dien-7-one	SVOC	567-72-6	µg/kg	2/24/2011	2/24/2011	1	1	100	--	--	630	630	No Toxicity Value
Dibutylphosphate	SVOC	107-66-4	µg/kg	4/22/2009	9/1/2010	49	0	0	860	1,200	--	--	No Toxicity Value
Dimethyl phthalate	SVOC	131-11-3	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200	--	--	No Toxicity Value
Di-n-nonyl phthalate	SVOC	84-76-4	µg/kg	1/19/2010	5/17/2010	3	3	100	--	--	210	1,800	No Toxicity Value
Di-n-octylphthalate	SVOC	117-84-0	µg/kg	4/14/2009	11/8/2011	131	12	9.16	39.2	200	79.0	1,220	No Toxicity Value
Eicosane	SVOC	112-95-8	µg/kg	2/24/2011	2/24/2011	1	1	100	--	--	340	340	No Toxicity Value

Table 8-1. Waste Management Area C Soil Analytes Excluded from Further Consideration (Sheet 5 of 6)

Analyte	Analyte Class	Chemical Abstracts Service Number	Units	First Sample Date	Last Sample Date	Total Samples	Total Detects	Frequency of Detection (%)	Detection Limit		Detected Result		Basis for Exclusion
									Minimum	Maximum	Minimum	Maximum	
Enanthoic Acid	SVOC	111-14-8	µg/kg	7/27/2010	7/27/2010	1	1	100	--	--	380	380	No Toxicity Value
Hexadecane	SVOC	544-76-3	µg/kg	2/24/2011	2/24/2011	1	1	100	--	--	170	170	No Toxicity Value
Hexadecanoic acid (9CI)	SVOC	57-10-3	µg/kg	5/18/2009	2/24/2011	5	5	100	--	--	220	1,900	No Toxicity Value
Isopropenyl methyl ketone	SVOC	814-78-8	µg/kg	7/19/2010	5/25/2011	3	3	100	--	--	250	680	No Toxicity Value
Methyl eicosanoate	SVOC	1120-28-1	µg/kg	6/3/2009	6/3/2009	1	1	100	--	--	350	350	No Toxicity Value
Methyl hexadecanoate	SVOC	112-39-0	µg/kg	6/3/2009	6/3/2009	1	1	100	--	--	460	460	No Toxicity Value
Methyl octadec-9-enoate	SVOC	1937-62-8	µg/kg	6/3/2009	6/3/2009	1	1	100	--	--	3,600	3,600	No Toxicity Value
Methyl octadecanoate	SVOC	112-61-8	µg/kg	6/3/2009	6/3/2009	1	1	100	--	--	690	690	No Toxicity Value
Monobutyl phosphate	SVOC	1623-15-0	µg/kg	4/22/2009	9/1/2010	49	0	0	630	98,300	--	--	No Toxicity Value
n-Heptane	SVOC	142-82-5	µg/kg	2/24/2011	6/20/2011	8	8	100	--	--	210	15,000	No Toxicity Value
n-Tetracosane	SVOC	646-31-1	µg/kg	9/1/2010	9/1/2010	1	1	100	--	--	290	290	No Toxicity Value
Octacosane	SVOC	630-02-4	µg/kg	2/24/2011	2/24/2011	1	1	100	--	--	240	240	No Toxicity Value
Octadecanoic acid	SVOC	57-11-4	µg/kg	2/24/2011	2/24/2011	1	1	100	--	--	310	310	No Toxicity Value
Phenanthrene	SVOC	85-01-8	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200	--	--	No Toxicity Value
Phthalic acid bis(7-methyloctyl)ester	SVOC	20548-62-3	µg/kg	6/1/2011	11/7/2011	3	3	100	--	--	0.91	250	No Toxicity Value
Ricinoleic acid	SVOC	141-22-0	µg/kg	5/7/2010	5/7/2010	1	1	100	--	--	2,800	2,800	No Toxicity Value
Stigmastane	SVOC	601-58-1	µg/kg	2/24/2011	2/24/2011	1	1	100	--	--	1,300	1,300	No Toxicity Value
Stigmastanol	SVOC	19466-47-8	µg/kg	2/24/2011	2/24/2011	1	1	100	--	--	910	910	No Toxicity Value
Trichloroacetic acid palmityl ester	SVOC	74339-54-1	µg/kg	4/23/2010	4/23/2010	1	1	100	--	--	200	200	No Toxicity Value
Bromacil (ACN)	PESTICIDE	314-40-9	µg/kg	8/10/2009	2/24/2011	6	6	100	--	--	200	1,300	No Toxicity Value
Delta-BHC	PESTICIDE	319-86-8	µg/kg	12/29/2009	10/26/2011	38	0	0	0.24	0.77	--	--	No Toxicity Value
Endosulfan sulfate	PESTICIDE	1031-07-8	µg/kg	2/24/2011	10/26/2011	14	0	0	0.25	0.52	--	--	No Toxicity Value
Endrin aldehyde	PESTICIDE	7421-93-4	µg/kg	2/24/2011	10/26/2011	14	0	0	0.39	0.81	--	--	No Toxicity Value
Endrin ketone	PESTICIDE	53494-70-5	µg/kg	2/24/2011	10/26/2011	14	0	0	0.30	0.62	--	--	No Toxicity Value
Total petroleum hydrocarbons - diesel range	TPH	TPHDIESEL	µg/kg	4/14/2009	8/29/2010	42	8	19.05	330	35,000	12,000	135,000	No Toxicity Value
Total petroleum hydrocarbons - gasoline range	TPH	TPHGASOLINE	µg/kg	4/14/2009	8/29/2010	38	1	2.63	10.0	335	100	100	No Toxicity Value
2-Hydroxyacetate	ANION	GLYCOLATE	µg/kg	4/14/2009	11/8/2011	133	1	0.75	82.6	123	663	663	No Toxicity Value
Acetate	ANION	71-50-1	µg/kg	4/14/2009	11/8/2011	133	96	72.18	53.7	75.5	105	24,500	No Toxicity Value

**Table 8-1. Waste Management Area C Soil Analytes Excluded from Further Consideration (Sheet 6 of 6)**

Analyte	Analyte Class	Chemical Abstracts Service Number	Units	First Sample Date	Last Sample Date	Total Samples	Total Detects	Frequency of Detection (%)	Detection Limit		Detected Result		Basis for Exclusion
									Minimum	Maximum	Minimum	Maximum	
Bromide	ANION	24959-67-9	µg/kg	5/15/2008	11/8/2011	135	4	2.96	511	4,500	27.5	1,760	No Toxicity Value
Chloride	ANION	16887-00-6	µg/kg	5/15/2008	11/8/2011	135	132	97.78	540	3,200	303	69,000	No Toxicity Value
Formate	ANION	FORMATE	µg/kg	4/14/2009	11/8/2011	133	124	93.23	44.1	491	109	7,060	No Toxicity Value
Oxalate	ANION	338-70-5	µg/kg	4/14/2009	11/8/2011	133	75	56.39	204	298	210	14,300	No Toxicity Value
Phosphate	ANION	14265-44-2	µg/kg	5/15/2008	11/8/2011	135	107	79.26	151	8,280	188	11,600	No Toxicity Value
Sulfate	ANION	14808-79-8	µg/kg	5/15/2008	11/8/2011	135	132	97.78	620	3,800	1,710	592,000	No Toxicity Value
Sulfide	ANION	18496-25-8	µg/kg	4/14/2009	9/1/2010	100	86	86	5,250	29,200	7,080	42,200	No Toxicity Value
Ammonium ion	CATION	14798-03-9	µg/kg	4/14/2009	11/8/2011	132	90	68.18	92.7	19,900	156	22,800	No Toxicity Value
Alkalinity	GEN CHEM	ALKALINITY	mEQ/g	5/15/2008	6/5/2008	2	1	50	0.00080	0.00080	0.012	0.012	Physical Property
Bicarbonate	GEN CHEM	71-52-3	mEQ/g	12/29/2009	4/15/2010	10	10	100	--	--	0.00090	0.0021	Physical Property
Bulk density - wet	GEN CHEM	BULKDENSITY-WET	µg/L	4/14/2009	11/8/2011	89	89	100	--	--	1,740,000,000	2,550,000,000	Physical Property
Carbonate ion	GEN CHEM	3812-32-6	mEQ/g	12/29/2009	4/15/2010	10	2	20	4.70E-06	4.90E-06	0.00010	0.00020	Physical Property
Percent moisture (wet sample)	GEN CHEM	%MOISTURE	%	5/15/2008	4/10/2013	131	131	100	--	--	0.80	18.1	No Toxicity Value
pH Measurement	GEN CHEM	PH	unitless	5/15/2008	11/8/2011	139	139	100	--	--	7.2	11.1	Physical Property
Specific Conductance	GEN CHEM	CONDUCT	µS/cm	5/15/2008	11/8/2011	36	36	100	--	--	60.9	1,240	Physical Property

SVOC = semi-volatile organic compound

VOC = volatile organic compound

**Table 8-2. Analytes Not Detected in Waste Management Area C Phase 2 Soil Samples (Sheet 1 of 4)**

Analyte	Analyte Class	Chemical Abstracts Service Number	Units	First Sample Date	Last Sample Date	Total Samples	Total Detects	Frequency of Detection (%)	Minimum Detection Limit	Maximum Detection Limit
Curium-243/244	RAD	CM-243/244	pCi/g	4/14/2009	11/8/2011	133	0	0	0.010	0.79
Europium-152	RAD	14683-23-9	pCi/g	5/15/2008	11/8/2011	134	0	0	0.090	13.4
Niobium-94	RAD	14681-63-1	pCi/g	5/15/2008	7/19/2011	9	0	0	-0.025	0.28
Plutonium-239	RAD	15117-48-3	pCi/g	5/15/2008	6/5/2008	2	0	0	29.3	29.3
Silver-108 metastable	RAD	14391-65-2	pCi/g	5/15/2008	6/5/2008	2	0	0	0.30	0.30
Thorium-234	RAD	15065-10-8	pCi/g	5/15/2008	11/8/2011	134	0	0	1.7	166
Uranium	METAL	7440-61-1	µg/kg	4/14/2009	8/17/2009	42	0	0	17,000	101,000
1,1,1-Trichloroethane	VOC	71-55-6	µg/kg	4/14/2009	9/1/2010	101	0	0	0.071	0.60
1,1,2,2-Tetrachloroethane	VOC	79-34-5	µg/kg	4/14/2009	9/1/2010	101	0	0	0.16	0.83
1,1,2-Trichloro-1,2,2-trifluoroethane	VOC	76-13-1	µg/kg	4/14/2009	9/1/2010	101	0	0	0.090	0.83
1,1,2-Trichloroethane	VOC	79-00-5	µg/kg	4/14/2009	9/1/2010	101	0	0	0.13	0.63
1,2,4-Trichlorobenzene	VOC	120-82-1	µg/kg	4/14/2009	11/8/2011	131	0	0	63.6	200
1,2,4-Trimethylbenzene	VOC	95-63-6	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
1,2-Dichlorobenzene	VOC	95-50-1	µg/kg	4/14/2009	11/8/2011	131	0	0	82.7	200
1,2-Dichloroethane	VOC	107-06-2	µg/kg	4/14/2009	9/1/2010	101	0	0	0.042	0.60
1,4-Dichlorobenzene	VOC	106-46-7	µg/kg	4/14/2009	7/21/2011	56	0	0	97.4	200
2,4,5-Trichlorophenol	VOC	95-95-4	µg/kg	4/14/2009	11/8/2011	131	0	0	36.2	200
2,4,6-Trichlorophenol	VOC	88-06-2	µg/kg	4/14/2009	11/8/2011	131	0	0	40.7	200
2,4-Dichlorophenol	VOC	120-83-2	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
2,4-Dimethylphenol	VOC	105-67-9	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
2,4-Dinitrophenol	VOC	51-28-5	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
2-Butoxyethanol	VOC	111-76-2	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
2-Chlorophenol	VOC	95-57-8	µg/kg	4/14/2009	11/8/2011	131	0	0	54.6	200
2-Naphthylamine	VOC	91-59-8	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
2-Nitropropane	VOC	79-46-9	µg/kg	4/14/2009	9/1/2010	101	0	0	0.46	3.0
4,6-Dinitro-2-methylphenol	VOC	534-52-1	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
4-Chloro-3-methylphenol	VOC	59-50-7	µg/kg	4/14/2009	11/8/2011	131	0	0	35.5	200
4-Chloroaniline	VOC	106-47-8	µg/kg	6/29/2011	7/21/2011	8	0	0	300	400
4-Nitroaniline	VOC	100-01-6	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
4-Nitrophenol	VOC	100-02-7	µg/kg	4/14/2009	7/21/2011	56	0	0	45.2	200

**Table 8-2. Analytes Not Detected in Waste Management Area C Phase 2 Soil Samples (Sheet 2 of 4)**

Analyte	Analyte Class	Chemical Abstracts Service Number	Units	First Sample Date	Last Sample Date	Total Samples	Total Detects	Frequency of Detection (%)	Minimum Detection Limit	Maximum Detection Limit
Benzyl alcohol	VOC	100-51-6	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
Bis(2-chloro-1-methylethyl)ether	VOC	108-60-1	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
Bis(2-Chloroethoxy)methane	VOC	111-91-1	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
Bis(2-chloroethyl) ether	VOC	111-44-4	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
Carbon tetrachloride	VOC	56-23-5	µg/kg	4/14/2009	9/1/2010	101	0	0	0.072	0.60
Chlorobenzene	VOC	108-90-7	µg/kg	4/14/2009	9/1/2010	101	0	0	0.067	0.60
Chloroform	VOC	67-66-3	µg/kg	4/14/2009	9/1/2010	101	0	0	0.089	0.60
cis-1,2-Dichloroethylene	VOC	156-59-2	µg/kg	4/14/2009	9/1/2010	101	0	0	0.13	0.60
Cyclohexanone	VOC	108-94-1	µg/kg	4/14/2009	11/8/2011	131	0	0	200	705
Decane	VOC	124-18-5	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
Diethyl ether	VOC	60-29-7	µg/kg	4/14/2009	9/1/2010	101	0	0	0.20	1.5
Dodecane	VOC	112-40-3	µg/kg	6/29/2011	7/21/2011	8	0	0	300	300
Ethyl acetate	VOC	141-78-6	µg/kg	4/14/2009	9/1/2010	101	0	0	0.46	10.0
Ethylbenzene	VOC	100-41-4	µg/kg	4/14/2009	9/1/2010	101	0	0	0.083	0.60
Hexachlorobenzene	VOC	118-74-1	µg/kg	12/29/2009	10/26/2011	20	0	0	0	200
Hexachlorocyclopentadiene	VOC	77-47-4	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
Isobutyl alcohol	VOC	78-83-1	µg/kg	4/14/2009	4/4/2011	105	0	0	378	600
Naphthalene	VOC	91-20-3	µg/kg	4/14/2009	11/8/2011	131	0	0	51.4	200
Nitrobenzene	VOC	98-95-3	µg/kg	4/14/2009	11/8/2011	131	0	0	53.1	200
Phenol	VOC	108-95-2	µg/kg	4/14/2009	7/21/2011	56	0	0	51.1	200
Pyridine	VOC	110-86-1	µg/kg	4/14/2009	11/8/2011	131	0	0	53.4	200
Tetrachloroethene	VOC	127-18-4	µg/kg	4/14/2009	9/1/2010	101	0	0	0.085	0.67
Total cresols	VOC	1319-77-3	µg/kg	4/14/2009	11/8/2011	120	0	0	87.6	134
trans-1,2-Dichloroethylene	VOC	156-60-5	µg/kg	4/14/2009	9/1/2010	101	0	0	0.18	0.60
trans-1,3-Dichloropropene	VOC	10061-02-6	µg/kg	4/14/2009	9/1/2010	101	0	0	0.069	1.0
Trichloroethene	VOC	79-01-6	µg/kg	4/14/2009	9/1/2010	101	0	0	0.094	0.50
Vinyl chloride	VOC	75-01-4	µg/kg	4/14/2009	9/1/2010	101	0	0	0.13	1.1
2,4-Dinitrotoluene	SVOC	121-14-2	µg/kg	4/14/2009	11/8/2011	131	0	0	31.3	200
2,6-bis(1,1-dimethylethyl)-4-methyl phenol	SVOC	128-37-0	µg/kg	4/14/2009	11/8/2011	123	0	0	194	297
2,6-Dinitrotoluene	SVOC	606-20-2	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200

**Table 8-2. Analytes Not Detected in Waste Management Area C Phase 2 Soil Samples (Sheet 3 of 4)**

Analyte	Analyte Class	Chemical Abstracts Service Number	Units	First Sample Date	Last Sample Date	Total Samples	Total Detects	Frequency of Detection (%)	Minimum Detection Limit	Maximum Detection Limit
2-Chloronaphthalene	SVOC	91-58-7	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
2-Methylnaphthalene	SVOC	91-57-6	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
2-Methylphenol (cresol, o-)	SVOC	95-48-7	µg/kg	4/14/2009	11/8/2011	131	0	0	47.2	200
2-Nitroaniline	SVOC	88-74-4	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
3,3'-Dichlorobenzidine	SVOC	91-94-1	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
3-Nitroaniline	SVOC	99-09-2	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
Acenaphthene	SVOC	83-32-9	µg/kg	4/14/2009	11/8/2011	131	0	0	14.5	200
Anthracene	SVOC	120-12-7	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
Benzo(a)anthracene	SVOC	56-55-3	µg/kg	4/14/2009	11/8/2011	131	0	0	31.1	200
Benzo(a)pyrene	SVOC	50-32-8	µg/kg	4/14/2009	11/8/2011	131	0	0	33.9	200
Benzo(b)fluoranthene	SVOC	205-99-2	µg/kg	4/14/2009	11/8/2011	131	0	0	40.2	200
Benzo(k)fluoranthene	SVOC	207-08-9	µg/kg	4/14/2009	11/8/2011	131	0	0	32.1	200
Carbazole	SVOC	86-74-8	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
Cellosolve Solvent	SVOC	110-80-5	µg/kg	4/14/2009	11/8/2011	123	0	0	150	230
Chrysene	SVOC	218-01-9	µg/kg	4/14/2009	11/8/2011	131	0	0	66.9	200
Dibenz[a,h]anthracene	SVOC	53-70-3	µg/kg	4/14/2009	11/8/2011	131	0	0	42.0	200
Dibenzofuran	SVOC	132-64-9	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
Fluoranthene	SVOC	206-44-0	µg/kg	4/14/2009	11/8/2011	131	0	0	29.1	200
Fluorene	SVOC	86-73-7	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
Heptachlor epoxide	SVOC	1024-57-3	µg/kg	12/29/2009	10/26/2011	38	0	0	0.43	1.4
Hexachlorobutadiene	SVOC	87-68-3	µg/kg	4/14/2009	11/8/2011	130	0	0	57.3	200
Hexachloroethane	SVOC	67-72-1	µg/kg	4/14/2009	11/8/2011	131	0	0	91.9	200
Indeno(1,2,3-cd)pyrene	SVOC	193-39-5	µg/kg	4/14/2009	11/8/2011	131	0	0	41.9	200
Isophorone	SVOC	78-59-1	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
n-Nitrosodi-n-dipropylamine	SVOC	621-64-7	µg/kg	4/14/2009	11/8/2011	131	0	0	47.7	200
n-Nitrosodiphenylamine	SVOC	86-30-6	µg/kg	6/29/2011	7/21/2011	8	0	0	200	200
n-Nitrosomorpholine	SVOC	59-89-2	µg/kg	4/14/2009	11/8/2011	123	0	0	157	241
Pyrene	SVOC	129-00-0	µg/kg	4/14/2009	11/8/2011	131	0	0	51.7	200
Tributyl phosphate	SVOC	126-73-8	µg/kg	4/14/2009	11/8/2011	131	0	0	88.6	200
Aroclor-1016	PCB	12674-11-2	µg/kg	4/14/2009	10/26/2011	56	0	0	5.4	28.3

