

3870

**PROJECT SPECIFIC PLAN FOR  
WASTE PITS REMEDIAL ACTION PROJECT  
SAMPLING OF WASTE BIN 4 CONTENTS FOR  
VINYL CHLORIDE**

**WASTE PITS REMEDIAL ACTION PROJECT**

**FERNALD ENVIRONMENTAL MANAGEMENT PROJECT  
FERNALD, OHIO**



September 26, 2001

**U.S. DEPARTMENT OF ENERGY  
FERNALD AREA OFFICE**

**10500-PSP-0001  
REVISION 0**

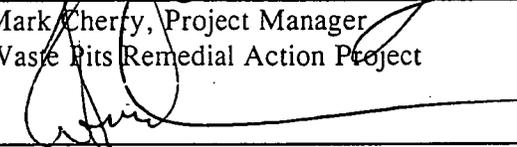
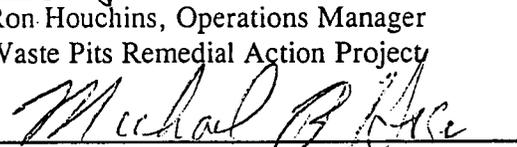
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WASTE PITS REMEDIAL ACTION PROJECT SAMPLING OF WASTE  
BIN 4 CONTENTS FOR VINYL CHLORIDE

10500-PSP-0001  
Revision 0

September 26, 2001

APPROVAL:

 _____ Mark Cherry, Project Manager Waste Pits Remedial Action Project	9-26-01 _____ Date
 _____ Ron Houchins, Operations Manager Waste Pits Remedial Action Project	9/26/01 _____ Date
 _____ Mike Hoge, Quality Assurance Waste Pits Remedial Action Project	9/26/01 _____ Date

FERNALD ENVIRONMENTAL MONITORING PROJECT

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## LIST OF ACRONYMS AND ABBREVIATIONS

ASL	analytical support level
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DQO	Data Quality Objective
IT	International Technology Corporation
mg/L	milligrams per liter
OU1	Operable Unit 1
PID	photoionization detector
ppm	parts per million
PSP	Project Specific Plan
QA	Quality Assurance
RCRA	Resource Conservation and Recovery Act
RWP	Radiological Work Permit
SCQ	Sitewide CERCLA Quality Assurance Project Plan
TAL	Target Analyte List
V/FCN	Variance/Field Change Notice
VOC	volatile organic compound
WPRAP	Waste Pit Remedial Action Project

## 1.0 INTRODUCTION

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### 1.1 PURPOSE

This project specific plan (PSP) has been developed to conduct sampling and analysis for vinyl chloride in waste currently stored in Waste Bin 4 within the Railcar Loadout Building (RLB) of the Waste Pit Remedial Action Project (WPRAP). The following objectives will drive the work performed under this PSP:

- Verify previous analytical results indicating that a portion of the waste in Bin 4 exceeds the level of leachable vinyl chloride permitted by the Waste Acceptance Criteria (WAC) for disposal of the waste at the Envirocare facility in Utah.
- Systematically segregate the waste currently in Waste Bin 4 into smaller, more manageable piles for sampling and identification purposes.
- Return material determined to be WAC compliant to rail loadout status and segregation/isolation of any waste determined to be WAC non-compliant, for appropriate management as RCRA characteristic hazardous waste.

### 1.2 BACKGROUND

The WPRAP Project has been operating under the requirements of an approved Sampling and Analysis Plan for Waste Pit Materials (SAP: approved by U.S. Environmental Protection Agency and Ohio Environmental Protection Agency as part of the Remedial Action Workplan). The SAP was developed to document sampling and analysis activities performed in support of the remedial action activities for the WPRAP. Specifically, it was prepared to support the transport of waste to and disposal at Envirocare of Utah, Inc. The objectives of the WPRAP SAP are to satisfy the requirements of the Operable Unit 1 Record of Decision, Envirocare's requirements for waste characterization, and to identify where additional sampling is required to further reduce the possibility of material rejection upon its arrival at Envirocare.