**Table 8-2. Analytes Not Detected in Waste Management Area C Phase 2 Soil Samples (Sheet 4 of 4)**

Analyte	Analyte Class	Chemical Abstracts Service Number	Units	First Sample Date	Last Sample Date	Total Samples	Total Detects	Frequency of Detection (%)	Minimum Detection Limit	Maximum Detection Limit
Aroclor-1221	PCB	11104-28-2	µg/kg	4/14/2009	10/26/2011	56	0	0	3.1	21.0
Aroclor-1232	PCB	11141-16-5	µg/kg	4/14/2009	10/26/2011	56	0	0	5.2	21.0
Aroclor-1242	PCB	53469-21-9	µg/kg	4/14/2009	10/26/2011	56	0	0	5.4	21.0
Aroclor-1248	PCB	12672-29-6	µg/kg	4/14/2009	10/26/2011	56	0	0	5.4	21.0
4,4'-DDD (Dichlorodiphenyldichloroethane)	PESTICIDE	72-54-8	µg/kg	4/15/2010	10/26/2011	37	0	0	0.082	0.27
4,4'-DDE (Dichlorodiphenyldichloroethylene)	PESTICIDE	72-55-9	µg/kg	12/29/2009	10/26/2011	38	0	0	0.39	1.2
4,4'-DDT (Dichlorodiphenyltrichloroethane)	PESTICIDE	50-29-3	µg/kg	4/15/2010	10/26/2011	37	0	0	0.63	2.0
Alpha-BHC	PESTICIDE	319-84-6	µg/kg	12/29/2009	10/26/2011	38	0	0	0.13	0.76
Alpha-Chlordane	PESTICIDE	5103-71-9	µg/kg	2/24/2011	10/26/2011	14	0	0	0.57	1.2
Chlordane	PESTICIDE	57-74-9	µg/kg	4/15/2010	10/26/2011	37	0	0	3.7	12.0
Dieldrin	PESTICIDE	60-57-1	µg/kg	12/29/2009	10/26/2011	38	0	0	0.22	0.76
Endosulfan I	PESTICIDE	959-98-8	µg/kg	2/24/2011	10/26/2011	14	0	0	0.57	1.2
Endosulfan II	PESTICIDE	33213-65-9	µg/kg	2/24/2011	10/26/2011	14	0	0	0.24	0.49
Endrin	PESTICIDE	72-20-8	µg/kg	4/15/2010	10/26/2011	37	0	0	0.14	0.43
Heptachlor	PESTICIDE	76-44-8	µg/kg	12/29/2009	10/26/2011	38	0	0	0.10	0.76
Methoxychlor	PESTICIDE	72-43-5	µg/kg	2/24/2011	10/26/2011	14	0	0	0.72	1.5
Pentachlorophenol	PESTICIDE	87-86-5	µg/kg	4/14/2009	11/8/2011	70	0	0	32.2	200
Toxaphene	PESTICIDE	8001-35-2	µg/kg	2/24/2011	10/26/2011	14	0	0	15.0	32.0
trans-Chlordane	PESTICIDE	5103-74-2	µg/kg	2/24/2011	10/26/2011	14	0	0	0.16	0.33
Cyanide	ANION	57-12-5	µg/kg	4/14/2009	11/8/2011	134	0	0	200	5,640

PCB = polychlorinated biphenyl

SVOC = semi-volatile organic compound

VOC = volatile organic compound

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**Table 8-3. ProUCL Input Filenames for Waste Management Area C Exposure Areas**

<b>Exposure Area</b>	<b>Filenames</b>
A + B	ProUCL_A+B_Shallow.xls, ProUCL_A+B_Deep.xls
C	ProUCL_C_Shallow.xls, ProUCL_C_Deep.xls
E	ProUCL_E_Shallow.xls, ProUCL_E_Deep.xls
F + G	ProUCL_F+G_Shallow.xls, ProUCL_F+G_Deep.xls
H + I	ProUCL_H+I_Shallow.xls, ProUCL_H+I_Deep.xls
J	ProUCL_J_Shallow.xls, ProUCL_J_Deep.xls
L1 + L2	ProUCL_L1+L2_Shallow.xls, ProUCL_L1+L2_Deep.xls
P	ProUCL_P_Shallow.xls, ProUCL_P_Deep.xls
R	ProUCL_R_Shallow.xls, ProUCL_R_Deep.xls
U	ProUCL_U_Shallow.xls, ProUCL_U_Deep.xls
299-E27-20	ProUCL_299-E27-20_Shallow.xls, ProUCL_299-E27-20_Deep.xls
299-E27-24	ProUCL_299-E27-24_Shallow.xls, ProUCL_299-E27-20_Deep.xls

**Table 8-4. Raw Statistics Output Filenames for Waste Management Area C Exposure Areas**

<b>Exposure Area</b>	<b>Filenames</b>
A + B	A+B_Shallow_WNDRawStats.xls, A+B_Deep_WNDRawStats.xls
C	C_Shallow_WNDRawStats.xls, C_Deep_WNDRawStats.xls
E	E_Shallow_WNDRawStats.xls, E_Deep_WNDRawStats.xls
F + G	F+G_Shallow_WNDRawStats.xls, F+G_Deep_WNDRawStats.xls
H + I	H+I_Shallow_WNDRawStats.xls, H+I_Deep_WNDRawStats.xls
J	J_Shallow_WNDRawStats.xls, J_Deep_WNDRawStats.xls
L1 + L2	L1+L2_Shallow_WNDRawStats.xls, L1+L2_Deep_WNDRawStats.xls
P	P_Shallow_WNDRawStats.xls, P_Deep_WNDRawStats.xls
R	R_Shallow_WNDRawStats.xls, R_Deep_WNDRawStats.xls
U	U_Shallow_WNDRawStats.xls, U_Deep_WNDRawStats.xls
299-E27-20	299-E27-20_Shallow_WNDRawStats.xls, 299-E27-20_Deep_WNDRawStats.xls
299-E27-24	299-E27-24_Shallow_WNDRawStats.xls, 299-E27-24_Deep_WNDRawStats.xls

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**Table 8-5. Upper Confidence Limit Output Filenames for Waste Management Area C Exposure Areas**

Exposure Area	Filenames
A + B	A+B_Shallow_WNDStats.xls, A+B_Deep_WNDStats.xls
C	C_Shallow_WNDStats.xls, C_Deep_WNDStats.xls
E	E_Shallow_WNDStats.xls, E_Deep_WNDStats.xls
F + G	F+G_Shallow_WNDStats.xls, F+G_Deep_WNDStats.xls
H + I	H+I_Shallow_WNDStats.xls, H+I_Deep_WNDStats.xls
J	J_Shallow_WNDStats.xls, J_Deep_WNDStats.xls
L1 + L2	L1+L2_Shallow_WNDStats.xls, L1+L2_Deep_WNDStats.xls
P	P_Shallow_WNDStats.xls, P_Deep_WNDStats.xls
R	R_Shallow_WNDStats.xls, R_Deep_WNDStats.xls
U	U_Shallow_WNDStats.xls, U_Deep_WNDStats.xls
299-E27-20	299-E27-20_Shallow_WNDStats.xls, 299-E27-20_Deep_WNDStats.xls
299-E27-24	299-E27-24_Shallow_WNDStats.xls, 299-E27-24_Deep_WNDStats.xls

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 1 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
									Minimum	Maximum	Minimum	Maximum				
A+B_Deep	non-Rad	Aluminum	7429-90-5	9	9	0	100	µg/kg	0	0	5,940,000	10,300,000	0.19	7,926,192	95% Approximate Gamma UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Antimony	7440-36-0	9	9	0	100	µg/kg	0	0	108	265	0.26	213	95% Student's-t UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Arsenic	7440-38-2	9	9	0	100	µg/kg	0	0	1,720	3,870	0.32	3,078	95% Student's-t UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Barium	7440-39-3	9	9	0	100	µg/kg	0	0	57,800	92,400	0.18	76,114	95% Student's-t UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Beryllium	7440-41-7	9	1	8	11.11	µg/kg	217	227	231	231	0	231	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Beryllium was not processed!
A+B_Deep	non-Rad	Boron	7440-42-8	4	1	3	25	µg/kg	6,670	6,800	6,960	6,960	0	6,960	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Boron was not processed!
A+B_Deep	non-Rad	Cadmium	7440-43-9	9	9	0	100	µg/kg	0	0	37.5	112	0.32	82.4	95% Student's-t UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Chromium	7440-47-3	9	9	0	100	µg/kg	0	0	13,100	27,700	0.26	23,675	95% Student's-t UCL	Warning: There are only 9 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 2 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
A+B_Deep	non-Rad	Cobalt	7440-48-4	9	9	0	100	µg/kg	0	0	3,290	7,160	0.20	6,248	95% Student's-t UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Copper	7440-50-8	9	9	0	100	µg/kg	0	0	8,950	14,100	0.14	11,391	95% Approximate Gamma UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Diethylphthalate	84-66-2	4	1	3	25	µg/kg	300	300	240	240	0	240	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Diethylphthalate was not processed!
A+B_Deep	non-Rad	Fluoride	16984-48-8	9	5	4	55.56	µg/kg	1,800	2,000	397	797	0.24	751	95% KM (t) UCL	Warning: There are only 5 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 to draw conclusions
A+B_Deep	non-Rad	Iron	7439-89-6	9	9	0	100	µg/kg	0	0	15,200,000	22,400,000	0.13	18,556,487	95% Approximate Gamma UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Lead	7439-92-1	9	9	0	100	µg/kg	0	0	3,190	11,900	0.59	6,495	95% Modified-t UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Lithium	7439-93-2	9	9	0	100	µg/kg	0	0	7,130	10,500	0.11	9,717	95% Student's-t UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Manganese	7439-96-5	9	9	0	100	µg/kg	0	0	247,000	316,000	0.089	289,386	95% Student's-t UCL	Warning: There are only 9 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 3 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
A+B_Deep	non-Rad	Mercury	7439-97-6	9	1	8	11.11	µg/kg	9.1	12.0	23.0	23.0	0	23.0	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Mercury was not processed!
A+B_Deep	non-Rad	Nickel	7440-02-0	9	9	0	100	µg/kg	0	0	13,400	18,200	0.10	17,339	95% Student's-t UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Nitrate	14797-55-8	9	9	0	100	µg/kg	0	0	4,720	121,000	1.5	108,036	97.5% Chebyshev (Mean, Sd)	Recommended UCL Exceeds Maximum Concentration: EPC set to 97.5% Chebyshev(Mean, Sd).
A+B_Deep	non-Rad	Nitrite	14797-65-0	9	4	5	44.44	µg/kg	189	3,610	303	524	0.24	457	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions
A+B_Deep	non-Rad	Silver	7440-22-4	9	8	1	88.89	µg/kg	34.7	34.7	33.3	76.9	0.29	52.6	95% KM (BCA) UCL	Warning: There are only 8 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 to draw conclusions
A+B_Deep	non-Rad	Strontium	7440-24-6	9	9	0	100	µg/kg	0	0	28,100	67,700	0.34	44,154	95% Modified-t UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Total_U_Isotopes	Total_U_Isotopes	9	9	0	100	µg/kg	0	0	429	1,905	0.68	1,024	95% Modified-t UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Vanadium	7440-62-2	9	9	0	100	µg/kg	0	0	29,200	57,700	0.23	43,688	95% Student's-t UCL	Warning: There are only 9 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
A+B_Deep	non-Rad	Zinc	7440-66-6	9	9	0	100	µg/kg	0	0	30,700	44,300	0.12	36,864	95% Modified-t UCL	Warning: There are only 9 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 4 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
A+B_Deep	Rad	Carbon-14	14762-75-5	9	2	7	22.22	pCi/g	0.60	1.7	1.3	1.9	0.25	1.9	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
A+B_Deep	Rad	Nickel-63	13981-37-8	9	1	8	11.11	pCi/g	3.1	7.9	6.7	6.7	0	6.7	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Nickel-63 was not processed!
A+B_Deep	Rad	Selenium-79	15758-45-9	9	2	7	22.22	pCi/g	1.3	1.9	1.6	2.2	0.20	2.2	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
A+B_Deep	Rad	Technetium-99	14133-76-7	9	1	8	11.11	pCi/g	9.0	9.7	16.2	16.2	0	16.2	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Technetium-99 was not processed!
A+B_Deep	Rad	Tin-126	15832-50-5	9	9	0	100	pCi/g	0	0	13.9	281	1.0	267	95% Approximate Gamma UCL	Warning: There are only 9 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
A+B_Deep	Rad	Tritium	10028-17-8	9	3	6	33.33	pCi/g	1.6	2.7	1.7	5.2	0.65	5.2	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
A+B_Deep	Rad	Uranium-234	13966-29-5	9	7	2	77.78	pCi/g	0.14	0.14	0.17	0.58	0.51	0.33	95% KM (Percentile Bootstrap) UCL	Warning: There are only 7 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 to draw conclusions

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 5 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
A+B_Deep	Rad	Uranium-235	15117-96-1	9	9	0	100	pCi/g	0	0	0.0063	0.030	0.72	0.022	95% Chebyshev (Mean, Sd) UCL	Warning: There are only 9 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
A+B_Deep	Rad	Uranium-236	13982-70-2	9	1	8	11.11	pCi/g	0.0011	0.0012	0.029	0.029	0	0.029	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Uranium-236 was not processed!
A+B_Deep	Rad	Uranium-238	U-238	9	9	0	100	pCi/g	0	0	0.14	0.64	0.68	0.34	95% Modified-t UCL	Warning: There are only 9 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
A+B_Shallow	non-Rad	Aluminum	7429-90-5	8	8	0	100	µg/kg	0	0	6,710,000	7,860,000	0.057	7,549,337	95% Student's-t UCL	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
A+B_Shallow	non-Rad	Antimony	7440-36-0	8	8	0	100	µg/kg	0	0	114	342	0.36	265	95% Student's-t UCL	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
A+B_Shallow	non-Rad	Aroclor-1254	11097-69-1	7	2	5	28.57	µg/kg	5.4	6.0	6.5	8.6	0.20	7.5	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
A+B_Shallow	non-Rad	Arsenic	7440-38-2	8	8	0	100	µg/kg	0	0	2,400	5,220	0.30	3,751	95% Approximate Gamma UCL	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
A+B_Shallow	non-Rad	Barium	7440-39-3	8	8	0	100	µg/kg	0	0	66,100	100,000	0.13	85,003	95% Student's-t UCL	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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 6 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
A+B_Shallow	non-Rad	Cadmium	7440-43-9	8	8	0	100	µg/kg	0	0	39.3	117	0.40	96.7	95% Student's-t UCL	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
A+B_Shallow	non-Rad	Chromium	7440-47-3	8	8	0	100	µg/kg	0	0	5,970	11,100	0.19	9,537	95% Student's-t UCL	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
A+B_Shallow	non-Rad	Cobalt	7440-48-4	8	8	0	100	µg/kg	0	0	6,470	11,400	0.22	9,094	95% Approximate Gamma UCL	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
A+B_Shallow	non-Rad	Copper	7440-50-8	8	8	0	100	µg/kg	0	0	10,800	14,200	0.092	12,756	95% Student's-t UCL	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
A+B_Shallow	non-Rad	Diethylphthalate	84-66-2	4	1	3	25	µg/kg	200	300	340	340	0	340	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Diethylphthalate was not processed!
A+B_Shallow	non-Rad	Fluoride	16984-48-8	8	4	4	50	µg/kg	310	1,900	717	2,750	0.59	2,225	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions
A+B_Shallow	non-Rad	Iron	7439-89-6	8	8	0	100	µg/kg	0	0	21,200,000	26,200,000	0.068	24,080,312	95% Student's-t UCL	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
A+B_Shallow	non-Rad	Lead	7439-92-1	8	8	0	100	µg/kg	0	0	2,920	7,210	0.32	5,722	95% Student's-t UCL	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
A+B_Shallow	non-Rad	Lithium	7439-93-2	8	8	0	100	µg/kg	0	0	7,100	8,640	0.064	8,332	95% Student's-t UCL	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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 7 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
A+B_Shallow	non-Rad	Manganese	7439-96-5	8	8	0	100	µg/kg	0	0	299,000	377,000	0.080	354,006	95% Student's-t UCL	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
A+B_Shallow	non-Rad	Nickel	7440-02-0	8	8	0	100	µg/kg	0	0	7,530	12,200	0.17	10,843	95% Student's-t UCL	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
A+B_Shallow	non-Rad	Nitrate	14797-55-8	8	6	2	75	µg/kg	4,340	4,380	1,710	16,100	0.76	9,063	95% KM (t) UCL	Warning: There are only 6 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 to draw conclusions
A+B_Shallow	non-Rad	Nitrite	14797-65-0	8	4	4	50	µg/kg	558	3,280	342	1,080	0.56	925	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions
A+B_Shallow	non-Rad	Silver	7440-22-4	8	8	0	100	µg/kg	0	0	28.6	52.5	0.24	48.3	95% Student's-t UCL	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
A+B_Shallow	non-Rad	Strontium	7440-24-6	8	8	0	100	µg/kg	0	0	30,100	45,000	0.14	37,739	95% Student's-t UCL	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
A+B_Shallow	non-Rad	Tin	7440-31-5	3	3	0	100	µg/kg	0	0	6,900	11,600	0.25	11,600	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin was not processed!
A+B_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	8	8	0	100	µg/kg	0	0	408	732	0.22	577	95% Student's-t UCL	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
A+B_Shallow	non-Rad	Vanadium	7440-62-2	8	8	0	100	µg/kg	0	0	48,300	66,500	0.095	59,975	95% Student's-t UCL	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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 8 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
A+B_Shallow	non-Rad	Zinc	7440-66-6	8	8	0	100	µg/kg	0	0	41,200	47,500	0.059	45,590	95% Student's-t UCL	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
A+B_Shallow	Rad	Americium-241	14596-10-2	8	3	5	37.5	pCi/g	0.016	0.034	0.038	0.18	0.81	0.18	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
A+B_Shallow	Rad	Carbon-14	14762-75-5	8	3	5	37.5	pCi/g	0.92	2.2	1.2	3.4	0.47	3.4	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
A+B_Shallow	Rad	Cesium-137	10045-97-3	8	2	6	25	pCi/g	0.081	0.19	4.4	27.7	1.0	27.7	95% KM (BCA) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
A+B_Shallow	Rad	Plutonium-239/240	PU-239/240	8	1	7	12.5	pCi/g	0.028	0.054	0.31	0.31	0	0.31	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Plutonium-239/240 was not processed!
A+B_Shallow	Rad	Plutonium-241	14119-32-5	8	1	7	12.5	pCi/g	0.10	0.20	1.2	1.2	0	1.2	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Plutonium-241 was not processed!
A+B_Shallow	Rad	Selenium-79	15758-45-9	8	2	6	25	pCi/g	1.2	2.7	2.2	2.7	0.15	2.4	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 9 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
A+B_Shallow	Rad	Strontium-90	10098-97-2	8	2	6	25	pCi/g	0.18	0.65	11.8	24.0	0.48	17.1	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
A+B_Shallow	Rad	Tin-126	15832-50-5	8	8	0	100	pCi/g	0	0	14.1	47.0	0.41	31.7	95% Student's-t UCL	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
A+B_Shallow	Rad	Uranium-234	13966-29-5	8	7	1	87.5	pCi/g	0.14	0.14	0.17	0.33	0.24	0.26	95% KM (t) UCL	Warning: There are only 7 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 to draw conclusions
A+B_Shallow	Rad	Uranium-235	15117-96-1	8	8	0	100	pCi/g	0	0	0.0060	0.011	0.22	0.0089	95% Student's-t UCL	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
A+B_Shallow	Rad	Uranium-238	U-238	8	8	0	100	pCi/g	0	0	0.14	0.24	0.22	0.19	95% Student's-t UCL	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
C_Deep	non-Rad	Aluminum	7429-90-5	5	5	0	100	µg/kg	0	0	5,900,000	7,560,000	0.093	7,181,796	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	non-Rad	Antimony	7440-36-0	5	5	0	100	µg/kg	0	0	55.0	224	0.46	199	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	non-Rad	Arsenic	7440-38-2	5	5	0	100	µg/kg	0	0	2,220	7,770	0.49	6,226	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	non-Rad	Barium	7440-39-3	5	5	0	100	µg/kg	0	0	54,400	79,900	0.17	74,324	95% Student's-t UCL	Warning: There are only 5 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 10 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
C_Deep	non-Rad	Beryllium	7440-41-7	5	5	0	100	µg/kg	0	0	181	235	0.11	228	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	non-Rad	Bis(2-ethylhexyl) adipate	103-23-1	1	1	0	100	µg/kg	0	0	240	240	0	240	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Bis(2-ethylhexyl) adipate was not processed!
C_Deep	non-Rad	Cadmium	7440-43-9	5	5	0	100	µg/kg	0	0	70.2	86.5	0.094	85.4	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	non-Rad	Chromium	7440-47-3	5	5	0	100	µg/kg	0	0	12,900	22,200	0.22	22,200	Maximum Detect	Recommended UCL Exceeds Maximum Concentration; EPC defaulting to Maximum Concentration since 97.5% and 99% Chebyshev(Mean, Sd) UCLs also exceed maximum concentration.
C_Deep	non-Rad	Cobalt	7440-48-4	5	5	0	100	µg/kg	0	0	5,800	8,090	0.14	7,875	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	non-Rad	Copper	7440-50-8	5	5	0	100	µg/kg	0	0	10,200	13,100	0.13	12,909	95% Student's-t UCL	Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates! It is suggested to collect at least 8 to 10 observations using these statistical methods! If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.
C_Deep	non-Rad	Fluoride	16984-48-8	5	5	0	100	µg/kg	0	0	507	1,040	0.26	979	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	non-Rad	Iron	7439-89-6	5	5	0	100	µg/kg	0	0	15,500,000	21,100,000	0.13	20,601,734	95% Student's-t UCL	Warning: There are only 5 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 11 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
C_Deep	non-Rad	Lead	7439-92-1	5	5	0	100	µg/kg	0	0	2,390	3,650	0.17	3,650	Maximum Detect	Recommended UCL Exceeds Maximum Concentration; EPC defaulting to Maximum Concentration since 97.5% and 99% Chebyshev(Mean, Sd) UCLs also exceed maximum concentration.
C_Deep	non-Rad	Lithium	7439-93-2	5	5	0	100	µg/kg	0	0	6,570	9,230	0.13	9,230	Maximum Detect	Recommended UCL Exceeds Maximum Concentration; EPC defaulting to Maximum Concentration since 97.5% and 99% Chebyshev(Mean, Sd) UCLs also exceed maximum concentration.
C_Deep	non-Rad	Manganese	7439-96-5	5	5	0	100	µg/kg	0	0	237,000	364,000	0.17	330,664	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	non-Rad	Nickel	7440-02-0	5	5	0	100	µg/kg	0	0	11,200	18,200	0.20	17,946	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	non-Rad	Nitrate	14797-55-8	5	5	0	100	µg/kg	0	0	2,850	4,600	0.22	4,246	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	non-Rad	Nitrite	14797-65-0	5	5	0	100	µg/kg	0	0	424	1,930	0.42	1,930	Maximum Detect	Recommended UCL Exceeds Maximum Concentration; EPC defaulting to Maximum Concentration since 97.5% and 99% Chebyshev(Mean, Sd) UCLs also exceed maximum concentration.
C_Deep	non-Rad	Silver	7440-22-4	5	1	4	20	µg/kg	35.5	37.0	38.9	38.9	0	38.9	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Silver was not processed!
C_Deep	non-Rad	Strontium	7440-24-6	5	5	0	100	µg/kg	0	0	29,200	38,200	0.11	37,072	95% Student's-t UCL	Warning: There are only 5 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 12 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
C_Deep	non-Rad	Total_U_Isotopes	Total_U_Isotopes	5	5	0	100	µg/kg	0	0	396	671	0.22	599	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	non-Rad	Vanadium	7440-62-2	5	5	0	100	µg/kg	0	0	30,800	55,600	0.24	51,858	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	non-Rad	Zinc	7440-66-6	5	5	0	100	µg/kg	0	0	30,500	37,700	0.10	37,535	95% Student's-t UCL	Warning: There are only 5 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
C_Deep	Rad	Nickel-63	13981-37-8	5	1	4	20	pCi/g	3.2	5.6	3.8	3.8	0	3.8	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Nickel-63 was not processed!
C_Deep	Rad	Strontium-90	10098-97-2	5	1	4	20	pCi/g	0.17	0.60	0.19	0.19	0	0.19	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Strontium-90 was not processed!
C_Deep	Rad	Tin-126	15832-50-5	5	4	1	80	pCi/g	7.2	7.2	14.3	26.6	0.29	24.6	95% KM (t) UCL	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 to draw conclusions
C_Deep	Rad	Uranium-235	15117-96-1	5	5	0	100	pCi/g	0	0	0.0060	0.010	0.22	0.0090	95% Student's-t UCL	Warning: There are only 5 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 13 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
C_Deep	Rad	Uranium-238	U-238	5	5	0	100	pCi/g	0	0	0.13	0.22	0.22	0.20	95% Student's-t UCL	Warning: There are only 5 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
C_Shallow	non-Rad	Aluminum	7429-90-5	3	3	0	100	µg/kg	0	0	8,270,000	9,510,000	0.077	9,510,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Aluminum was not processed!
C_Shallow	non-Rad	Antimony	7440-36-0	3	3	0	100	µg/kg	0	0	175	721	0.74	721	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Antimony was not processed!
C_Shallow	non-Rad	Arsenic	7440-38-2	3	3	0	100	µg/kg	0	0	3,810	21,200	0.88	21,200	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
C_Shallow	non-Rad	Barium	7440-39-3	3	3	0	100	µg/kg	0	0	81,500	98,800	0.10	98,800	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Barium was not processed!
C_Shallow	non-Rad	Beryllium	7440-41-7	3	3	0	100	µg/kg	0	0	323	403	0.11	403	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Beryllium was not processed!
C_Shallow	non-Rad	Butylbenzyl phthalate	85-68-7	3	1	2	33.33	µg/kg	48.3	49.9	80.7	80.7	0	80.7	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Butylbenzylphthalate was not processed!
C_Shallow	non-Rad	Cadmium	7440-43-9	3	3	0	100	µg/kg	0	0	94.9	150	0.24	150	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cadmium was not processed!
C_Shallow	non-Rad	Chromium	7440-47-3	3	3	0	100	µg/kg	0	0	9,290	12,800	0.16	12,800	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 14 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
C_Shallow	non-Rad	Cobalt	7440-48-4	3	3	0	100	µg/kg	0	0	9,010	11,000	0.10	11,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cobalt was not processed!
C_Shallow	non-Rad	Copper	7440-50-8	3	3	0	100	µg/kg	0	0	13,200	18,100	0.16	18,100	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Copper was not processed!
C_Shallow	non-Rad	Fluoride	16984-48-8	3	3	0	100	µg/kg	0	0	557	2,290	0.58	2,290	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Fluoride was not processed!
C_Shallow	non-Rad	Iron	7439-89-6	3	3	0	100	µg/kg	0	0	22,800,000	28,600,000	0.12	28,600,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Iron was not processed!
C_Shallow	non-Rad	Lead	7439-92-1	3	3	0	100	µg/kg	0	0	3,710	10,600	0.51	10,600	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!
C_Shallow	non-Rad	Lithium	7439-93-2	3	3	0	100	µg/kg	0	0	7,800	12,100	0.24	12,100	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lithium was not processed!
C_Shallow	non-Rad	Manganese	7439-96-5	3	3	0	100	µg/kg	0	0	373,000	449,000	0.093	449,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Manganese was not processed!
C_Shallow	non-Rad	Mercury	7439-97-6	3	2	1	66.67	µg/kg	1.0	1.0	3.9	5.1	0.18	5.1	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Mercury was not processed!
C_Shallow	non-Rad	Nickel	7440-02-0	3	3	0	100	µg/kg	0	0	10,800	13,000	0.092	13,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nickel was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 15 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
C_Shallow	non-Rad	Nitrate	14797-55-8	3	3	0	100	µg/kg	0	0	4,210	17,400	0.61	17,400	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrate was not processed!
C_Shallow	non-Rad	Nitrite	14797-65-0	3	3	0	100	µg/kg	0	0	1,180	2,110	0.29	2,110	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrite was not processed!
C_Shallow	non-Rad	Silver	7440-22-4	3	3	0	100	µg/kg	0	0	40.0	80.0	0.39	80.0	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Silver was not processed!
C_Shallow	non-Rad	Strontium	7440-24-6	3	3	0	100	µg/kg	0	0	33,100	44,700	0.16	44,700	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Strontium was not processed!
C_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	3	3	0	100	µg/kg	0	0	540	845	0.26	845	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Total_U_Isotopes was not processed!
C_Shallow	non-Rad	Vanadium	7440-62-2	3	3	0	100	µg/kg	0	0	49,000	78,500	0.27	78,500	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Vanadium was not processed!
C_Shallow	non-Rad	Zinc	7440-66-6	3	3	0	100	µg/kg	0	0	44,600	51,100	0.079	51,100	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Zinc was not processed!
C_Shallow	Rad	Cesium-137	10045-97-3	3	1	2	33.33	pCi/g	0.10	0.15	7.1	7.1	0	7.1	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cesium-137 was not processed!
C_Shallow	Rad	Nickel-63	13981-37-8	3	1	2	33.33	pCi/g	3.1	3.4	4.5	4.5	0	4.5	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nickel-63 was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 16 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
C_Shallow	Rad	Strontium-90	10098-97-2	3	1	2	33.33	pCi/g	0.18	0.56	3.0	3.0	0	3.0	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Strontium-90 was not processed!
C_Shallow	Rad	Tin-126	15832-50-5	3	3	0	100	pCi/g	0	0	20.7	53.1	0.53	53.1	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin-126 was not processed!
C_Shallow	Rad	Uranium-235	15117-96-1	3	3	0	100	pCi/g	0	0	0.0083	0.013	0.24	0.013	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-235 was not processed!
C_Shallow	Rad	Uranium-238	U-238	3	3	0	100	pCi/g	0	0	0.18	0.28	0.26	0.28	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
E_Deep	non-Rad	2-Butanone	78-93-3	4	1	3	25	µg/kg	2.0	2.5	6.6	6.6	0	6.6	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable 2-Butanone was not processed!
E_Deep	non-Rad	Acetone	67-64-1	4	1	3	25	µg/kg	2.2	2.8	5.4	5.4	0	5.4	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Acetone was not processed!
E_Deep	non-Rad	Aluminum	7429-90-5	4	4	0	100	µg/kg	0	0	6,680,000	9,330,000	0.16	9,330,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Aluminum was not processed!
E_Deep	non-Rad	Amylene Hydrate	75-85-4	1	1	0	100	µg/kg	0	0	190	190	0	190	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Amylene Hydrate was not processed!
E_Deep	non-Rad	Antimony	7440-36-0	4	4	0	100	µg/kg	0	0	93.0	263	0.53	263	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Antimony was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 17 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
E_Deep	non-Rad	Arsenic	7440-38-2	4	4	0	100	µg/kg	0	0	2,240	3,710	0.21	3,710	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
E_Deep	non-Rad	Barium	7440-39-3	4	4	0	100	µg/kg	0	0	53,200	99,900	0.26	99,900	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Barium was not processed!
E_Deep	non-Rad	Beryllium	7440-41-7	4	4	0	100	µg/kg	0	0	125	195	0.18	195	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Beryllium was not processed!
E_Deep	non-Rad	Boron	7440-42-8	4	1	3	25	µg/kg	2,970	2,990	3,100	3,100	0	3,100	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Boron was not processed!
E_Deep	non-Rad	Butylbenzyl phthalate	85-68-7	4	2	2	50	µg/kg	41.1	49.3	110	125	0.090	125	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Butylbenzylphthalate was not processed!
E_Deep	non-Rad	Cadmium	7440-43-9	4	4	0	100	µg/kg	0	0	1,760	2,440	0.14	2,440	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cadmium was not processed!
E_Deep	non-Rad	Chromium	7440-47-3	4	4	0	100	µg/kg	0	0	16,500	29,800	0.26	29,800	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
E_Deep	non-Rad	Cobalt	7440-48-4	4	4	0	100	µg/kg	0	0	5,590	11,300	0.37	11,300	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cobalt was not processed!
E_Deep	non-Rad	Copper	7440-50-8	4	4	0	100	µg/kg	0	0	9,490	15,300	0.21	15,300	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Copper was not processed!

**Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 18 of 89)**

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
E_Deep	non-Rad	Fluoride	16984-48-8	4	4	0	100	µg/kg	0	0	171	2,870	0.92	2,870	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Fluoride was not processed!
E_Deep	non-Rad	Iron	7439-89-6	4	4	0	100	µg/kg	0	0	15,100,000	22,900,000	0.19	22,900,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Iron was not processed!
E_Deep	non-Rad	Lithium	7439-93-2	4	4	0	100	µg/kg	0	0	8,130	10,800	0.14	10,800	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lithium was not processed!
E_Deep	non-Rad	Manganese	7439-96-5	4	4	0	100	µg/kg	0	0	265,000	310,000	0.065	310,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Manganese was not processed!
E_Deep	non-Rad	Molybdenum	7439-98-7	4	1	3	25	µg/kg	1,980	2,000	2,540	2,540	0	2,540	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Molybdenum was not processed!
E_Deep	non-Rad	Nickel	7440-02-0	4	4	0	100	µg/kg	0	0	11,200	25,300	0.35	25,300	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nickel was not processed!
E_Deep	non-Rad	Nitrate	14797-55-8	4	4	0	100	µg/kg	0	0	2,320	8,920	0.55	8,920	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrate was not processed!
E_Deep	non-Rad	Nitrite	14797-65-0	4	4	0	100	µg/kg	0	0	721	1,470	0.35	1,470	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrite was not processed!
E_Deep	non-Rad	Selenium	7782-49-2	4	4	0	100	µg/kg	0	0	195	568	0.49	568	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Selenium was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 19 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
E_Deep	non-Rad	Silver	7440-22-4	4	4	0	100	µg/kg	0	0	46.4	78.0	0.23	78.0	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Silver was not processed!
E_Deep	non-Rad	Strontium	7440-24-6	4	4	0	100	µg/kg	0	0	29,100	56,200	0.32	56,200	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Strontium was not processed!
E_Deep	non-Rad	Styrene	100-42-5	1	1	0	100	µg/kg	0	0	0.78	0.78	0	0.78	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Styrene was not processed!
E_Deep	non-Rad	Toluene	108-88-3	4	3	1	75	µg/kg	0.080	0.080	0.40	0.73	0.29	0.73	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Toluene was not processed!
E_Deep	non-Rad	Total_U_Isotopes	Total_U_Isotopes	4	4	0	100	µg/kg	0	0	540	857	0.23	857	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Total_U_Isotopes was not processed!
E_Deep	non-Rad	Vanadium	7440-62-2	4	4	0	100	µg/kg	0	0	29,600	63,700	0.36	63,700	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Vanadium was not processed!
E_Deep	non-Rad	Zinc	7440-66-6	4	4	0	100	µg/kg	0	0	31,200	43,000	0.16	43,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Zinc was not processed!
E_Deep	Rad	Selenium-79	15758-45-9	4	1	3	25	pCi/g	1.3	3.3	7.1	7.1	0	7.1	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Selenium-79 was not processed!
E_Deep	Rad	Tin-126	15832-50-5	4	4	0	100	pCi/g	0	0	3.4	4.7	0.16	4.7	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin-126 was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 20 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
E_Deep	Rad	Uranium-233	13968-55-3	4	4	0	100	pCi/g	0	0	1.2	2.5	0.33	2.5	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233 was not processed!
E_Deep	Rad	Uranium-234	13966-29-5	4	4	0	100	pCi/g	0	0	0.29	0.40	0.15	0.40	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-234 was not processed!
E_Deep	Rad	Uranium-235	15117-96-1	4	4	0	100	pCi/g	0	0	0.0077	0.012	0.19	0.012	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-235 was not processed!
E_Deep	Rad	Uranium-238	U-238	4	4	0	100	pCi/g	0	0	0.18	0.29	0.23	0.29	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
E_Shallow	non-Rad	Acetone	67-64-1	4	3	1	75	µg/kg	1.7	1.7	4.1	6.6	0.25	6.6	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Acetone was not processed!
E_Shallow	non-Rad	Aldrin	309-00-2	4	1	3	25	µg/kg	0.31	0.32	2.0	2.0	0	2.0	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Aldrin was not processed!
E_Shallow	non-Rad	Aluminum	7429-90-5	4	4	0	100	µg/kg	0	0	6,810,000	7,420,000	0.035	7,420,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Aluminum was not processed!
E_Shallow	non-Rad	Antimony	7440-36-0	4	4	0	100	µg/kg	0	0	92.6	178	0.26	178	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Antimony was not processed!
E_Shallow	non-Rad	Arsenic	7440-38-2	4	4	0	100	µg/kg	0	0	2,990	5,200	0.27	5,200	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 21 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
E_Shallow	non-Rad	Barium	7440-39-3	4	4	0	100	µg/kg	0	0	75,000	78,400	0.018	78,400	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Barium was not processed!
E_Shallow	non-Rad	Beryllium	7440-41-7	4	4	0	100	µg/kg	0	0	147	159	0.037	159	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Beryllium was not processed!
E_Shallow	non-Rad	Boron	7440-42-8	4	2	2	50	µg/kg	2,980	2,990	3,250	3,340	0.019	3,340	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Boron was not processed!
E_Shallow	non-Rad	Butylbenzyl phthalate	85-68-7	4	3	1	75	µg/kg	118	118	121	124	0.012	124	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Butylbenzylphthalate was not processed!
E_Shallow	non-Rad	Cadmium	7440-43-9	4	4	0	100	µg/kg	0	0	2,700	3,260	0.087	3,260	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cadmium was not processed!
E_Shallow	non-Rad	Chromium	7440-47-3	4	4	0	100	µg/kg	0	0	7,980	17,200	0.33	17,200	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
E_Shallow	non-Rad	Cobalt	7440-48-4	4	4	0	100	µg/kg	0	0	7,620	8,820	0.062	8,820	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cobalt was not processed!
E_Shallow	non-Rad	Copper	7440-50-8	4	4	0	100	µg/kg	0	0	12,000	16,500	0.15	16,500	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Copper was not processed!
E_Shallow	non-Rad	Fluoride	16984-48-8	4	4	0	100	µg/kg	0	0	995	1,480	0.17	1,480	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Fluoride was not processed!

**Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 22 of 89)**

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
E_Shallow	non-Rad	Iron	7439-89-6	4	4	0	100	µg/kg	0	0	21,600,000	24,200,000	0.050	24,200,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Iron was not processed!
E_Shallow	non-Rad	Lithium	7439-93-2	4	4	0	100	µg/kg	0	0	7,030	9,130	0.12	9,130	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lithium was not processed!
E_Shallow	non-Rad	Manganese	7439-96-5	4	4	0	100	µg/kg	0	0	298,000	495,000	0.24	495,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Manganese was not processed!
E_Shallow	non-Rad	Mercury	7439-97-6	4	1	3	25	µg/kg	9.2	9.9	23.2	23.2	0	23.2	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Mercury was not processed!
E_Shallow	non-Rad	Nickel	7440-02-0	4	4	0	100	µg/kg	0	0	7,820	12,400	0.19	12,400	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nickel was not processed!
E_Shallow	non-Rad	Nitrate	14797-55-8	4	4	0	100	µg/kg	0	0	2,850	5,020	0.23	5,020	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrate was not processed!
E_Shallow	non-Rad	Nitrite	14797-65-0	4	4	0	100	µg/kg	0	0	724	1,400	0.26	1,400	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrite was not processed!
E_Shallow	non-Rad	Selenium	7782-49-2	4	4	0	100	µg/kg	0	0	210	560	0.42	560	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Selenium was not processed!
E_Shallow	non-Rad	Silver	7440-22-4	4	4	0	100	µg/kg	0	0	66.7	85.0	0.10	85.0	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Silver was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 23 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
E_Shallow	non-Rad	Strontium	7440-24-6	4	4	0	100	µg/kg	0	0	28,900	34,700	0.080	34,700	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Strontium was not processed!
E_Shallow	non-Rad	Toluene	108-88-3	4	4	0	100	µg/kg	0	0	0.23	0.34	0.18	0.34	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Toluene was not processed!
E_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	4	4	0	100	µg/kg	0	0	570	827	0.18	827	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Total_U_Isotopes was not processed!
E_Shallow	non-Rad	Vanadium	7440-62-2	4	4	0	100	µg/kg	0	0	50,000	58,800	0.068	58,800	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Vanadium was not processed!
E_Shallow	non-Rad	Zinc	7440-66-6	4	4	0	100	µg/kg	0	0	39,800	44,800	0.049	44,800	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Zinc was not processed!
E_Shallow	Rad	Cesium-137	10045-97-3	4	1	3	25	pCi/g	0.41	0.49	5.1	5.1	0	5.1	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cesium-137 was not processed!
E_Shallow	Rad	Selenium-79	15758-45-9	4	4	0	100	pCi/g	0	0	1.6	3.8	0.45	3.8	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Selenium-79 was not processed!
E_Shallow	Rad	Strontium-90	10098-97-2	4	1	3	25	pCi/g	0.22	0.67	2.5	2.5	0	2.5	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Strontium-90 was not processed!
E_Shallow	Rad	Tin-126	15832-50-5	4	4	0	100	pCi/g	0	0	3.8	18.5	0.89	18.5	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin-126 was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 24 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
E_Shallow	Rad	Uranium-233	13968-55-3	4	4	0	100	pCi/g	0	0	1.6	2.0	0.11	2.0	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233 was not processed!
E_Shallow	Rad	Uranium-234	13966-29-5	4	3	1	75	pCi/g	0.12	0.12	0.19	0.45	0.47	0.45	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-234 was not processed!
E_Shallow	Rad	Uranium-235	15117-96-1	4	4	0	100	pCi/g	0	0	0.0083	0.012	0.16	0.012	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-235 was not processed!
E_Shallow	Rad	Uranium-236	13982-70-2	4	1	3	25	pCi/g	0.0010	0.0010	0.0012	0.0012	0	0.0012	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-236 was not processed!
E_Shallow	Rad	Uranium-238	U-238	4	4	0	100	pCi/g	0	0	0.19	0.28	0.18	0.28	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
F+G_Deep	non-Rad	2-(2-ethoxyethoxy) ethanol	111-90-0	1	1	0	100	µg/kg	0	0	230	230	0	230	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable 2-(2-ethoxyethoxy)ethanol was not processed!
F+G_Deep	non-Rad	2-Butanone	78-93-3	11	3	8	27.27	µg/kg	1.6	2.5	2.2	3.2	0.18	3.2	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
F+G_Deep	non-Rad	2-Hexanone	591-78-6	1	1	0	100	µg/kg	0	0	4.2	4.2	0	4.2	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable 2-Hexanone was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 25 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
F+G_Deep	non-Rad	4-Methyl-2-pentanone	108-10-1	11	2	9	18.18	µg/kg	1.1	2.2	2.0	2.0	0.0035	2.0	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
F+G_Deep	non-Rad	Aluminum	7429-90-5	11	11	0	100	µg/kg	0	0	4,800,000	7,350,000	0.13	6,496,369	95% Student's-t UCL	
F+G_Deep	non-Rad	Antimony	7440-36-0	11	2	9	18.18	µg/kg	159	216	186	240	0.18	203	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
F+G_Deep	non-Rad	Arsenic	7440-38-2	11	11	0	100	µg/kg	0	0	1,700	3,990	0.25	2,953	95% Student's-t UCL	
F+G_Deep	non-Rad	Barium	7440-39-3	11	11	0	100	µg/kg	0	0	40,600	101,000	0.24	70,297	95% H-UCL	
F+G_Deep	non-Rad	Beryllium	7440-41-7	11	1	10	9.09	µg/kg	181	853	181	181	0	181	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Beryllium was not processed!
F+G_Deep	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	11	4	7	36.36	µg/kg	568	589	714	2,930	0.68	1,981	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions
F+G_Deep	non-Rad	Cadmium	7440-43-9	11	6	5	54.55	µg/kg	109	118	47.2	89.7	0.25	73.0	95% KM (t) UCL	Warning: There are only 6 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 to draw conclusions
F+G_Deep	non-Rad	Chromium	7440-47-3	11	11	0	100	µg/kg	0	0	9,630	22,100	0.29	16,590	95% Student's-t UCL	
F+G_Deep	non-Rad	Cobalt	7440-48-4	11	11	0	100	µg/kg	0	0	3,900	7,150	0.18	6,043	95% Student's-t UCL	
F+G_Deep	non-Rad	Copper	7440-50-8	11	11	0	100	µg/kg	0	0	6,680	14,600	0.23	10,498	95% Student's-t UCL	
F+G_Deep	non-Rad	Fluoride	16984-48-8	11	11	0	100	µg/kg	0	0	459	2,140	0.48	1,290	95% Student's-t UCL	