A graded approach to sampling and analysis of WPRAP waste is utilized to select appropriate analytes for material characterization. This list of analytes is based on Envirocare's sampling analyte list for waste receipt and a general knowledge of the Fernald waste pit contaminant concentration levels indicated by the OU1 Remedial Investigation.

The analysis for radiological constituents involves performing quantitative gamma spectroscopy on every composite bin (these bins are used for rail car loadout; each bin contains approximately six railcars of waste material) sample. Depending on the results of the gamma scan and additional testing, including

gamma spectroscopy, alpha spectroscopy, and/or inductively coupled plasma-mass spectroscopy (ICP-MS) may be performed to further identify and quantify the waste radiological constituents.

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The approach for characterizing the physical properties of the waste material involves analyzing a composite sample from each bin for moisture content, proctor density, free liquids (PFLT), and debris content. This information allows Envirocare to categorize and appropriately place the waste. It also aids Envirocare in certifying the waste placement after it is received.

The chemical properties of the waste material are determined by conducting analysis for pH, pyrophoricity, and the eight Toxicity Characteristic Leachate Procedure (TCLP) metals and zinc on every bin composite sample. Additionally, three discrete waste samples are taken from each bin and screened using a Photoionization Detector (PID). If the PID reading from any one of these samples exceeds the established action levels, then TCLP organic testing as well as polychlorinated biphenyls (PCB) analysis is performed on that sample.

On July 24, 2001, the on-site International Technology Analytical Laboratory (ITAL) received a composite sample from waste lot WAC-0328-B4 (i.e., Bin 4). The first of the three initial PID screens of the material measured a headspace volatile organics level (1179 parts per million) higher than the preshipment sample tolerances (788 parts per million), indicating the material was potentially Resource Conservation and Recovery (RCRA) characteristic waste. Per the SAP, a sample of the waste was submitted to an off-site laboratory for TCLP organics analysis.

On July 31, 2001, the off-site laboratory analytical results for WAC-0328-B4 were received by the on-site ITAL. Following a preliminary review of these results, approval was given to load the waste material in Bin 4 into railcars. Approximately an hour later, final review of the sample results identified an elevated level of vinyl chloride (a volatile organic compound included on the RCRA TCLP list of hazardous volatile organic substances) that had not been identified during the preliminary review of the analytical results. The vinyl chloride result from waste material associated with the first discrete PID screen sample slightly exceeded the TCLP regulatory limit (0.2 mg/L) by 0.05 mg/L.

Loading of the material from Bin 4 was stopped after one entire railcar (OHFX155) and another partial railcar (OHFX155, containing approximately 20 percent Bin 4 material, with the remainder from another bin) had been completed. These two railcars and the material remaining in the bin were secured and

isolated. Following the identification of the WAC non-compliant material, a detailed review was performed on the bin filling operations, sampling activities and documentation, railcar loading process, and the analytical results. The results of this review were utilized to prepare a path forward regarding this material.

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### 1.3 CONSTITUENT OF CONCERN

The constituent of concern (COC) in this PSP is vinyl chloride. The waste material in Bin 4 was sampled and analyzed for numerous Envirocare WAC and RCRA hazardous waste constituents. TCLP vinyl chloride was the only result to exceed waste characterization limits.

### 1.4 SCOPE

Under this PSP, physical samples will be collected from the waste material currently in Bin 4 to meet the objectives stated in Section 1.1. Following a review of the initial sampling results, material determined to be WAC compliant will be processed per standard operating procedures and any waste that exceeds the TCLP limit for vinyl chloride will be segregated and managed as WAC non-compliant waste. Any additional sampling activities required will be identified by a Variance/Field Change Notice to this PSP. Sampling activities carried out under this PSP will be performed in accordance with the Sitewide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Quality Assurance Project Plan (SCQ), and Data Quality Objective (DQO) SL-060, Revision 0 (Appendix B).

1.5 KEY PROJECT PERSONNEL

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The key project personnel are listed in Table 1-1.