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 26 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
F+G_Deep	non-Rad	Hexane	110-54-3	5	5	0	100	µg/kg	0	0	4.8	27.3	0.58	23.2	95% Student's-t UCL	Warning: There are only 5 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
F+G_Deep	non-Rad	Iron	7439-89-6	11	11	0	100	µg/kg	0	0	12,100,000	17,700,000	0.12	15,514,264	95% Student's-t UCL	
F+G_Deep	non-Rad	Lead	7439-92-1	11	6	5	54.55	µg/kg	3,500	5,150	3,160	9,720	0.49	5,353	95% KM (t) UCL	Warning: There are only 6 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 to draw conclusions
F+G_Deep	non-Rad	Lithium	7439-93-2	11	11	0	100	µg/kg	0	0	6,820	10,500	0.14	9,016	95% Student's-t UCL	
F+G_Deep	non-Rad	Manganese	7439-96-5	11	11	0	100	µg/kg	0	0	213,000	386,000	0.19	288,640	95% Approximate Gamma UCL	
F+G_Deep	non-Rad	Methylene chloride	75-09-2	11	4	7	36.36	µg/kg	0.062	0.32	2.0	2.8	0.18	2.2	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
F+G_Deep	non-Rad	Molybdenum	7439-98-7	11	1	10	9.09	µg/kg	3,620	17,100	2,110	2,110	0	2,110	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Molybdenum was not processed!
F+G_Deep	non-Rad	Nickel	7440-02-0	11	11	0	100	µg/kg	0	0	9,860	17,600	0.17	14,594	95% Student's-t UCL	
F+G_Deep	non-Rad	Nitrate	14797-55-8	11	11	0	100	µg/kg	0	0	1,940	192,000	1.9	172,757	97.5% Chebyshev(Mean, Sd)	Recommended UCL Exceeds Maximum Concentration: EPC set to 97.5% Chebyshev(Mean, Sd).
F+G_Deep	non-Rad	Nitrite	14797-65-0	11	10	1	90.91	µg/kg	516	516	302	3,540	0.66	2,203	95% KM (t) UCL	
F+G_Deep	non-Rad	Silver	7440-22-4	11	2	9	18.18	µg/kg	67.2	107	72.2	82.7	0.10	78.0	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
F+G_Deep	non-Rad	Strontium	7440-24-6	11	11	0	100	µg/kg	0	0	22,400	35,800	0.14	31,751	95% Student's-t UCL	

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 27 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
F+G_Deep	non-Rad	Styrene	100-42-5	2	2	0	100	µg/kg	0	0	0.32	0.61	0.44	0.61	Maximum Detect	Warning: This data set only has 2 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Styrene was not processed!
F+G_Deep	non-Rad	Toluene	108-88-3	11	6	5	54.55	µg/kg	0.15	0.23	0.16	0.28	0.18	0.23	95% KM (Percentile Bootstrap) UCL	Warning: There are only 6 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 to draw conclusions
F+G_Deep	non-Rad	Total_U_Isotopes	Total_U_Isotopes	11	11	0	100	µg/kg	0	0	363	557	0.13	491	95% Student's-t UCL	
F+G_Deep	non-Rad	Vanadium	7440-62-2	11	11	0	100	µg/kg	0	0	24,400	43,300	0.16	34,321	95% Student's-t UCL	
F+G_Deep	non-Rad	Zinc	7440-66-6	11	11	0	100	µg/kg	0	0	25,100	32,600	0.078	30,012	95% Student's-t UCL	
F+G_Deep	Rad	Carbon-14	14762-75-5	11	5	6	45.45	pCi/g	3.0	69.4	33.7	269	1.0	117	95% KM (Percentile Bootstrap) UCL	Warning: There are only 5 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 to draw conclusions
F+G_Deep	Rad	Cesium-137	10045-97-3	11	1	10	9.09	pCi/g	0.24	0.43	0.56	0.56	0	0.56	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Cesium-137 was not processed!
F+G_Deep	Rad	Strontium-90	10098-97-2	11	1	10	9.09	pCi/g	0.18	2.0	2.3	2.3	0	2.3	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Strontium-90 was not processed!
F+G_Deep	Rad	Technetium-99	14133-76-7	11	2	9	18.18	pCi/g	5.3	19.7	50.1	54.6	0.061	51.5	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 28 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
F+G_Deep	Rad	Tin-126	15832-50-5	11	2	9	18.18	pCi/g	2.5	9.5	28.4	32.7	0.10	29.7	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
F+G_Deep	Rad	Tritium	10028-17-8	11	1	10	9.09	pCi/g	2.4	434	306	306	0	306	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Tritium was not processed!
F+G_Deep	Rad	Uranium-233	13968-55-3	11	11	0	100	pCi/g	0	0	0.73	2.1	0.35	1.4	95% Student's-t UCL	
F+G_Deep	Rad	Uranium-234	13966-29-5	11	3	8	27.27	pCi/g	0.11	0.13	0.13	0.26	0.36	0.26	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
F+G_Deep	Rad	Uranium-235	15117-96-1	11	11	0	100	pCi/g	0	0	0.0052	0.0081	0.14	0.0071	95% Student's-t UCL	
F+G_Deep	Rad	Uranium-236	13982-70-2	11	1	10	9.09	pCi/g	0.00087	0.0011	0.0012	0.0012	0	0.0012	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Uranium-236 was not processed!
F+G_Deep	Rad	Uranium-238	U-238	11	11	0	100	pCi/g	0	0	0.12	0.19	0.13	0.16	95% Student's-t UCL	
F+G_Shallow	non-Rad	2-Butanone	78-93-3	8	2	6	25	µg/kg	1.3	3.9	2.5	2.5	0.0085	2.5	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
F+G_Shallow	non-Rad	Aluminum	7429-90-5	8	8	0	100	µg/kg	0	0	4,480,000	7,440,000	0.16	6,760,835	95% Student's-t UCL	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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 29 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
F+G_Shallow	non-Rad	Antimony	7440-36-0	8	4	4	50	µg/kg	162	200	120	262	0.32	247	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions
F+G_Shallow	non-Rad	Aroclor-1260	11096-82-5	8	1	7	12.5	µg/kg	6.4	19.6	20.6	20.6	0	20.6	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Aroclor-1260 was not processed!
F+G_Shallow	non-Rad	Arsenic	7440-38-2	8	8	0	100	µg/kg	0	0	1,920	4,300	0.29	3,488	95% Student's-t UCL	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
F+G_Shallow	non-Rad	Barium	7440-39-3	8	8	0	100	µg/kg	0	0	40,600	129,000	0.33	94,105	95% Student's-t UCL	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
F+G_Shallow	non-Rad	Beryllium	7440-41-7	8	3	5	37.5	µg/kg	185	864	185	298	0.26	298	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
F+G_Shallow	non-Rad	beta-1,2,3,4,5,6-Hexachlorocyclohexane (beta-BHC)	319-85-7	5	4	1	80	µg/kg	0.31	0.31	21.3	25.3	0.080	25.2	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions
F+G_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	8	4	4	50	µg/kg	538	579	667	7,420	0.93	4,033	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 30 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
F+G_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	8	2	6	25	µg/kg	45.6	49.4	48.8	72.6	0.28	59.2	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
F+G_Shallow	non-Rad	Cadmium	7440-43-9	8	6	2	75	µg/kg	111	117	73.3	143	0.27	117	95% KM (t) UCL	Warning: There are only 6 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 to draw conclusions
F+G_Shallow	non-Rad	Chromium	7440-47-3	8	8	0	100	µg/kg	0	0	4,740	9,720	0.23	8,977	95% Student's-t UCL	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
F+G_Shallow	non-Rad	Cobalt	7440-48-4	8	8	0	100	µg/kg	0	0	5,360	8,760	0.18	8,183	95% Student's-t UCL	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
F+G_Shallow	non-Rad	Copper	7440-50-8	8	8	0	100	µg/kg	0	0	10,100	15,600	0.15	13,030	95% Student's-t UCL	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
F+G_Shallow	non-Rad	Fluoride	16984-48-8	8	8	0	100	µg/kg	0	0	695	3,290	0.57	2,112	95% Approximate Gamma UCL	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
F+G_Shallow	non-Rad	Gamma-BHC (Lindane)	58-89-9	2	1	1	50	µg/kg	0.17	0.17	5.1	5.1	0	5.1	Maximum Detect	Warning: This data set only has 2 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Gamma-BHC (Lindane) was not processed!
F+G_Shallow	non-Rad	Hexane	110-54-3	4	4	0	100	µg/kg	0	0	2.1	35.9	1.4	35.9	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Hexane was not processed!
F+G_Shallow	non-Rad	Iron	7439-89-6	8	8	0	100	µg/kg	0	0	15,200,000	25,900,000	0.20	23,947,828	95% Student's-t UCL	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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 31 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
F+G_Shallow	non-Rad	Lead	7439-92-1	8	6	2	75	µg/kg	4,380	5,230	3,370	8,480	0.37	6,159	95% KM (t) UCL	Warning: There are only 6 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 to draw conclusions
F+G_Shallow	non-Rad	Lithium	7439-93-2	8	8	0	100	µg/kg	0	0	3,350	7,910	0.26	7,427	95% Student's-t UCL	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
F+G_Shallow	non-Rad	Manganese	7439-96-5	8	8	0	100	µg/kg	0	0	229,000	500,000	0.26	386,286	95% Student's-t UCL	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
F+G_Shallow	non-Rad	Mercury	7439-97-6	8	1	7	12.5	µg/kg	9.0	28.9	30.4	30.4	0	30.4	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Mercury was not processed!
F+G_Shallow	non-Rad	Methylene chloride	75-09-2	8	3	5	37.5	µg/kg	0.053	0.86	2.0	2.0	0	2.0	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Methylene chloride was not processed!
F+G_Shallow	non-Rad	Nickel	7440-02-0	8	8	0	100	µg/kg	0	0	6,400	12,400	0.22	11,253	95% Student's-t UCL	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
F+G_Shallow	non-Rad	Nitrate	14797-55-8	8	8	0	100	µg/kg	0	0	3,250	11,400	0.47	7,154	95% Modified-t UCL	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
F+G_Shallow	non-Rad	Nitrite	14797-65-0	8	8	0	100	µg/kg	0	0	1,180	4,080	0.42	3,059	95% Student's-t UCL	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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 32 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
F+G_Shallow	non-Rad	o-Xylene	95-47-6	8	1	7	12.5	µg/kg	0.076	0.29	0.13	0.13	0	0.13	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable o-Xylene was not processed!
F+G_Shallow	non-Rad	Silver	7440-22-4	8	2	6	25	µg/kg	84.2	136	70.7	81.8	0.10	81.8	Maximum Detect	Recommended UCL Exceeds Maximum Concentration: EPC defaulting to Maximum Concentration since 97.5% and 99% Chebyshev(Mean, Sd) UCLs were not calculated.
F+G_Shallow	non-Rad	Strontium	7440-24-6	8	8	0	100	µg/kg	0	0	21,700	49,700	0.29	36,178	95% Student's-t UCL	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
F+G_Shallow	non-Rad	Styrene	100-42-5	4	4	0	100	µg/kg	0	0	0.25	0.65	0.53	0.65	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Styrene was not processed!
F+G_Shallow	non-Rad	Tin	7440-31-5	1	1	0	100	µg/kg	0	0	6,360	6,360	0	6,360	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin was not processed!
F+G_Shallow	non-Rad	Toluene	108-88-3	8	3	5	37.5	µg/kg	0.12	0.36	0.24	1.0	0.87	1.0	95% KM (% Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
F+G_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	8	8	0	100	µg/kg	0	0	396	1,019	0.39	715	95% Modified-t UCL	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
F+G_Shallow	non-Rad	Vanadium	7440-62-2	8	8	0	100	µg/kg	0	0	31,600	78,500	0.33	69,739	95% Student's-t UCL	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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 33 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
F+G_Shallow	non-Rad	Xylenes (total)	1330-20-7	8	1	7	12.5	µg/kg	0.17	0.91	0.46	0.46	0	0.46	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Xylenes (total) was not processed!
F+G_Shallow	non-Rad	Zinc	7440-66-6	8	8	0	100	µg/kg	0	0	28,500	43,100	0.12	38,336	95% Student's-t UCL	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
F+G_Shallow	Rad	Carbon-14	14762-75-5	8	3	5	37.5	pCi/g	2.7	52.5	3.5	12.5	0.63	12.5	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
F+G_Shallow	Rad	Cesium-137	10045-97-3	8	2	6	25	pCi/g	0.31	0.40	2.1	4.8	0.56	3.2	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
F+G_Shallow	Rad	Selenium-79	15758-45-9	8	1	7	12.5	pCi/g	1.3	2.8	2.4	2.4	0	2.4	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Selenium-79 was not processed!
F+G_Shallow	Rad	Strontium-90	10098-97-2	8	2	6	25	pCi/g	0.23	4.1	0.30	0.30	0.012	0.30	95% KM (% Bootstrap) UCL	Warning: Recommended UCL exceeds the maximum observation Note: DL/2 is not a recommended method. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 34 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
F+G_Shallow	Rad	Tin-126	15832-50-5	8	1	7	12.5	pCi/g	2.4	9.7	2.6	2.6	0	2.6	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Tin-126 was not processed!
F+G_Shallow	Rad	Uranium-233	13968-55-3	8	8	0	100	pCi/g	0	0	0.62	2.2	0.45	1.5	95% Student's-t UCL	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
F+G_Shallow	Rad	Uranium-234	13966-29-5	8	5	3	62.5	pCi/g	0.11	0.12	0.18	0.42	0.38	0.30	95% KM (Percentile Bootstrap) UCL	Warning: There are only 5 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 to draw conclusions
F+G_Shallow	Rad	Uranium-235	15117-96-1	8	8	0	100	pCi/g	0	0	0.0058	0.015	0.39	0.010	95% Modified-t UCL	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
F+G_Shallow	Rad	Uranium-236	13982-70-2	8	2	6	25	pCi/g	0.00089	0.0010	0.0013	0.0013	0.0055	0.0013	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
F+G_Shallow	Rad	Uranium-238	U-238	8	8	0	100	pCi/g	0	0	0.13	0.34	0.39	0.24	95% Modified-t UCL	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
H+I_Deep	non-Rad	Aluminum	7429-90-5	9	9	0	100	µg/kg	0	0	5,390,000	7,900,000	0.13	7,142,384	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Amylene Hydrate	75-85-4	1	1	0	100	µg/kg	0	0	220	220	0	220	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Amylene Hydrate was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 35 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
H+I_Deep	non-Rad	Antimony	7440-36-0	9	9	0	100	µg/kg	0	0	115	189	0.19	164	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Arsenic	7440-38-2	9	9	0	100	µg/kg	0	0	2,550	4,520	0.20	3,779	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Barium	7440-39-3	9	9	0	100	µg/kg	0	0	57,000	87,200	0.17	76,793	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Beryllium	7440-41-7	9	9	0	100	µg/kg	0	0	112	215	0.17	188	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	9	2	7	22.22	µg/kg	583	590	1,010	5,620	1.0	5,620	95% KM (BCA) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
H+I_Deep	non-Rad	Cadmium	7440-43-9	9	8	1	88.89	µg/kg	100	100	58.2	137	0.36	126	95% KM (Chebyshev) UCL	Warning: There are only 8 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 to draw conclusions
H+I_Deep	non-Rad	Chromium	7440-47-3	9	9	0	100	µg/kg	0	0	11,000	28,700	0.33	22,486	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Cobalt	7440-48-4	9	9	0	100	µg/kg	0	0	4,500	10,600	0.28	7,976	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Copper	7440-50-8	9	9	0	100	µg/kg	0	0	9,040	12,300	0.11	11,088	95% Student's-t UCL	Warning: There are only 9 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

**Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 36 of 89)**

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
H+I_Deep	non-Rad	Fluoride	16984-48-8	9	9	0	100	µg/kg	0	0	566	1,860	0.46	1,298	95% H-UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Iron	7439-89-6	9	9	0	100	µg/kg	0	0	14,100,000	24,900,000	0.19	19,304,414	95% Approximate Gamma UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Lead	7439-92-1	9	9	0	100	µg/kg	0	0	3,620	10,300	0.46	7,012	95% Modified-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Lithium	7439-93-2	9	9	0	100	µg/kg	0	0	6,940	10,500	0.14	9,178	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Manganese	7439-96-5	9	9	0	100	µg/kg	0	0	250,000	409,000	0.17	339,652	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Nickel	7440-02-0	9	9	0	100	µg/kg	0	0	8,650	18,200	0.21	16,936	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Nitrate	14797-55-8	9	9	0	100	µg/kg	0	0	5,850	19,200	0.49	13,776	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Nitrite	14797-65-0	9	8	1	88.89	µg/kg	190	190	276	1,240	0.40	856	95% KM (t) UCL	Warning: There are only 8 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 to draw conclusions
H+I_Deep	non-Rad	Selenium	7782-49-2	9	9	0	100	µg/kg	0	0	345	1,000	0.42	878	95% Modified-t UCL	Warning: There are only 9 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 37 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
H+I_Deep	non-Rad	Silver	7440-22-4	9	5	4	55.56	µg/kg	80.0	100	44.3	56.6	0.11	53.6	95% KM (t) UCL	Warning: There are only 5 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 to draw conclusions
H+I_Deep	non-Rad	Strontium	7440-24-6	9	9	0	100	µg/kg	0	0	24,900	37,700	0.12	34,808	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Styrene	100-42-5	6	5	1	83.33	µg/kg	0.33	0.33	0.30	0.42	0.12	0.38	95% KM (t) UCL	Warning: There are only 5 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 to draw conclusions
H+I_Deep	non-Rad	Tetrahydrofuran	109-99-9	1	1	0	100	µg/kg	0	0	27.4	27.4	0	27.4	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tetrahydrofuran was not processed!
H+I_Deep	non-Rad	Toluene	108-88-3	9	7	2	77.78	µg/kg	0.43	0.48	0.27	0.50	0.21	0.43	95% KM (t) UCL	Warning: There are only 7 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 to draw conclusions
H+I_Deep	non-Rad	Total_U_Isotopes	Total_U_Isotopes	9	9	0	100	µg/kg	0	0	417	989	0.32	673	95% Modified-t UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Vanadium	7440-62-2	9	9	0	100	µg/kg	0	0	25,600	71,200	0.38	46,027	95% Approximate Gamma UCL	Warning: There are only 9 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
H+I_Deep	non-Rad	Zinc	7440-66-6	9	9	0	100	µg/kg	0	0	29,800	42,000	0.12	36,619	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	Rad	Selenium-79	15758-45-9	9	2	7	22.22	pCi/g	1.7	5.1	2.2	6.2	0.67	3.7	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 38 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
H+I_Deep	Rad	Tin-126	15832-50-5	9	9	0	100	pCi/g	0	0	3.2	8.3	0.29	6.1	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	Rad	Tritium	10028-17-8	9	2	7	22.22	pCi/g	3.8	102	2.7	89.2	1.3	89.2	Maximum Detect	Recommended UCL Exceeds Maximum Concentration: EPC defaulting to Maximum Concentration since 97.5% and 99% Chebyshev(Mean, Sd) UCLs were not calculated.
H+I_Deep	Rad	Uranium-233	13968-55-3	9	9	0	100	pCi/g	0	0	0.87	2.2	0.28	1.9	95% Student's-t UCL	Warning: There are only 9 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
H+I_Deep	Rad	Uranium-234	13966-29-5	9	7	2	77.78	pCi/g	0.12	0.12	0.12	0.56	0.50	0.36	95% KM (t) UCL	Warning: There are only 7 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 to draw conclusions
H+I_Deep	Rad	Uranium-235	15117-96-1	9	9	0	100	pCi/g	0	0	0.0067	0.014	0.28	0.010	95% Modified-t UCL	Warning: There are only 9 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
H+I_Deep	Rad	Uranium-236	13982-70-2	9	3	6	33.33	pCi/g	0.0010	0.0010	0.0013	0.0014	0.050	0.0014	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
H+I_Deep	Rad	Uranium-238	U-238	9	9	0	100	pCi/g	0	0	0.14	0.33	0.32	0.22	95% Modified-t UCL	Warning: There are only 9 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
H+I_Shallow	non-Rad	Aluminum	7429-90-5	8	8	0	100	µg/kg	0	0	4,590,000	7,730,000	0.16	7,005,174	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Amylene Hydrate	75-85-4	4	4	0	100	µg/kg	0	0	210	260	0.089	260	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Amylene Hydrate was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 39 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
H+I_Shallow	non-Rad	Antimony	7440-36-0	8	8	0	100	µg/kg	0	0	77.9	420	0.63	256	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Arsenic	7440-38-2	8	8	0	100	µg/kg	0	0	2,000	7,000	0.41	5,020	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Barium	7440-39-3	8	8	0	100	µg/kg	0	0	71,000	103,000	0.12	90,474	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Beryllium	7440-41-7	8	7	1	87.5	µg/kg	100	100	136	212	0.15	199	95% KM (t) UCL	Warning: There are only 7 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 to draw conclusions
H+I_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	8	1	7	12.5	µg/kg	48.1	50.0	200	200	0	200	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Butylbenzylphthalate was not processed!
H+I_Shallow	non-Rad	Cadmium	7440-43-9	8	8	0	100	µg/kg	0	0	66.1	196	0.40	137	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Chromium	7440-47-3	8	8	0	100	µg/kg	0	0	5,340	26,800	0.59	16,797	95% Approximate Gamma UCL	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
H+I_Shallow	non-Rad	Cobalt	7440-48-4	8	8	0	100	µg/kg	0	0	6,680	11,300	0.18	10,181	95% Student's-t UCL	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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 40 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
H+I_Shallow	non-Rad	Copper	7440-50-8	8	8	0	100	µg/kg	0	0	9,970	13,500	0.085	12,194	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Di-n-butylphthalate	84-74-2	8	1	7	12.5	µg/kg	558	562	570	570	0	570	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Di-n-butylphthalate was not processed!
H+I_Shallow	non-Rad	Fluoride	16984-48-8	8	8	0	100	µg/kg	0	0	372	2,100	0.40	1,657	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Iron	7439-89-6	8	8	0	100	µg/kg	0	0	14,300,000	31,200,000	0.24	26,088,701	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Lead	7439-92-1	8	8	0	100	µg/kg	0	0	2,460	11,300	0.45	7,819	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Lithium	7439-93-2	8	8	0	100	µg/kg	0	0	3,560	8,010	0.21	7,563	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Manganese	7439-96-5	8	8	0	100	µg/kg	0	0	270,000	465,000	0.17	408,047	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Molybdenum	7439-98-7	8	2	6	25	µg/kg	1,650	2,000	1,980	2,000	0.0071	2,000	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 41 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
H+I_Shallow	non-Rad	Nickel	7440-02-0	8	8	0	100	µg/kg	0	0	6,610	18,300	0.33	13,083	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Nitrate	14797-55-8	8	8	0	100	µg/kg	0	0	2,750	54,600	1.0	32,443	95% Approximate Gamma UCL	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
H+I_Shallow	non-Rad	Nitrite	14797-65-0	8	7	1	87.5	µg/kg	192	192	232	1,850	0.53	1,299	95% KM (t) UCL	Warning: There are only 7 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 to draw conclusions
H+I_Shallow	non-Rad	Selenium	7782-49-2	8	8	0	100	µg/kg	0	0	523	1,000	0.26	983	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Silver	7440-22-4	8	4	4	50	µg/kg	100	100	59.1	66.7	0.050	65.5	95% KM (t) UCL	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 to draw conclusions
H+I_Shallow	non-Rad	Strontium	7440-24-6	8	8	0	100	µg/kg	0	0	20,200	37,700	0.22	33,393	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Styrene	100-42-5	8	7	1	87.5	µg/kg	0.32	0.32	0.27	0.46	0.19	0.39	95% KM (t) UCL	Warning: There are only 7 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 to draw conclusions
H+I_Shallow	non-Rad	Toluene	108-88-3	8	7	1	87.5	µg/kg	0.52	0.52	0.27	1.1	0.57	0.62	95% KM (BCA) UCL	Warning: There are only 7 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 to draw conclusions
H+I_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	8	8	0	100	µg/kg	0	0	471	578	0.084	545	95% Student's-t UCL	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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 42 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
H+I_Shallow	non-Rad	Vanadium	7440-62-2	8	8	0	100	µg/kg	0	0	24,500	82,600	0.38	66,149	95% Student's-t UCL	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
H+I_Shallow	non-Rad	Zinc	7440-66-6	8	8	0	100	µg/kg	0	0	29,500	53,000	0.17	44,785	95% Student's-t UCL	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
H+I_Shallow	Rad	Carbon-14	14762-75-5	8	1	7	12.5	pCi/g	1.3	2.5	3.5	3.5	0	3.5	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Carbon-14 was not processed!
H+I_Shallow	Rad	Selenium-79	15758-45-9	8	2	6	25	pCi/g	1.4	3.0	2.2	2.7	0.12	2.7	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
H+I_Shallow	Rad	Tin-126	15832-50-5	8	7	1	87.5	pCi/g	2.4	2.4	3.4	9.8	0.36	7.7	95% KM (t) UCL	Warning: There are only 7 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 to draw conclusions
H+I_Shallow	Rad	Tritium	10028-17-8	8	4	4	50	pCi/g	4.0	63.7	2.9	75.8	1.7	75.8	Maximum Detect	Recommended UCL Exceeds Maximum Concentration: EPC defaulting to Maximum Concentration since 97.5% and 99% Chebyshev(Mean, Sd) UCLs were not calculated.
H+I_Shallow	Rad	Uranium-233	13968-55-3	8	8	0	100	pCi/g	0	0	0.58	2.0	0.32	1.6	95% Student's-t UCL	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
H+I_Shallow	Rad	Uranium-234	13966-29-5	8	3	5	37.5	pCi/g	0.12	0.12	0.26	0.35	0.14	0.35	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 43 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
H+I_Shallow	Rad	Uranium-235	15117-96-1	8	8	0	100	pCi/g	0	0	0.0064	0.0081	0.077	0.0078	95% Student's-t UCL	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
H+I_Shallow	Rad	Uranium-236	13982-70-2	8	3	5	37.5	pCi/g	0.0010	0.0010	0.0014	0.0021	0.22	0.0021	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
H+I_Shallow	Rad	Uranium-238	U-238	8	8	0	100	pCi/g	0	0	0.16	0.19	0.084	0.18	95% Student's-t UCL	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
J_Deep	non-Rad	Aluminum	7429-90-5	6	6	0	100	µg/kg	0	0	5,740,000	6,920,000	0.067	6,742,486	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Antimony	7440-36-0	6	6	0	100	µg/kg	0	0	121	241	0.26	196	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Arsenic	7440-38-2	6	6	0	100	µg/kg	0	0	2,160	3,850	0.21	3,765	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Barium	7440-39-3	6	6	0	100	µg/kg	0	0	55,400	70,000	0.086	67,361	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Beryllium	7440-41-7	6	6	0	100	µg/kg	0	0	114	164	0.14	158	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Boron	7440-42-8	5	5	0	100	µg/kg	0	0	2,740	4,580	0.23	4,043	95% Student's-t UCL	Warning: There are only 5 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 44 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
J_Deep	non-Rad	Butylbenzylphthalate	85-68-7	6	2	4	33.33	µg/kg	46.6	49.9	80.8	85.5	0.040	85.5	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
J_Deep	non-Rad	Cadmium	7440-43-9	6	6	0	100	µg/kg	0	0	59.2	95.9	0.18	83.1	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Chromium	7440-47-3	6	6	0	100	µg/kg	0	0	8,840	27,400	0.42	20,409	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Cobalt	7440-48-4	6	6	0	100	µg/kg	0	0	4,500	5,990	0.10	5,959	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Copper	7440-50-8	6	6	0	100	µg/kg	0	0	8,780	13,700	0.18	11,829	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Dimethyl Formamide	68-12-2	1	1	0	100	µg/kg	0	0	1,000	1,000	0	1,000	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Dimethyl Formamide was not processed!
J_Deep	non-Rad	Fluoride	16984-48-8	6	6	0	100	µg/kg	0	0	521	1,880	0.42	1,575	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Iron	7439-89-6	6	6	0	100	µg/kg	0	0	14,600,000	19,200,000	0.11	17,917,564	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Lead	7439-92-1	6	6	0	100	µg/kg	0	0	2,550	4,800	0.23	4,374	95% Student's-t UCL	Warning: There are only 6 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 45 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
J_Deep	non-Rad	Lithium	7439-93-2	6	6	0	100	µg/kg	0	0	6,990	10,300	0.17	9,325	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Manganese	7439-96-5	6	6	0	100	µg/kg	0	0	231,000	321,000	0.13	297,836	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Molybdenum	7439-98-7	6	1	5	16.67	µg/kg	989	1,890	3,580	3,580	0	3,580	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Molybdenum was not processed!
J_Deep	non-Rad	Nickel	7440-02-0	6	6	0	100	µg/kg	0	0	9,180	16,500	0.23	14,200	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Nitrate	14797-55-8	6	6	0	100	µg/kg	0	0	4,560	18,800	0.60	15,226	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Nitrite	14797-65-0	6	5	1	83.33	µg/kg	2,500	2,500	394	2,650	0.61	2,175	95% KM (t) UCL	Warning: There are only 5 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 to draw conclusions
J_Deep	non-Rad	Silver	7440-22-4	6	6	0	100	µg/kg	0	0	45.1	50.8	0.046	50.3	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Strontium	7440-24-6	6	6	0	100	µg/kg	0	0	26,100	32,700	0.10	30,897	95% Student's-t UCL	Warning: There are only 6 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 46 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
J_Deep	non-Rad	Tetrahydrofuran	109-99-9	1	1	0	100	µg/kg	0	0	1,400	1,400	0	1,400	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tetrahydrofuran was not processed!
J_Deep	non-Rad	Tin	7440-31-5	4	4	0	100	µg/kg	0	0	2,020	5,490	0.37	5,490	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin was not processed!
J_Deep	non-Rad	Toluene	108-88-3	1	1	0	100	µg/kg	0	0	220	220	0	220	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Toluene was not processed!
J_Deep	non-Rad	Total_U_Isotopes	Total_U_Isotopes	6	6	0	100	µg/kg	0	0	438	626	0.15	573	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Vanadium	7440-62-2	6	6	0	100	µg/kg	0	0	30,200	46,600	0.19	42,751	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	non-Rad	Zinc	7440-66-6	6	6	0	100	µg/kg	0	0	31,500	38,300	0.078	35,535	95% Modified-t UCL	Warning: There are only 6 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
J_Deep	Rad	Americium-241	14596-10-2	6	1	5	16.67	pCi/g	0.032	0.048	0.049	0.049	0	0.049	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Americium-241 was not processed!
J_Deep	Rad	Carbon-14	14762-75-5	6	1	5	16.67	pCi/g	2.7	2.9	2.7	2.7	0	2.7	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Carbon-14 was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 47 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
J_Deep	Rad	Plutonium-239/240	PU-239/240	6	1	5	16.67	pCi/g	0.023	0.042	0.044	0.044	0	0.044	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Plutonium-239/240 was not processed!
J_Deep	Rad	Plutonium-241	14119-32-5	6	1	5	16.67	pCi/g	0.084	0.16	0.16	0.16	0	0.16	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Plutonium-241 was not processed!
J_Deep	Rad	Selenium-79	15758-45-9	6	6	0	100	pCi/g	0	0	6.1	14.0	0.37	12.3	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	Rad	Tin-126	15832-50-5	6	4	2	66.67	pCi/g	12.1	12.1	4.6	8.7	0.34	7.4	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions
J_Deep	Rad	Uranium-235	15117-96-1	6	6	0	100	pCi/g	0	0	0.0064	0.0093	0.15	0.0087	95% Student's-t UCL	Warning: There are only 6 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
J_Deep	Rad	Uranium-238	U-238	6	6	0	100	pCi/g	0	0	0.15	0.21	0.15	0.19	95% Student's-t UCL	Warning: There are only 6 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
J_Shallow	non-Rad	Aluminum	7429-90-5	3	3	0	100	µg/kg	0	0	6,890,000	7,740,000	0.068	7,740,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Aluminum was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 48 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
J_Shallow	non-Rad	Antimony	7440-36-0	3	3	0	100	µg/kg	0	0	219	2,160	1.3	2,160	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Antimony was not processed!
J_Shallow	non-Rad	Arsenic	7440-38-2	3	3	0	100	µg/kg	0	0	3,270	7,890	0.42	7,890	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
J_Shallow	non-Rad	Barium	7440-39-3	3	3	0	100	µg/kg	0	0	77,800	244,000	0.71	244,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Barium was not processed!
J_Shallow	non-Rad	Beryllium	7440-41-7	3	3	0	100	µg/kg	0	0	134	328	0.51	328	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Beryllium was not processed!
J_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	3	1	2	33.33	µg/kg	579	585	2,070	2,070	0	2,070	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Bis(2-ethylhexyl) phthalate was not processed!
J_Shallow	non-Rad	Boron	7440-42-8	3	3	0	100	µg/kg	0	0	5,610	43,900	1.2	43,900	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Boron was not processed!
J_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	3	1	2	33.33	µg/kg	49.0	49.5	77.8	77.8	0	77.8	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Butylbenzylphthalate was not processed!
J_Shallow	non-Rad	Cadmium	7440-43-9	3	3	0	100	µg/kg	0	0	84.0	113	0.15	113	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cadmium was not processed!
J_Shallow	non-Rad	Chromium	7440-47-3	3	3	0	100	µg/kg	0	0	9,580	11,600	0.10	11,600	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 49 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
J_Shallow	non-Rad	Cobalt	7440-48-4	3	3	0	100	µg/kg	0	0	6,340	8,270	0.14	8,270	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cobalt was not processed!
J_Shallow	non-Rad	Copper	7440-50-8	3	3	0	100	µg/kg	0	0	12,100	13,800	0.075	13,800	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Copper was not processed!
J_Shallow	non-Rad	Fluoride	16984-48-8	3	3	0	100	µg/kg	0	0	502	1,530	0.50	1,530	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Fluoride was not processed!
J_Shallow	non-Rad	Iron	7439-89-6	3	3	0	100	µg/kg	0	0	18,700,000	24,100,000	0.13	24,100,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Iron was not processed!
J_Shallow	non-Rad	Lead	7439-92-1	3	3	0	100	µg/kg	0	0	4,900	5,290	0.040	5,290	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!
J_Shallow	non-Rad	Lithium	7439-93-2	3	3	0	100	µg/kg	0	0	7,300	8,680	0.10	8,680	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lithium was not processed!
J_Shallow	non-Rad	Manganese	7439-96-5	3	3	0	100	µg/kg	0	0	287,000	383,000	0.14	383,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Manganese was not processed!
J_Shallow	non-Rad	Mercury	7439-97-6	3	2	1	66.67	µg/kg	9.1	9.1	11.5	16.2	0.24	16.2	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Mercury was not processed!
J_Shallow	non-Rad	Nickel	7440-02-0	3	3	0	100	µg/kg	0	0	10,200	13,700	0.16	13,700	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nickel was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 50 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
J_Shallow	non-Rad	Nitrate	14797-55-8	3	3	0	100	µg/kg	0	0	3,240	9,230	0.47	9,230	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrate was not processed!
J_Shallow	non-Rad	Nitrite	14797-65-0	3	3	0	100	µg/kg	0	0	1,220	2,500	0.38	2,500	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrite was not processed!
J_Shallow	non-Rad	Silver	7440-22-4	3	3	0	100	µg/kg	0	0	57.7	62.4	0.041	62.4	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Silver was not processed!
J_Shallow	non-Rad	Strontium	7440-24-6	3	3	0	100	µg/kg	0	0	33,100	125,000	0.83	125,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Strontium was not processed!
J_Shallow	non-Rad	Tin	7440-31-5	2	2	0	100	µg/kg	0	0	3,030	3,600	0.12	3,600	Maximum Detect	Warning: This data set only has 2 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin was not processed!
J_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	3	3	0	100	µg/kg	0	0	572	650	0.071	650	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Total_U_Isotopes was not processed!
J_Shallow	non-Rad	Vanadium	7440-62-2	3	3	0	100	µg/kg	0	0	41,900	54,300	0.13	54,300	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Vanadium was not processed!
J_Shallow	non-Rad	Zinc	7440-66-6	3	3	0	100	µg/kg	0	0	34,300	52,300	0.21	52,300	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Zinc was not processed!
J_Shallow	Rad	Carbon-14	14762-75-5	3	1	2	33.33	pCi/g	3.1	3.4	13.7	13.7	0	13.7	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Carbon-14 was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 51 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
J_Shallow	Rad	Cesium-137	10045-97-3	3	1	2	33.33	pCi/g	0.075	0.076	5.7	5.7	0	5.7	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cesium-137 was not processed!
J_Shallow	Rad	Plutonium-238	13981-16-3	3	1	2	33.33	pCi/g	0.030	0.038	0.067	0.067	0	0.067	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Plutonium-238 was not processed!
J_Shallow	Rad	Plutonium-239/240	PU-239/240	3	1	2	33.33	pCi/g	0.032	0.040	0.038	0.038	0	0.038	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Plutonium-239/240 was not processed!
J_Shallow	Rad	Plutonium-241	14119-32-5	3	1	2	33.33	pCi/g	0.12	0.15	0.14	0.14	0	0.14	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Plutonium-241 was not processed!
J_Shallow	Rad	Selenium-79	15758-45-9	3	3	0	100	pCi/g	0	0	3.8	11.3	0.59	11.3	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Selenium-79 was not processed!
J_Shallow	Rad	Strontium-90	10098-97-2	3	1	2	33.33	pCi/g	0.69	0.75	4.0	4.0	0	4.0	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Strontium-90 was not processed!
J_Shallow	Rad	Uranium-235	15117-96-1	3	3	0	100	pCi/g	0	0	0.0083	0.010	0.077	0.010	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-235 was not processed!
J_Shallow	Rad	Uranium-238	U-238	3	3	0	100	pCi/g	0	0	0.19	0.22	0.071	0.22	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
L1+L2_Deep	non-Rad	Acetone	67-64-1	9	5	4	55.56	µg/kg	2.0	3.5	3.1	72.5	1.2	30.0	95% KM (Percentile Bootstrap) UCL	Warning: There are only 5 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 to draw conclusions

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 52 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
L1+L2_Deep	non-Rad	Aluminum	7429-90-5	9	9	0	100	µg/kg	0	0	4,560,000	8,530,000	0.23	7,362,560	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Antimony	7440-36-0	9	5	4	55.56	µg/kg	151	161	122	247	0.26	194	95% KM (Percentile Bootstrap) UCL	Warning: There are only 5 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 to draw conclusions
L1+L2_Deep	non-Rad	Arsenic	7440-38-2	9	9	0	100	µg/kg	0	0	1,700	3,260	0.18	2,869	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Barium	7440-39-3	9	9	0	100	µg/kg	0	0	47,400	78,400	0.17	67,403	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Benzene	71-43-2	9	1	8	11.11	µg/kg	0.13	0.36	0.40	0.40	0	0.40	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Benzene was not processed!
L1+L2_Deep	non-Rad	Beryllium	7440-41-7	9	7	2	77.78	µg/kg	100	172	135	212	0.16	188	95% KM (Percentile Bootstrap) UCL	Warning: There are only 7 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 to draw conclusions
L1+L2_Deep	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	9	2	7	22.22	µg/kg	534	587	1,260	1,360	0.054	1,360	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
L1+L2_Deep	non-Rad	Cadmium	7440-43-9	9	9	0	100	µg/kg	0	0	37.7	68.5	0.16	62.8	95% Student's-t UCL	Warning: There are only 9 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

**Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 53 of 89)**

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
L1+L2_Deep	non-Rad	Chromium	7440-47-3	9	9	0	100	µg/kg	0	0	9,610	32,200	0.38	22,344	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Cobalt	7440-48-4	9	9	0	100	µg/kg	0	0	4,590	8,840	0.22	7,234	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Copper	7440-50-8	9	9	0	100	µg/kg	0	0	7,370	27,100	0.54	15,496	95% Modified-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Fluoride	16984-48-8	9	9	0	100	µg/kg	0	0	780	2,380	0.36	1,676	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Hexane	110-54-3	5	5	0	100	µg/kg	0	0	1.6	15.4	0.69	12.3	95% Student's-t UCL	Warning: There are only 5 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
L1+L2_Deep	non-Rad	Iron	7439-89-6	9	9	0	100	µg/kg	0	0	13,100,000	23,300,000	0.22	18,942,193	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Lead	7439-92-1	9	9	0	100	µg/kg	0	0	2,580	13,800	0.62	7,623	95% H-UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Lithium	7439-93-2	9	9	0	100	µg/kg	0	0	5,840	9,590	0.14	9,391	95% Approximate Gamma UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Manganese	7439-96-5	9	9	0	100	µg/kg	0	0	205,000	353,000	0.18	302,503	95% Student's-t UCL	Warning: There are only 9 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 54 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
L1+L2_Deep	non-Rad	Mercury	7439-97-6	9	1	8	11.11	µg/kg	8.0	41.2	68.1	68.1	0	68.1	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Mercury was not processed!
L1+L2_Deep	non-Rad	Molybdenum	7439-98-7	9	1	8	11.11	µg/kg	1,990	3,660	5,120	5,120	0	5,120	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Molybdenum was not processed!
L1+L2_Deep	non-Rad	Nickel	7440-02-0	9	9	0	100	µg/kg	0	0	8,920	20,200	0.25	14,877	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Nitrate	14797-55-8	9	9	0	100	µg/kg	0	0	4,980	90,300	1.0	69,814	95% Approximate Gamma UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Nitrite	14797-65-0	9	7	2	77.78	µg/kg	1,410	2,950	982	4,710	0.57	3,304	95% KM (t) UCL	Warning: There are only 7 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 to draw conclusions
L1+L2_Deep	non-Rad	Silver	7440-22-4	9	9	0	100	µg/kg	0	0	33.7	62.4	0.19	57.2	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Strontium	7440-24-6	9	9	0	100	µg/kg	0	0	21,900	46,100	0.23	35,432	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Styrene	100-42-5	2	2	0	100	µg/kg	0	0	0.44	0.51	0.094	0.51	Maximum Detect	Warning: This data set only has 2 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Styrene was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 55 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
L1+L2_Deep	non-Rad	Toluene	108-88-3	9	3	6	33.33	µg/kg	0.13	0.36	0.31	0.33	0.027	0.33	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
L1+L2_Deep	non-Rad	Total_U_Isotopes	Total_U_Isotopes	9	9	0	100	µg/kg	0	0	324	570	0.19	516	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Vanadium	7440-62-2	9	9	0	100	µg/kg	0	0	27,800	60,000	0.22	46,973	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	non-Rad	Zinc	7440-66-6	9	9	0	100	µg/kg	0	0	26,600	52,700	0.25	38,466	95% Approximate Gamma UCL	Warning: There are only 9 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
L1+L2_Deep	Rad	Selenium-79	15758-45-9	9	4	5	44.44	pCi/g	1.1	1.8	1.7	2.7	0.24	2.7	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions
L1+L2_Deep	Rad	Technetium-99	14133-76-7	9	3	6	33.33	pCi/g	26.9	76.0	28.4	33.5	0.085	33.5	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
L1+L2_Deep	Rad	Tritium	10028-17-8	9	3	6	33.33	pCi/g	4.1	333	3.2	4.4	0.18	4.4	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
L1+L2_Deep	Rad	Uranium-233	13968-55-3	9	9	0	100	pCi/g	0	0	0.50	1.6	0.48	1.1	95% Student's-t UCL	Warning: There are only 9 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 56 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
L1+L2_Deep	Rad	Uranium-234	13966-29-5	9	6	3	66.67	pCi/g	0.12	0.15	0.12	0.25	0.24	0.19	95% KM (Percentile Bootstrap) UCL	Warning: There are only 6 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 to draw conclusions
L1+L2_Deep	Rad	Uranium-235	15117-96-1	9	9	0	100	pCi/g	0	0	0.0045	0.0087	0.22	0.0078	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Deep	Rad	Uranium-238	U-238	9	9	0	100	pCi/g	0	0	0.11	0.19	0.19	0.17	95% Student's-t UCL	Warning: There are only 9 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
L1+L2_Shallow	non-Rad	1-Butanol	71-36-3	8	1	7	12.5	µg/kg	7.7	14.1	22.2	22.2	0	22.2	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable 1-Butanol was not processed!
L1+L2_Shallow	non-Rad	2-(2-Butoxyethoxy) ethanol	112-34-5	1	1	0	100	µg/kg	0	0	230	230	0	230	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable 2-(2-Butoxyethoxy)ethanol was not processed!
L1+L2_Shallow	non-Rad	2-(2-ethoxyethoxy) ethanol	111-90-0	2	2	0	100	µg/kg	0	0	210	250	0.12	250	Maximum Detect	Warning: This data set only has 2 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable 2-(2-ethoxyethoxy)ethanol was not processed!
L1+L2_Shallow	non-Rad	Acetone	67-64-1	8	1	7	12.5	µg/kg	1.8	4.0	46.2	46.2	0	46.2	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Acetone was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 57 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
L1+L2_Shallow	non-Rad	Aluminum	7429-90-5	7	7	0	100	µg/kg	0	0	5,110,000	7,070,000	0.13	6,397,264	95% H-UCL	Warning: There are only 7 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
L1+L2_Shallow	non-Rad	Antimony	7440-36-0	8	5	3	62.5	µg/kg	156	174	74.1	500	0.90	269	95% KM (t) UCL	Warning: There are only 5 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 to draw conclusions
L1+L2_Shallow	non-Rad	Arsenic	7440-38-2	8	8	0	100	µg/kg	0	0	1,800	4,520	0.36	3,599	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Barium	7440-39-3	8	8	0	100	µg/kg	0	0	46,600	106,000	0.31	83,446	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Beryllium	7440-41-7	8	4	4	50	µg/kg	177	198	111	216	0.33	164	95% KM (t) UCL	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 to draw conclusions
L1+L2_Shallow	non-Rad	beta-1,2,3,4,5,6-Hexachlorocyclohexane (beta-BHC)	319-85-7	8	4	4	50	µg/kg	0.30	0.35	19.4	23.4	0.095	22.7	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions
L1+L2_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	8	1	7	12.5	µg/kg	531	589	1,840	1,840	0	1,840	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Bis(2-ethylhexyl) phthalate was not processed!
L1+L2_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	8	2	6	25	µg/kg	45.0	80.4	53.6	59.2	0.070	59.2	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 58 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
L1+L2_Shallow	non-Rad	Cadmium	7440-43-9	8	8	0	100	µg/kg	0	0	32.3	120	0.39	95.6	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Chromium	7440-47-3	8	8	0	100	µg/kg	0	0	7,540	11,100	0.15	9,678	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Cobalt	7440-48-4	8	8	0	100	µg/kg	0	0	4,340	10,700	0.33	8,260	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Copper	7440-50-8	8	8	0	100	µg/kg	0	0	8,020	15,100	0.19	12,175	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Fluoride	16984-48-8	8	8	0	100	µg/kg	0	0	379	1,660	0.43	1,264	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Hexane	110-54-3	4	4	0	100	µg/kg	0	0	20.2	60.5	0.44	60.5	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Hexane was not processed!
L1+L2_Shallow	non-Rad	Iron	7439-89-6	8	8	0	100	µg/kg	0	0	12,600,000	25,900,000	0.23	21,064,334	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Lead	7439-92-1	8	8	0	100	µg/kg	0	0	3,040	6,430	0.31	5,312	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Lithium	7439-93-2	8	8	0	100	µg/kg	0	0	5,550	7,440	0.088	7,069	95% Student's-t UCL	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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 59 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
L1+L2_Shallow	non-Rad	Manganese	7439-96-5	8	8	0	100	µg/kg	0	0	169,000	450,000	0.32	355,885	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Mercury	7439-97-6	8	2	6	25	µg/kg	8.6	48.1	10.2	17.1	0.36	17.1	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
L1+L2_Shallow	non-Rad	Molybdenum	7439-98-7	8	2	6	25	µg/kg	2,090	3,950	2,260	2,450	0.057	2,450	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
L1+L2_Shallow	non-Rad	Nickel	7440-02-0	8	8	0	100	µg/kg	0	0	7,330	18,400	0.36	13,132	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Nitrate	14797-55-8	8	8	0	100	µg/kg	0	0	1,920	12,000	0.59	7,684	95% Approximate Gamma UCL	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
L1+L2_Shallow	non-Rad	Nitrite	14797-65-0	8	6	2	75	µg/kg	240	643	1,250	5,180	0.55	3,100	95% KM (t) UCL	Warning: There are only 6 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 to draw conclusions
L1+L2_Shallow	non-Rad	Selenium	7782-49-2	8	1	7	12.5	µg/kg	216	656	1,350	1,350	0	1,350	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Selenium was not processed!
L1+L2_Shallow	non-Rad	Silver	7440-22-4	8	4	4	50	µg/kg	81.6	86.1	52.0	102	0.29	94.0	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 60 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
L1+L2_Shallow	non-Rad	Strontium	7440-24-6	8	8	0	100	µg/kg	0	0	19,000	33,300	0.17	31,005	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	8	8	0	100	µg/kg	0	0	318	980	0.42	688	95% Student's-t UCL	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
L1+L2_Shallow	non-Rad	Vanadium	7440-62-2	8	8	0	100	µg/kg	0	0	32,000	71,600	0.36	59,115	95% H-UCL	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
L1+L2_Shallow	non-Rad	Zinc	7440-66-6	8	8	0	100	µg/kg	0	0	24,200	43,400	0.21	38,009	95% Student's-t UCL	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
L1+L2_Shallow	Rad	Carbon-14	14762-75-5	8	3	5	37.5	pCi/g	2.6	60.4	4.7	53.8	0.76	53.8	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
L1+L2_Shallow	Rad	Cesium-137	10045-97-3	8	3	5	37.5	pCi/g	0.23	0.34	0.44	7.5	1.0	3.5	95% KM (t) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
L1+L2_Shallow	Rad	Nickel-63	13981-37-8	8	1	7	12.5	pCi/g	13.4	70.6	390	390	0	390	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Nickel-63 was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 61 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
L1+L2_Shallow	Rad	Selenium-79	15758-45-9	8	1	7	12.5	pCi/g	0.89	2.7	1.6	1.6	0	1.6	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Selenium-79 was not processed!
L1+L2_Shallow	Rad	Strontium-90	10098-97-2	8	3	5	37.5	pCi/g	0.29	3.0	0.12	4.0	1.1	2.0	95% KM (t) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
L1+L2_Shallow	Rad	Tin-126	15832-50-5	8	2	6	25	pCi/g	2.4	9.4	3.4	8.9	0.63	8.9	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
L1+L2_Shallow	Rad	Tritium	10028-17-8	8	1	7	12.5	pCi/g	3.9	306	4.7	4.7	0	4.7	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Tritium was not processed!
L1+L2_Shallow	Rad	Uranium-233	13968-55-3	8	8	0	100	pCi/g	0	0	0.44	2.1	0.46	1.5	95% Student's-t UCL	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
L1+L2_Shallow	Rad	Uranium-234	13966-29-5	8	5	3	62.5	pCi/g	0.12	0.13	0.14	0.29	0.28	0.25	95% KM (Percentile Bootstrap) UCL	Warning: There are only 5 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 to draw conclusions
L1+L2_Shallow	Rad	Uranium-235	15117-96-1	8	8	0	100	pCi/g	0	0	0.0047	0.014	0.41	0.010	95% Student's-t UCL	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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 62 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
L1+L2_Shallow	Rad	Uranium-236	13982-70-2	8	1	7	12.5	pCi/g	0.00092	0.0011	0.0013	0.0013	0	0.0013	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Uranium-236 was not processed!
L1+L2_Shallow	Rad	Uranium-238	U-238	8	8	0	100	pCi/g	0	0	0.11	0.33	0.42	0.23	95% Student's-t UCL	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
P_Deep	non-Rad	1,1-Dichloroethene	75-35-4	14	1	13	7.14	µg/kg	0.19	0.39	0.32	0.32	0	0.32	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable 1,1-Dichloroethene was not processed!
P_Deep	non-Rad	1,2-Propanediol	57-55-6	6	6	0	100	µg/kg	0	0	270	750	0.45	593	95% Student's-t UCL	Warning: There are only 6 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
P_Deep	non-Rad	2-(2-ethoxyethoxy) ethanol	111-90-0	3	2	1	66.67	µg/kg	210	210	210	220	0.033	220	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable 2-(2-ethoxyethoxy)ethanol was not processed!
P_Deep	non-Rad	Acetone	67-64-1	14	9	5	64.29	µg/kg	3.2	5.0	3.0	8.4	0.30	5.6	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions
P_Deep	non-Rad	Aluminum	7429-90-5	16	16	0	100	µg/kg	0	0	3,790,000	7,620,000	0.17	6,198,137	95% Student's-t UCL	
P_Deep	non-Rad	Arsenic	7440-38-2	16	15	1	93.75	µg/kg	10,300	10,300	1,730	11,200	0.62	4,542	95% KM (BCA) UCL	
P_Deep	non-Rad	Barium	7440-39-3	16	16	0	100	µg/kg	0	0	51,700	99,100	0.19	69,700	95% Approximate Gamma UCL	

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 63 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
P_Deep	non-Rad	Benzoic acid	65-85-0	2	2	0	100	µg/kg	0	0	230	260	0.087	260	Maximum Detect	Warning: This data set only has 2 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Benzoic acid was not processed!
P_Deep	non-Rad	Beryllium	7440-41-7	16	6	10	37.5	µg/kg	171	201	199	285	0.13	234	95% KM (Percentile Bootstrap) UCL	Warning: There are only 6 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 to draw conclusions
P_Deep	non-Rad	Bis(2-ethylhexyl) adipate	103-23-1	1	1	0	100	µg/kg	0	0	200	200	0	200	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Bis(2-ethylhexyl) adipate was not processed!
P_Deep	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	14	8	6	57.14	µg/kg	560	745	673	5,050	0.70	2,156	95% KM (Percentile Bootstrap) UCL	Warning: There are only 8 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 to draw conclusions
P_Deep	non-Rad	Cadmium	7440-43-9	16	13	3	81.25	µg/kg	40.2	67.1	47.4	1,690	1.8	994	97.5% KM (Chebyshev) UCL	
P_Deep	non-Rad	Carbon disulfide	75-15-0	14	1	13	7.14	µg/kg	0.17	0.34	0.26	0.26	0	0.26	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Carbon disulfide was not processed!
P_Deep	non-Rad	Chromium	7440-47-3	16	16	0	100	µg/kg	0	0	5,540	32,700	0.47	17,102	95% Approximate Gamma UCL	
P_Deep	non-Rad	Cobalt	7440-48-4	16	16	0	100	µg/kg	0	0	4,050	10,500	0.28	6,920	95% Student's-t UCL	
P_Deep	non-Rad	Copper	7440-50-8	16	16	0	100	µg/kg	0	0	6,830	14,600	0.20	11,493	95% Student's-t UCL	
P_Deep	non-Rad	Di-n-butylphthalate	84-74-2	14	3	11	21.43	µg/kg	483	709	645	770	0.10	688	95% KM (t) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 64 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
P_Deep	non-Rad	Ethylene glycol	107-21-1	9	2	7	22.22	µg/kg	430	5,000	610	1,030	0.36	1,030	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
P_Deep	non-Rad	Fluoride	16984-48-8	16	16	0	100	µg/kg	0	0	431	7,410	0.90	2,671	95% Approximate Gamma UCL	
P_Deep	non-Rad	Iron	7439-89-6	16	16	0	100	µg/kg	0	0	12,400,000	26,100,000	0.23	18,619,458	95% Approximate Gamma UCL	
P_Deep	non-Rad	Lead	7439-92-1	16	15	1	93.75	µg/kg	8,570	8,570	2,720	14,100	0.56	8,080	95% KM (Chebyshev) UCL	
P_Deep	non-Rad	Lithium	7439-93-2	16	16	0	100	µg/kg	0	0	4,670	10,700	0.24	8,057	95% Student's-t UCL	
P_Deep	non-Rad	Manganese	7439-96-5	16	16	0	100	µg/kg	0	0	193,000	412,000	0.19	295,423	95% Student's-t UCL	
P_Deep	non-Rad	Mercury	7439-97-6	14	1	13	7.14	µg/kg	10.0	22.1	13.2	13.2	0	13.2	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Mercury was not processed!
P_Deep	non-Rad	Methylene chloride	75-09-2	14	2	12	14.29	µg/kg	0.25	0.39	0.20	0.71	0.78	0.33	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
P_Deep	non-Rad	Nickel	7440-02-0	16	16	0	100	µg/kg	0	0	6,950	30,600	0.46	16,639	95% Approximate Gamma UCL	
P_Deep	non-Rad	Nitrate	14797-55-8	16	16	0	100	µg/kg	0	0	3,060	143,000	1.8	31,383	95% H-UCL	
P_Deep	non-Rad	Nitrite	14797-65-0	16	12	4	75	µg/kg	785	3,790	347	4,440	0.64	2,187	95% KM (t) UCL	
P_Deep	non-Rad	Silver	7440-22-4	16	5	11	31.25	µg/kg	81.2	857	156	933	1.1	307	95% KM (% Bootstrap) UCL	Warning: There are only 5 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 to draw conclusions
P_Deep	non-Rad	Strontium	7440-24-6	16	16	0	100	µg/kg	0	0	17,500	35,900	0.18	28,440	95% Student's-t UCL	

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 65 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
P_Deep	non-Rad	Tin	7440-31-5	7	6	1	85.71	µg/kg	5,100	5,100	6,670	13,900	0.35	11,352	95% KM (t) UCL	Warning: There are only 6 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 to draw conclusions
P_Deep	non-Rad	Toluene	108-88-3	14	1	13	7.14	µg/kg	0.13	0.27	1.4	1.4	0	1.4	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Toluene was not processed!
P_Deep	non-Rad	Total_U_Isotopes	Total_U_Isotopes	16	16	0	100	µg/kg	0	0	399	6,454	1.5	2,628	95% Chebyshev (Mean, Sd) UCL	
P_Deep	non-Rad	Triacetyl glycerin	102-76-1	2	2	0	100	µg/kg	0	0	250	270	0.054	270	Maximum Detect	Warning: This data set only has 2 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Triacetyl glycerin was not processed!
P_Deep	non-Rad	Vanadium	7440-62-2	16	16	0	100	µg/kg	0	0	27,300	95,100	0.39	52,571	95% Approximate Gamma UCL	
P_Deep	non-Rad	Zinc	7440-66-6	16	16	0	100	µg/kg	0	0	25,400	72,300	0.31	40,152	95% Approximate Gamma UCL	
P_Deep	Rad	Americium-241	14596-10-2	16	1	15	6.25	pCi/g	0.33	1.1	1.4	1.4	0	1.4	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Americium-241 was not processed!
P_Deep	Rad	Carbon-14	14762-75-5	14	1	13	7.14	pCi/g	48.7	89.2	61.1	61.1	0	61.1	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Carbon-14 was not processed!
P_Deep	Rad	Cesium-137	10045-97-3	16	4	12	25	pCi/g	0.29	0.61	1.3	6.3	0.71	6.1	95% KM (Percentile Bootstrap) UCL	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 to draw conclusions

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 66 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
P_Deep	Rad	Cobalt-60	10198-40-0	16	2	14	12.5	pCi/g	0.23	0.71	0.54	0.63	0.11	0.56	95% KM (t) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
P_Deep	Rad	Europium-154	15585-10-1	16	1	15	6.25	pCi/g	0.78	2.1	2.3	2.3	0	2.3	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Europium-154 was not processed!
P_Deep	Rad	Europium-155	14391-16-3	16	1	15	6.25	pCi/g	0.46	1.2	0.81	0.81	0	0.81	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Europium-155 was not processed!
P_Deep	Rad	Neptunium-237	13994-20-2	16	2	14	12.5	pCi/g	0.026	0.38	0.39	0.51	0.18	0.51	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
P_Deep	Rad	Nickel-63	13981-37-8	14	1	13	7.14	pCi/g	41.8	85.0	87.1	87.1	0	87.1	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Nickel-63 was not processed!
P_Deep	Rad	Selenium-79	15758-45-9	14	7	7	50	pCi/g	1.0	3.1	2.0	6.4	0.51	3.2	95% KM (% Bootstrap) UCL	Warning: There are only 7 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 to draw conclusions

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 67 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
P_Deep	Rad	Strontium-90	10098-97-2	14	8	6	57.14	pCi/g	1.4	3.5	1.9	53.7	1.4	32.7	97.5% KM (Chebyshev) UCL	Warning: There are only 8 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 to draw conclusions
P_Deep	Rad	Technetium-99	14133-76-7	16	3	13	18.75	pCi/g	17.6	20.7	4.5	45.5	1.2	13.1	95% KM (t) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
P_Deep	Rad	Uranium-233	13968-55-3	14	12	2	85.71	pCi/g	1.0	1.0	0.78	2.9	0.40	1.6	95% KM (BCA) UCL	
P_Deep	Rad	Uranium-234	13966-29-5	14	9	5	64.29	pCi/g	0.12	0.31	0.15	2.8	1.6	0.81	95% KM (BCA) UCL	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 to draw conclusions
P_Deep	Rad	Uranium-235	15117-96-1	16	14	2	87.5	pCi/g	0.30	0.31	0.0056	0.11	1.6	0.049	95% KM (Chebyshev) UCL	
P_Deep	Rad	Uranium-236	13982-70-2	14	5	9	35.71	pCi/g	0.0010	0.0026	0.0034	0.15	1.4	0.038	95% KM (t) UCL	Warning: There are only 5 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 to draw conclusions
P_Deep	Rad	Uranium-238	U-238	16	16	0	100	pCi/g	0	0	0.13	2.2	1.5	0.88	95% Chebyshev (Mean, Sd) UCL	
P_Shallow	non-Rad	1,2-Propanediol	57-55-6	4	4	0	100	µg/kg	0	0	250	910	0.58	910	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable 1,2-Propanediol was not processed!
P_Shallow	non-Rad	2-(2-ethoxyethoxy) ethanol	111-90-0	1	1	0	100	µg/kg	0	0	230	230	0	230	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable 2-(2-ethoxyethoxy)ethanol was not processed!
P_Shallow	non-Rad	Acetone	67-64-1	11	7	4	63.64	µg/kg	2.9	3.7	4.2	13.1	0.43	9.8	95% KM (Percentile Bootstrap) UCL	Warning: There are only 7 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 to draw conclusions
P_Shallow	non-Rad	Aluminum	7429-90-5	10	10	0	100	µg/kg	0	0	5,650,000	7,800,000	0.12	7,128,284	95% Student's-t UCL	