**TABLE 1-1  
KEY PERSONNEL**

Title	Primary	Alternate
DOE Contact	Dave Lojek	John Hall
WPRAP Project Director	Mark Cherry	Monty Morris
WPRAP Operations Manager	Ron Houchins	Phil Limerick
Sampling Lead	Mark Couch	Lori Hurst
WAO Contact	Joe Jacoboski	Bob Bischoff
Laboratory Contact	Doug Taylor	Doug Draper
Data Management Lead	Tim Arnold	Bill Westerman
Data Validation Contact	Jim Chambers	Jim Cross
FACTS/SED Database Contact	Cara Sue Schaefer	Christa Blades
Quality Assurance Contact	Mike Hoge	Leslie Williams
Health and Safety Contact	Charlie Lineberry	Todd Valli

## 2.0 SAMPLING STRATEGY

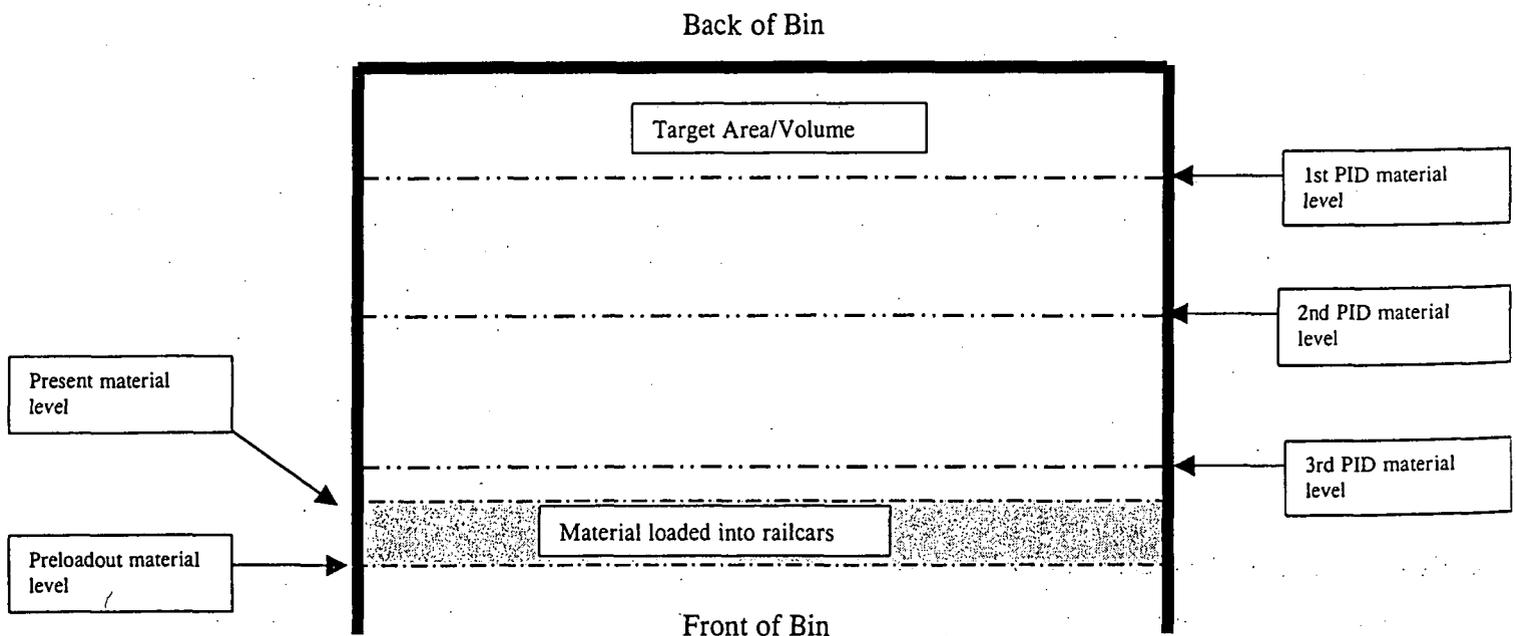
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### 2.1 EVALUATION OF BIN 4 MATERIAL

The PID screen result that was above the established action level came from a sample collected from the seventh front-end loader bucket used to fill the loadout bin. The PID result was 1179 ppm. The next two PID screens, which came from samples obtained from the 70th and 140th front-end loader buckets, were significantly lower (38.4 ppm and 31.5 ppm, respectively). These two PID screens represent the last two-thirds of the material placed in the bin. Based on these low results and process knowledge of the manner of filling the bin, the material that produced the elevated PID result is expected to be located against the back wall of the loadout bin and is identified as the Target Area/Volume shown in Figure 1.