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 68 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
P_Shallow	non-Rad	Antimony	7440-36-0	10	3	7	30	µg/kg	149	171	174	367	0.45	235	95% KM (t) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
P_Shallow	non-Rad	Aroclor-1260	11096-82-5	8	2	6	25	µg/kg	10.0	21.0	25.2	26.8	0.044	26.8	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
P_Shallow	non-Rad	Arsenic	7440-38-2	10	10	0	100	µg/kg	0	0	1,790	5,900	0.26	5,064	95% Student's-t UCL	
P_Shallow	non-Rad	Barium	7440-39-3	10	10	0	100	µg/kg	0	0	66,100	86,100	0.10	81,503	95% Student's-t UCL	
P_Shallow	non-Rad	Benzoic acid	65-85-0	1	1	0	100	µg/kg	0	0	300	300	0	300	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Benzoic acid was not processed!
P_Shallow	non-Rad	Beryllium	7440-41-7	10	6	4	60	µg/kg	183	1,010	191	315	0.17	276	95% KM (Percentile Bootstrap) UCL	Warning: There are only 6 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 to draw conclusions
P_Shallow	non-Rad	beta-1,2,3,4,5,6-Hexachlorocyclohexane (beta-BHC)	319-85-7	4	4	0	100	µg/kg	0	0	21.2	25.8	0.085	25.8	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable beta-1,2,3,4,5,6-Hexachlorocyclohexane (beta-BHC) was not processed!
P_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	8	2	6	25	µg/kg	549	599	804	2,300	0.68	2,300	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
P_Shallow	non-Rad	Cadmium	7440-43-9	10	10	0	100	µg/kg	0	0	76.8	145	0.18	121	95% Student's-t UCL	
P_Shallow	non-Rad	Chromium	7440-47-3	10	10	0	100	µg/kg	0	0	4,470	21,800	0.51	12,404	95% Approximate Gamma UCL	
P_Shallow	non-Rad	Cobalt	7440-48-4	10	10	0	100	µg/kg	0	0	6,370	9,900	0.12	9,157	95% Student's-t UCL	
P_Shallow	non-Rad	Copper	7440-50-8	10	10	0	100	µg/kg	0	0	11,300	13,200	0.043	12,769	95% Student's-t UCL	

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 69 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
P_Shallow	non-Rad	Di-n-butylphthalate	84-74-2	8	1	7	12.5	µg/kg	523	571	863	863	0	863	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Di-n-butylphthalate was not processed!
P_Shallow	non-Rad	Fluoride	16984-48-8	9	9	0	100	µg/kg	0	0	1,340	4,760	0.47	2,873	95% Approximate Gamma UCL	Warning: There are only 9 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
P_Shallow	non-Rad	Iron	7439-89-6	10	10	0	100	µg/kg	0	0	20,000,000	30,500,000	0.13	25,306,987	95% Student's-t UCL	
P_Shallow	non-Rad	Lead	7439-92-1	10	10	0	100	µg/kg	0	0	2,930	8,060	0.24	7,803	95% Approximate Gamma UCL	
P_Shallow	non-Rad	Lithium	7439-93-2	10	10	0	100	µg/kg	0	0	4,190	9,420	0.22	8,366	95% Student's-t UCL	
P_Shallow	non-Rad	Manganese	7439-96-5	10	10	0	100	µg/kg	0	0	291,000	385,000	0.10	364,282	95% Student's-t UCL	
P_Shallow	non-Rad	Mercury	7439-97-6	10	1	9	10	µg/kg	10.2	17.5	19.2	19.2	0	19.2	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Mercury was not processed!
P_Shallow	non-Rad	Methylene chloride	75-09-2	11	3	8	27.27	µg/kg	0.22	0.41	0.80	2.6	0.64	1.3	95% KM (t) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
P_Shallow	non-Rad	Nickel	7440-02-0	10	10	0	100	µg/kg	0	0	6,710	13,900	0.25	11,109	95% Student's-t UCL	
P_Shallow	non-Rad	Nitrate	14797-55-8	9	9	0	100	µg/kg	0	0	3,700	17,500	0.52	11,436	95% Student's-t UCL	Warning: There are only 9 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
P_Shallow	non-Rad	Nitrite	14797-65-0	9	8	1	88.89	µg/kg	1,240	1,240	1,670	5,760	0.35	4,608	95% KM (t) UCL	Warning: There are only 8 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 to draw conclusions

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 70 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
P_Shallow	non-Rad	Silver	7440-22-4	10	7	3	70	µg/kg	137	153	100	223	0.31	177	95% KM (Percentile Bootstrap) UCL	Warning: There are only 7 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 to draw conclusions
P_Shallow	non-Rad	Strontium	7440-24-6	10	10	0	100	µg/kg	0	0	26,300	39,100	0.15	33,142	95% Approximate Gamma UCL	
P_Shallow	non-Rad	Tin	7440-31-5	4	4	0	100	µg/kg	0	0	7,750	14,400	0.32	14,400	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin was not processed!
P_Shallow	non-Rad	Toluene	108-88-3	11	1	10	9.09	µg/kg	0.16	0.40	0.29	0.29	0	0.29	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Toluene was not processed!
P_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	10	10	0	100	µg/kg	0	0	581	2,634	0.52	1,568	95% Student's-t UCL	
P_Shallow	non-Rad	Vanadium	7440-62-2	10	10	0	100	µg/kg	0	0	56,700	110,000	0.24	77,756	95% Modified-t UCL	
P_Shallow	non-Rad	Zinc	7440-66-6	10	10	0	100	µg/kg	0	0	39,500	305,000	1.2	183,424	95% Chebyshev (Mean, Sd) UCL	
P_Shallow	Rad	Americium-241	14596-10-2	11	1	10	9.09	pCi/g	0.85	2.0	2.2	2.2	0	2.2	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Americium-241 was not processed!
P_Shallow	Rad	Cesium-137	10045-97-3	10	7	3	70	pCi/g	0.52	3.1	0.33	73.1	1.0	32.1	95% KM (Percentile Bootstrap) UCL	Warning: There are only 7 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 to draw conclusions
P_Shallow	Rad	Cobalt-60	10198-40-0	10	1	9	10	pCi/g	0.20	3.1	0.83	0.83	0	0.83	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Cobalt-60 was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 71 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
P_Shallow	Rad	Iodine-129	15046-84-1	11	1	10	9.09	pCi/g	0.11	0.46	0.81	0.81	0	0.81	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Iodine-129 was not processed!
P_Shallow	Rad	Neptunium-237	13994-20-2	10	1	9	10	pCi/g	0.14	0.15	1.5	1.5	0	1.5	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Neptunium-237 was not processed!
P_Shallow	Rad	Nickel-63	13981-37-8	11	1	10	9.09	pCi/g	40.8	112	85.0	85.0	0	85.0	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Nickel-63 was not processed!
P_Shallow	Rad	Plutonium-239/240	PU-239/240	11	1	10	9.09	pCi/g	0.57	1.5	10.7	10.7	0	10.7	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Plutonium-239/240 was not processed!
P_Shallow	Rad	Plutonium-241	14119-32-5	11	1	10	9.09	pCi/g	2.1	5.5	39.9	39.9	0	39.9	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Plutonium-241 was not processed!
P_Shallow	Rad	Selenium-79	15758-45-9	11	7	4	63.64	pCi/g	1.2	7.6	2.0	8.7	0.61	4.6	95% KM (t) UCL	Warning: There are only 7 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 to draw conclusions

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 72 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
P_Shallow	Rad	Strontium-90	10098-97-2	11	8	3	72.73	pCi/g	3.4	8.8	2.2	141	0.69	82.2	95% KM (Percentile Bootstrap) UCL	Warning: There are only 8 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 to draw conclusions
P_Shallow	Rad	Technetium-99	14133-76-7	10	1	9	10	pCi/g	17.3	19.3	24.0	24.0	0	24.0	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Technetium-99 was not processed!
P_Shallow	Rad	Tritium	10028-17-8	10	1	9	10	pCi/g	262	442	308	308	0	308	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Tritium was not processed!
P_Shallow	Rad	Uranium-233	13968-55-3	10	10	0	100	pCi/g	0	0	0.75	2.6	0.37	1.9	95% Student's-t UCL	
P_Shallow	Rad	Uranium-234	13966-29-5	10	9	1	90	pCi/g	0.12	0.12	0.15	1.4	0.69	0.72	95% KM (BCA) UCL	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 to draw conclusions
P_Shallow	Rad	Uranium-235	15117-96-1	10	10	0	100	pCi/g	0	0	0.0082	0.043	0.58	0.025	95% Student's-t UCL	
P_Shallow	Rad	Uranium-236	13982-70-2	10	9	1	90	pCi/g	0.0010	0.0010	0.0026	0.056	1.0	0.029	95% KM (t) UCL	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 to draw conclusions
P_Shallow	Rad	Uranium-238	U-238	10	10	0	100	pCi/g	0	0	0.19	0.88	0.52	0.52	95% Student's-t UCL	
R_Deep	non-Rad	Acetone	67-64-1	4	4	0	100	µg/kg	0	0	1.2	10.0	0.73	10.0	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Acetone was not processed!
R_Deep	non-Rad	Aluminum	7429-90-5	5	5	0	100	µg/kg	0	0	6,120,000	7,380,000	0.073	7,374,448	95% Student's-t UCL	Warning: There are only 5 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 73 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
R_Deep	non-Rad	Antimony	7440-36-0	5	5	0	100	µg/kg	0	0	114	303	0.48	269	95% Approximate Gamma UCL	Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates! It is suggested to collect at least 8 to 10 observations using these statistical methods! If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.
R_Deep	non-Rad	Arsenic	7440-38-2	5	5	0	100	µg/kg	0	0	2,530	4,480	0.23	4,085	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Barium	7440-39-3	5	5	0	100	µg/kg	0	0	51,200	75,500	0.15	75,500	Maximum Detect	Recommended UCL Exceeds Maximum Concentration; EPC defaulting to Maximum Concentration since 97.5% and 99% Chebyshev(Mean, Sd) UCLs also exceed maximum concentration.
R_Deep	non-Rad	Beryllium	7440-41-7	5	5	0	100	µg/kg	0	0	135	172	0.090	172	Maximum Detect	Recommended UCL Exceeds Maximum Concentration; EPC defaulting to Maximum Concentration since 97.5% and 99% Chebyshev(Mean, Sd) UCLs also exceed maximum concentration.
R_Deep	non-Rad	Butylbenzylphthalate	85-68-7	5	4	1	80	µg/kg	102	102	105	114	0.036	111	95% KM (t) UCL	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 to draw conclusions
R_Deep	non-Rad	Cadmium	7440-43-9	5	5	0	100	µg/kg	0	0	1,160	3,080	0.39	2,983	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Chromium	7440-47-3	5	5	0	100	µg/kg	0	0	10,900	14,700	0.13	14,378	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Cobalt	7440-48-4	5	5	0	100	µg/kg	0	0	5,880	9,720	0.24	9,322	95% Student's-t UCL	Warning: There are only 5 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 74 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
R_Deep	non-Rad	Copper	7440-50-8	5	5	0	100	µg/kg	0	0	8,430	12,200	0.16	11,664	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Fluoride	16984-48-8	5	5	0	100	µg/kg	0	0	597	2,490	0.49	2,297	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Iron	7439-89-6	5	5	0	100	µg/kg	0	0	12,500,000	24,000,000	0.31	22,435,399	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Lead	7439-92-1	5	5	0	100	µg/kg	0	0	3,190	4,460	0.15	4,309	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Lithium	7439-93-2	5	5	0	100	µg/kg	0	0	7,010	8,750	0.082	8,518	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Manganese	7439-96-5	5	5	0	100	µg/kg	0	0	247,000	359,000	0.15	341,481	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Methylene chloride	75-09-2	4	3	1	75	µg/kg	0.050	0.050	1.1	6.9	1.0	6.9	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Methylene chloride was not processed!
R_Deep	non-Rad	Nickel	7440-02-0	5	5	0	100	µg/kg	0	0	9,190	14,600	0.17	14,600	Maximum Detect	Recommended UCL Exceeds Maximum Concentration; EPC defaulting to Maximum Concentration since 97.5% and 99% Chebyshev(Mean, Sd) UCLs also exceed maximum concentration.
R_Deep	non-Rad	Nitrate	14797-55-8	5	5	0	100	µg/kg	0	0	1,470	39,100	1.2	27,497	95% Student's-t UCL	Warning: There are only 5 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 75 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
R_Deep	non-Rad	Nitrite	14797-65-0	5	5	0	100	µg/kg	0	0	846	4,750	0.75	3,613	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Selenium	7782-49-2	5	5	0	100	µg/kg	0	0	317	524	0.17	504	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Silver	7440-22-4	5	5	0	100	µg/kg	0	0	36.2	58.4	0.19	52.7	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Strontium	7440-24-6	5	5	0	100	µg/kg	0	0	28,400	33,800	0.074	33,721	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Toluene	108-88-3	4	1	3	25	µg/kg	0.50	0.60	0.26	0.26	0	0.26	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Toluene was not processed!
R_Deep	non-Rad	Total_U_Isotopes	Total_U_Isotopes	5	5	0	100	µg/kg	0	0	378	522	0.15	519	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Trichloromono-fluoromethane	75-69-4	4	3	1	75	µg/kg	0.073	0.073	2.3	11.0	0.62	11.0	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Trichloromonofluoromethane was not processed!
R_Deep	non-Rad	Vanadium	7440-62-2	5	5	0	100	µg/kg	0	0	20,200	60,000	0.47	54,934	95% Student's-t UCL	Warning: There are only 5 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
R_Deep	non-Rad	Zinc	7440-66-6	5	5	0	100	µg/kg	0	0	27,100	42,300	0.19	40,065	95% Student's-t UCL	Warning: There are only 5 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

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 76 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
R_Deep	Rad	Selenium-79	15758-45-9	5	1	4	20	pCi/g	1.4	3.8	4.0	4.0	0	4.0	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Selenium-79 was not processed!
R_Deep	Rad	Technetium-99	14133-76-7	5	1	4	20	pCi/g	5.1	28.6	6.5	6.5	0	6.5	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Technetium-99 was not processed!
R_Deep	Rad	Tin-126	15832-50-5	5	3	2	60	pCi/g	13.4	13.7	3.6	6.2	0.26	6.2	95% KM (Percentile Bootstrap) UCL	Warning: Recommended UCL exceeds the maximum observation Note: DL/2 is not a recommended method. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
R_Deep	Rad	Tritium	10028-17-8	5	3	2	60	pCi/g	2.9	3.3	2.9	4.2	0.19	4.2	95% KM (Percentile Bootstrap) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
R_Deep	Rad	Uranium-233	13968-55-3	5	5	0	100	pCi/g	0	0	1.0	1.7	0.19	1.7	Maximum Detect	Recommended UCL Exceeds Maximum Concentration; EPC defaulting to Maximum Concentration since 97.5% and 99% Chebyshev(Mean, Sd) UCLs also exceed maximum concentration.
R_Deep	Rad	Uranium-234	13966-29-5	5	2	3	40	pCi/g	0.12	0.27	0.25	0.29	0.13	0.29	95% KM (% Bootstrap) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 77 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
R_Deep	Rad	Uranium-235	15117-96-1	5	5	0	100	pCi/g	0	0	0.0057	0.0080	0.15	0.0078	95% Student's-t UCL	Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates! It is suggested to collect at least 8 to 10 observations using these statistical methods! If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.
R_Deep	Rad	Uranium-238	U-238	5	5	0	100	pCi/g	0	0	0.13	0.17	0.15	0.17	95% Student's-t UCL	Warning: There are only 5 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
R_Shallow	non-Rad	2-Hexanone	591-78-6	3	3	0	100	µg/kg	0	0	2.1	2.8	0.14	2.8	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable 2-Hexanone was not processed!
R_Shallow	non-Rad	Acetone	67-64-1	4	2	2	50	µg/kg	2.1	2.6	2.5	6.4	0.61	6.4	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Acetone was not processed!
R_Shallow	non-Rad	Aluminum	7429-90-5	3	3	0	100	µg/kg	0	0	6,770,000	8,390,000	0.11	8,390,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Aluminum was not processed!
R_Shallow	non-Rad	Antimony	7440-36-0	2	2	0	100	µg/kg	0	0	161	245	0.29	245	Maximum Detect	Warning: This data set only has 2 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Antimony was not processed!
R_Shallow	non-Rad	Arsenic	7440-38-2	3	3	0	100	µg/kg	0	0	4,900	5,830	0.088	5,830	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
R_Shallow	non-Rad	Barium	7440-39-3	3	3	0	100	µg/kg	0	0	66,800	79,200	0.085	79,200	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Barium was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 78 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
R_Shallow	non-Rad	Beryllium	7440-41-7	3	3	0	100	µg/kg	0	0	156	175	0.057	175	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Beryllium was not processed!
R_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	3	2	1	66.67	µg/kg	109	109	76.1	107	0.24	107	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Butylbenzylphthalate was not processed!
R_Shallow	non-Rad	Cadmium	7440-43-9	3	3	0	100	µg/kg	0	0	2,990	3,470	0.085	3,470	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cadmium was not processed!
R_Shallow	non-Rad	Chromium	7440-47-3	3	3	0	100	µg/kg	0	0	9,250	11,200	0.10	11,200	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
R_Shallow	non-Rad	Cobalt	7440-48-4	3	3	0	100	µg/kg	0	0	8,370	10,500	0.13	10,500	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cobalt was not processed!
R_Shallow	non-Rad	Copper	7440-50-8	3	3	0	100	µg/kg	0	0	11,000	14,800	0.15	14,800	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Copper was not processed!
R_Shallow	non-Rad	Fluoride	16984-48-8	3	3	0	100	µg/kg	0	0	964	3,530	0.55	3,530	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Fluoride was not processed!
R_Shallow	non-Rad	Iron	7439-89-6	3	3	0	100	µg/kg	0	0	22,100,000	25,900,000	0.088	25,900,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Iron was not processed!
R_Shallow	non-Rad	Lead	7439-92-1	3	3	0	100	µg/kg	0	0	4,310	8,450	0.33	8,450	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 79 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
R_Shallow	non-Rad	Lithium	7439-93-2	3	3	0	100	µg/kg	0	0	7,290	9,050	0.11	9,050	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lithium was not processed!
R_Shallow	non-Rad	Manganese	7439-96-5	3	3	0	100	µg/kg	0	0	331,000	409,000	0.11	409,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Manganese was not processed!
R_Shallow	non-Rad	Mercury	7439-97-6	3	1	2	33.33	µg/kg	7.8	7.9	13.5	13.5	0	13.5	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Mercury was not processed!
R_Shallow	non-Rad	Methylene chloride	75-09-2	4	1	3	25	µg/kg	0.052	0.075	1.4	1.4	0	1.4	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Methylene chloride was not processed!
R_Shallow	non-Rad	Nickel	7440-02-0	3	3	0	100	µg/kg	0	0	8,690	11,000	0.13	11,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nickel was not processed!
R_Shallow	non-Rad	Nitrate	14797-55-8	3	3	0	100	µg/kg	0	0	6,710	39,700	1.0	39,700	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrate was not processed!
R_Shallow	non-Rad	Nitrite	14797-65-0	3	2	1	66.67	µg/kg	1,900	1,900	387	5,310	1.2	5,310	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrite was not processed!
R_Shallow	non-Rad	Selenium	7782-49-2	3	3	0	100	µg/kg	0	0	594	701	0.087	701	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Selenium was not processed!
R_Shallow	non-Rad	Silver	7440-22-4	3	3	0	100	µg/kg	0	0	51.9	69.4	0.17	69.4	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Silver was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 80 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
R_Shallow	non-Rad	Strontium	7440-24-6	3	3	0	100	µg/kg	0	0	29,900	37,300	0.12	37,300	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Strontium was not processed!
R_Shallow	non-Rad	Toluene	108-88-3	4	3	1	75	µg/kg	0.60	0.60	0.32	0.59	0.36	0.59	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Toluene was not processed!
R_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	3	3	0	100	µg/kg	0	0	471	660	0.17	660	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Total_U_Isotopes was not processed!
R_Shallow	non-Rad	Vanadium	7440-62-2	3	3	0	100	µg/kg	0	0	55,600	64,200	0.081	64,200	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Vanadium was not processed!
R_Shallow	non-Rad	Zinc	7440-66-6	3	3	0	100	µg/kg	0	0	45,300	48,600	0.036	48,600	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Zinc was not processed!
R_Shallow	Rad	Strontium-90	10098-97-2	1	1	0	100	pCi/g	0	0	0.37	0.37	0	0.37	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Strontium-90 was not processed!
R_Shallow	Rad	Tritium	10028-17-8	2	1	1	50	pCi/g	3.9	3.9	2.5	2.5	0	2.5	Maximum Detect	Warning: This data set only has 2 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tritium was not processed!
R_Shallow	Rad	Uranium-233	13968-55-3	3	3	0	100	pCi/g	0	0	1.8	2.4	0.12	2.4	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233 was not processed!
R_Shallow	Rad	Uranium-234	13966-29-5	3	2	1	66.67	pCi/g	0.14	0.14	0.21	0.22	0.036	0.22	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-234 was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 81 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
R_Shallow	Rad	Uranium-235	15117-96-1	3	3	0	100	pCi/g	0	0	0.0067	0.010	0.21	0.010	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-235 was not processed!
R_Shallow	Rad	Uranium-238	U-238	3	3	0	100	pCi/g	0	0	0.16	0.22	0.17	0.22	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
U_Deep	non-Rad	2-Butanone	78-93-3	3	1	2	33.33	µg/kg	1.8	2.3	13.8	13.8	0	13.8	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable 2-Butanone was not processed!
U_Deep	non-Rad	Acetone	67-64-1	3	1	2	33.33	µg/kg	2.0	2.6	25.7	25.7	0	25.7	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Acetone was not processed!
U_Deep	non-Rad	Aluminum	7429-90-5	4	4	0	100	µg/kg	0	0	5,730,000	8,370,000	0.19	8,370,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Aluminum was not processed!
U_Deep	non-Rad	Antimony	7440-36-0	3	1	2	33.33	µg/kg	300	300	139	139	0	139	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Antimony was not processed!
U_Deep	non-Rad	Arsenic	7440-38-2	4	4	0	100	µg/kg	0	0	4,000	20,000	0.91	20,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
U_Deep	non-Rad	Barium	7440-39-3	4	4	0	100	µg/kg	0	0	55,200	75,700	0.16	75,700	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Barium was not processed!
U_Deep	non-Rad	Beryllium	7440-41-7	4	4	0	100	µg/kg	0	0	142	231	0.22	231	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Beryllium was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 82 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
U_Deep	non-Rad	Cadmium	7440-43-9	4	3	1	75	µg/kg	100	100	125	190	0.22	190	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cadmium was not processed!
U_Deep	non-Rad	Chromium	7440-47-3	4	4	0	100	µg/kg	0	0	9,860	44,500	0.84	44,500	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
U_Deep	non-Rad	Cobalt	7440-48-4	4	4	0	100	µg/kg	0	0	4,060	7,100	0.23	7,100	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cobalt was not processed!
U_Deep	non-Rad	Copper	7440-50-8	4	4	0	100	µg/kg	0	0	7,510	12,500	0.21	12,500	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Copper was not processed!
U_Deep	non-Rad	Fluoride	16984-48-8	4	4	0	100	µg/kg	0	0	433	1,320	0.51	1,320	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Fluoride was not processed!
U_Deep	non-Rad	Hexane	110-54-3	1	1	0	100	µg/kg	0	0	4.2	4.2	0	4.2	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Hexane was not processed!
U_Deep	non-Rad	Iron	7439-89-6	4	4	0	100	µg/kg	0	0	11,800,000	18,500,000	0.19	18,500,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Iron was not processed!
U_Deep	non-Rad	Lead	7439-92-1	4	4	0	100	µg/kg	0	0	4,000	10,900	0.36	10,900	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!
U_Deep	non-Rad	Lithium	7439-93-2	4	4	0	100	µg/kg	0	0	6,190	11,600	0.26	11,600	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lithium was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 83 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
U_Deep	non-Rad	Manganese	7439-96-5	4	4	0	100	µg/kg	0	0	213,000	307,000	0.16	307,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Manganese was not processed!
U_Deep	non-Rad	Molybdenum	7439-98-7	4	1	3	25	µg/kg	1,650	1,970	1,880	1,880	0	1,880	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Molybdenum was not processed!
U_Deep	non-Rad	Nickel	7440-02-0	4	4	0	100	µg/kg	0	0	10,700	29,400	0.55	29,400	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nickel was not processed!
U_Deep	non-Rad	Nitrate	14797-55-8	4	4	0	100	µg/kg	0	0	4,490	71,600	1.4	71,600	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrate was not processed!
U_Deep	non-Rad	Nitrite	14797-65-0	4	2	2	50	µg/kg	190	192	393	2,370	1.0	2,370	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrite was not processed!
U_Deep	non-Rad	Selenium	7782-49-2	4	4	0	100	µg/kg	0	0	800	1,000	0.12	1,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Selenium was not processed!
U_Deep	non-Rad	Strontium	7440-24-6	4	4	0	100	µg/kg	0	0	28,100	36,100	0.13	36,100	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Strontium was not processed!
U_Deep	non-Rad	Styrene	100-42-5	1	1	0	100	µg/kg	0	0	0.35	0.35	0	0.35	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Styrene was not processed!
U_Deep	non-Rad	Toluene	108-88-3	3	2	1	66.67	µg/kg	0.43	0.43	0.56	0.56	0.0038	0.56	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Toluene was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 84 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
U_Deep	non-Rad	Total_U_Isotopes	Total_U_Isotopes	4	4	0	100	µg/kg	0	0	504	1,391	0.50	1,391	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Total_U_Isotopes was not processed!
U_Deep	non-Rad	Vanadium	7440-62-2	4	4	0	100	µg/kg	0	0	22,800	43,900	0.26	43,900	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Vanadium was not processed!
U_Deep	non-Rad	Zinc	7440-66-6	4	4	0	100	µg/kg	0	0	26,000	37,900	0.17	37,900	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Zinc was not processed!
U_Deep	Rad	Carbon-14	14762-75-5	4	1	3	25	pCi/g	1.3	1.9	4.9	4.9	0	4.9	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Carbon-14 was not processed!
U_Deep	Rad	Technetium-99	14133-76-7	4	2	2	50	pCi/g	2.6	5.1	5.3	53.5	1.2	53.5	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Technetium-99 was not processed!
U_Deep	Rad	Tin-126	15832-50-5	4	4	0	100	pCi/g	0	0	3.8	8.3	0.29	8.3	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin-126 was not processed!
U_Deep	Rad	Tritium	10028-17-8	4	1	3	25	pCi/g	1.5	4.9	3.8	3.8	0	3.8	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tritium was not processed!
U_Deep	Rad	Uranium-233	13968-55-3	4	4	0	100	pCi/g	0	0	1.6	7.6	0.80	7.6	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233 was not processed!
U_Deep	Rad	Uranium-234	13966-29-5	4	1	3	25	pCi/g	0.12	0.12	0.53	0.53	0	0.53	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-234 was not processed!

Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 85 of 89)

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
U_Deep	Rad	Uranium-235	15117-96-1	4	4	0	100	pCi/g	0	0	0.0074	0.020	0.51	0.020	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-235 was not processed!
U_Deep	Rad	Uranium-236	13982-70-2	4	1	3	25	pCi/g	0.0010	0.0010	0.0018	0.0018	0	0.0018	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-236 was not processed!
U_Deep	Rad	Uranium-238	U-238	4	4	0	100	pCi/g	0	0	0.17	0.46	0.50	0.46	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
U_Shallow	non-Rad	Acetone	67-64-1	4	2	2	50	µg/kg	1.8	2.0	6.0	6.2	0.026	6.2	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Acetone was not processed!
U_Shallow	non-Rad	Aluminum	7429-90-5	3	3	0	100	µg/kg	0	0	4,960,000	8,270,000	0.25	8,270,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Aluminum was not processed!
U_Shallow	non-Rad	Antimony	7440-36-0	3	3	0	100	µg/kg	0	0	151	291	0.31	291	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Antimony was not processed!
U_Shallow	non-Rad	Arsenic	7440-38-2	3	3	0	100	µg/kg	0	0	3,000	7,000	0.45	7,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
U_Shallow	non-Rad	Barium	7440-39-3	3	3	0	100	µg/kg	0	0	48,100	96,900	0.33	96,900	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Barium was not processed!
U_Shallow	non-Rad	Benzene	71-43-2	4	1	3	25	µg/kg	0.12	0.14	0.33	0.33	0	0.33	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Benzene was not processed!

**Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 86 of 89)**

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
U_Shallow	non-Rad	Beryllium	7440-41-7	3	3	0	100	µg/kg	0	0	126	235	0.31	235	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Beryllium was not processed!
U_Shallow	non-Rad	Boron	7440-42-8	1	1	0	100	µg/kg	0	0	6,420	6,420	0	6,420	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Boron was not processed!
U_Shallow	non-Rad	Chromium	7440-47-3	3	3	0	100	µg/kg	0	0	7,460	10,000	0.15	10,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
U_Shallow	non-Rad	Cobalt	7440-48-4	3	3	0	100	µg/kg	0	0	5,540	8,730	0.23	8,730	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cobalt was not processed!
U_Shallow	non-Rad	Copper	7440-50-8	3	3	0	100	µg/kg	0	0	9,080	13,200	0.18	13,200	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Copper was not processed!
U_Shallow	non-Rad	Fluoride	16984-48-8	3	3	0	100	µg/kg	0	0	402	2,020	0.62	2,020	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Fluoride was not processed!
U_Shallow	non-Rad	Iron	7439-89-6	3	3	0	100	µg/kg	0	0	15,500,000	23,100,000	0.20	23,100,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Iron was not processed!
U_Shallow	non-Rad	Lead	7439-92-1	3	3	0	100	µg/kg	0	0	3,000	7,000	0.45	7,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!
U_Shallow	non-Rad	Lithium	7439-93-2	3	3	0	100	µg/kg	0	0	5,520	9,240	0.25	9,240	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lithium was not processed!

**Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 87 of 89)**

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
U_Shallow	non-Rad	Manganese	7439-96-5	3	3	0	100	µg/kg	0	0	226,000	364,000	0.23	364,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Manganese was not processed!
U_Shallow	non-Rad	Mercury	7439-97-6	3	2	1	66.67	µg/kg	9.7	9.7	10.2	20.6	0.48	20.6	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Mercury was not processed!
U_Shallow	non-Rad	Molybdenum	7439-98-7	3	2	1	66.67	µg/kg	1,980	1,980	2,380	2,530	0.043	2,530	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Molybdenum was not processed!
U_Shallow	non-Rad	Nickel	7440-02-0	3	3	0	100	µg/kg	0	0	6,680	9,800	0.19	9,800	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nickel was not processed!
U_Shallow	non-Rad	Nitrate	14797-55-8	3	3	0	100	µg/kg	0	0	6,590	8,510	0.13	8,510	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrate was not processed!
U_Shallow	non-Rad	Nitrite	14797-65-0	3	3	0	100	µg/kg	0	0	671	2,190	0.63	2,190	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nitrite was not processed!
U_Shallow	non-Rad	Selenium	7782-49-2	3	3	0	100	µg/kg	0	0	1,000	2,000	0.43	2,000	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Selenium was not processed!
U_Shallow	non-Rad	Strontium	7440-24-6	3	3	0	100	µg/kg	0	0	23,000	49,600	0.36	49,600	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Strontium was not processed!
U_Shallow	non-Rad	Styrene	100-42-5	1	1	0	100	µg/kg	0	0	0.38	0.38	0	0.38	Maximum Detect	Warning: This data set only has 1 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Styrene was not processed!

**Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 88 of 89)**

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
U_Shallow	non-Rad	Toluene	108-88-3	4	4	0	100	µg/kg	0	0	0.56	0.74	0.14	0.74	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Toluene was not processed!
U_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	3	3	0	100	µg/kg	0	0	354	618	0.27	618	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Total_U_Isotopes was not processed!
U_Shallow	non-Rad	Vanadium	7440-62-2	3	3	0	100	µg/kg	0	0	38,800	51,900	0.15	51,900	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Vanadium was not processed!
U_Shallow	non-Rad	Zinc	7440-66-6	3	3	0	100	µg/kg	0	0	28,500	45,300	0.23	45,300	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Zinc was not processed!
U_Shallow	Rad	Carbon-14	14762-75-5	3	1	2	33.33	pCi/g	1.3	2.2	1.7	1.7	0	1.7	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Carbon-14 was not processed!
U_Shallow	Rad	Cesium-137	10045-97-3	3	1	2	33.33	pCi/g	0.55	0.59	2.1	2.1	0	2.1	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cesium-137 was not processed!
U_Shallow	Rad	Neptunium-237	13994-20-2	3	1	2	33.33	pCi/g	0.28	0.28	0.60	0.60	0	0.60	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Neptunium-237 was not processed!
U_Shallow	Rad	Selenium-79	15758-45-9	3	1	2	33.33	pCi/g	2.3	2.9	2.8	2.8	0	2.8	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Selenium-79 was not processed!
U_Shallow	Rad	Strontium-90	10098-97-2	3	1	2	33.33	pCi/g	0.21	0.21	4.2	4.2	0	4.2	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Strontium-90 was not processed!

**Table 8-6. Waste Management Area C Exposure Point Concentration Summary (Sheet 89 of 89)**

Exposure Area	Analyte Group	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Detection Limit		Detection Result		Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
U_Shallow	Rad	Tin-126	15832-50-5	3	3	0	100	pCi/g	0	0	3.8	6.3	0.25	6.3	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin-126 was not processed!
U_Shallow	Rad	Uranium-233	13968-55-3	3	3	0	100	pCi/g	0	0	0.77	2.1	0.45	2.1	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233 was not processed!
U_Shallow	Rad	Uranium-234	13966-29-5	3	3	0	100	pCi/g	0	0	0.19	0.31	0.26	0.31	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-234 was not processed!
U_Shallow	Rad	Uranium-235	15117-96-1	3	3	0	100	pCi/g	0	0	0.0056	0.0089	0.22	0.0089	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-235 was not processed!
U_Shallow	Rad	Uranium-236	13982-70-2	3	1	2	33.33	pCi/g	0.0010	0.0010	0.0016	0.0016	0	0.0016	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-236 was not processed!
U_Shallow	Rad	Uranium-238	U-238	3	3	0	100	pCi/g	0	0	0.12	0.21	0.27	0.21	Maximum Detect	Warning: This data set only has 3 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!

BCA = bias-corrected accelerated bootstrap method  
 BTV = background threshold value

EPC = exposure point concentration  
 GOF = goodness-of-fit

KM = Kaplan-Meier  
 ROS = regression on order statistics

UCL = upper confidence limit

Table 8-7. Analytes With Recommended Upper Confidence Limits Greater Than the Maximum Detected Concentration (Sheet 1 of 2)

Exposure Area	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Units	Detection Limit		Detected Result		Coefficient of Variation	UCL	UCL Basis	Comment
							Minimum	Maximum	Minimum	Maximum				
A+B_Deep	Nitrate	14797-55-8	9	9	0	µg/kg	0	0	4,720	121,000	1.5	229,548	95% Hall's Bootstrap UCL	Recommended UCL exceeds the maximum observation. In Case Bootstrap t and/or Hall's Bootstrap yields an unreasonably large UCL value, use 97.5% or 99% Chebyshev (Mean, Sd) UCL. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
C_Deep	Chromium	7440-47-3	5	5	0	µg/kg	0	0	12,900	22,200	0.22	22,939	95% Student's-t UCL	Recommended UCL exceeds the maximum observation. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in EPA/600/R-02/084.
C_Deep	Lead	7439-92-1	5	5	0	µg/kg	0	0	2,390	3,650	0.17	3,675	95% Student's-t UCL	Recommended UCL exceeds the maximum observation. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in EPA/600/R-02/084.
C_Deep	Lithium	7439-93-2	5	5	0	µg/kg	0	0	6,570	9,230	0.13	9,344	95% Student's-t UCL	Recommended UCL exceeds the maximum observation. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in EPA/600/R-02/084.
C_Deep	Nitrite	14797-65-0	5	5	0	µg/kg	0	0	424	1,930	0.42	2,030	95% Student's-t UCL	Recommended UCL exceeds the maximum observation. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in EPA/600/R-02/084.
F+G_Deep	Nitrate	14797-55-8	11	11	0	µg/kg	0	0	1,940	192,000	1.9	253,299	99% Chebyshev (Mean, Sd) UCL	Recommended UCL exceeds the maximum observation. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. . These recommendations are based upon the results of the simulation studies summarized in EPA/600/R-02/084.
F+G_Shallow	Silver	7440-22-4	8	2	6	µg/kg	84.2	136	70.7	81.8	0.10	86.8	95% KM (t) UCL	Warning: Recommended UCL exceeds the maximum observation. Note: DL/2 is not a recommended method. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
H+I_Deep	Tritium	10028-17-8	9	2	7	pCi/g	3.8	102	2.7	89.2	1.3	176	99% KM (Chebyshev) UCL	Warning: Recommended UCL exceeds the maximum observation. Note: DL/2 is not a recommended method. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
H+I_Shallow	Tritium	10028-17-8	8	4	4	pCi/g	4.0	63.7	2.9	75.8	1.7	110	99% KM (Chebyshev) UCL	Warning: Recommended UCL exceeds the maximum observation. Note: DL/2 is not a recommended method. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
R_Deep	Barium	7440-39-3	5	5	0	µg/kg	0	0	51,200	75,500	0.15	76,477	95% Student's-t UCL	Recommended UCL exceeds the maximum observation. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in EPA/600/R-02/084.
R_Deep	Beryllium	7440-41-7	5	5	0	µg/kg	0	0	135	172	0.090	173	95% Student's-t UCL	Recommended UCL exceeds the maximum observation. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in EPA/600/R-02/084.

**Table 8-7. Analytes With Recommended Upper Confidence Limits Greater Than the Maximum Detected Concentration (Sheet 2 of 2)**

Exposure Area	Analyte	Chemical Abstracts Service #	Total Samples	Total Detects	Total Non-Detects	Units	Detection Limit		Detected Result		Coefficient of Variation	UCL	UCL Basis	Comment
R_Deep	Nickel	7440-02-0	5	5	0	µg/kg	0	0	9,190	14,600	0.17	14,750	95% Student's-t UCL	Recommended UCL exceeds the maximum observation. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in EPA/600/R-02/084.
R_Deep	Uranium-233	13968-55-3	5	5	0	pCi/g	0	0	1.0	1.7	0.19	1.7	95% Student's-t UCL	Recommended UCL exceeds the maximum observation. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in EPA/600/R-02/084.

UCL = upper confidence limit

Reference: EPA/600/R-02/084, *Technology Support Center Issue, Estimation of the Exposure Point Concentration Term Using a Gamma Distribution.*

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**ATTACHMENT**

**SOFTWARE INSTALLATION AND CHECKOUT FORM FOR ProUCL**

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## RPP-RPT-57218, Rev. 0

## ATTACHMENT

<b>CHPRC SOFTWARE INSTALLATION AND CHECKOUT FORM</b>	
<b>Software Owner Instructions:</b> Complete Fields 1-13, then run test cases in Field 14. Compare test case results listed in Field 15 to corresponding Test Report outputs. If results are the same, sign and date Field 19. If not, resolve differences and repeat above steps.	
<b>Software Subject Matter Expert Instructions:</b> Assign test personnel. Approve the installation of the code by signing and dating Field 21, then maintain form as part of the software support documentation.	
<b>GENERAL INFORMATION:</b>	
1. Software Name: <u>ProUCL Version 4.00.05</u>	Software Version No.: <u>4.0</u>
<b>EXECUTABLE INFORMATION:</b>	
2. Executable Name (include path): Path: c:\\$ Programs\ProUCLv4.00.05\ <del>pro</del> <i>PROUCL.exe</i>	
3. Executable Size (bytes): 1,240 KB	
<b>COMPILATION INFORMATION:</b>	
4. Hardware System (i.e., property number or ID): Acquired software; compiled by vendor (EPA)	
5. Operating System (include version number): Acquired software; compiled by vendor (EPA)	
<b>INSTALLATION AND CHECKOUT INFORMATION:</b>	
6. Hardware System (i.e., property number or ID): INTERA-00470	
7. Operating System (include version number): Windows 7 (64-bit) SP-1	
8. Open Problem Report? <input checked="" type="radio"/> No <input type="radio"/> Yes PR/CR No.	
<b>TEST CASE INFORMATION:</b>	
9. Directory/Path: c:\\$ Programs\ProUCLv4.00.05\	
10. Procedure(s): CHPRC-01270 Rev. 0, Section 13.3.3.9 (Software Test Plan)	
11. Libraries: N/A	
12. Input Files: ProUCL InstallationTestCase.xls	
13. Output Files: to screen	
14. Test Cases: ITC-ProUCL-1, Installation Test Problem	
15. Test Case Results: Passed	
16. Test Performed By: RE Dockter	
17. Test Results: <input checked="" type="radio"/> Satisfactory, Accepted for Use <input type="radio"/> Unsatisfactory	
18. Disposition (include HISI update): Installation added to HISI registry. -WE Nichols	

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CHPRC SOFTWARE INSTALLATION AND CHECKOUT FORM (continued)			
1. Software Name: <u>ProUCL Version 4.00.05</u>		Software Version No.: <u>4.0</u>	
Prepared By:			
19. <u>William E. Nichols</u> <small>Digitally signed by William E. Nichols DN: cn=William E. Nichols, o=CHPRC, ou=CHPRC, email=wnichols@chprc.com, c=US Date: 2012.05.24 09:48:29Z</small>	<u>WE Nichols</u>	Print	Date
20. Test Personnel:			
<u><i>Randy Dockter</i></u> Sign	<u>RE Dockter</u>	Print	<u>5-24-2012</u> Date
_____ Sign	_____	Print	Date
_____ Sign	_____	Print	Date
Approved By:			
21. _____	_____	Print	Date
Software SME (Signature)			