Using a conservative estimate of seven front-end loader buckets prior to, and eight after, the high PID screen, the volume of target material is approximately 168 cubic yards (yd<sup>3</sup>), based on an average four yd<sup>3</sup>/bucket. This provides a target area approximately 18 feet out from the back wall and sloped at an angle to the top of the pile, approximately 12 ft high.

Figure 2-1: Bin 4 Plan View



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Bin and railcar loading operate on a last in first out basis so that the last material placed in a bin is the first material loaded into a railcar. Therefore, based on the low PID results from the final two screens, it is unlikely that the final two-thirds of material loaded into Bin 4 exhibited the same organic contaminant characteristics as the material associated with the elevated PID result and associated vinyl chloride detection. Material last placed in Bin 4 (front of bin) was used to fill railcar OHFX068 and part of railcar OHFX155 and is represented by the two low screening results. Because this material produced low PID screening results and is physically located at the opposite end of the bin from the Target Area/Volume, the material loaded into the railcars is considered to be WAC compliant and will not be sampled further. The volume of material left in Bin 4 is approximately 452 yd<sup>3</sup>; of this, 168 yd<sup>3</sup> is the target volume located on the back wall.

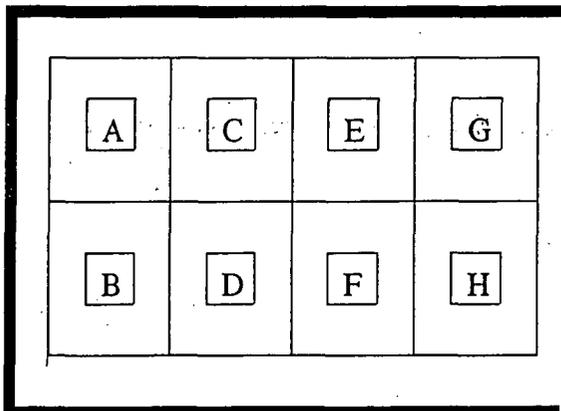
## 2.2 SAMPLING METHODOLOGY

A conservative sampling approach will be utilized to characterize the remaining material in Bin 4. Existing sampling procedures (IT Procedures AL-200-035, "Waste Sampling and Compositing" and AL-100-009, "Chain of Custody") will be used to gather data while segregating the bin volume into manageable units. Material exhibiting an elevated level of vinyl chloride within the bin volume will be identified and isolated. Material that does not exhibit elevated levels of vinyl chloride will be treated as WAC compliant waste and processed per standard operating procedures. Any segregated pile exhibiting vinyl chloride levels above the RCRA TCLP limit will then be managed as WAC non-compliant waste.

The sampling process has been designed to increase the sampling frequency (over the standard sampling frequency used to collect bin contents composite samples) during the process of moving/dividing the material into smaller piles. An open loadout bin will be used for material segregation. This bin shall have a two by eight foot section grid marked on the floor with surveyor's paint or a similar non-permanent marking device. These grids shall be designated as "A" through "H," from left to right, back to front, as shown in Figure 2-2. Volume estimates indicate that eight grid squares will be required, however, additional grid squares (i.e., I, J, K...) will be added as necessary. All grid squares containing material will be isolated and labeled.

Figure 2-2: Segregated Pile Identifiers

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Material will be moved from Loadout Bin 4 using a front-end loader, removing material evenly from the front, while working toward the back of the bin. The first 15 buckets of material will be placed in grid square "A", the next 15 buckets into grid square "B" and so on. A 400-gram grab sample shall be collected in a glass jar from each fifth loader bucket, providing three samples from each 15 bucket pile.

### 2.3 SAMPLE IDENTIFICATION

Bin sample identification numbers are listed in Table 2-1. Each identifier corresponds to a grid square and loader bucket number, allowing sample results to be related back to a specific location in the segregated material piles. The sample identification nomenclature will continue for any additional grid squares necessary. These samples will be transferred to the laboratory for PID analysis. If the PID analysis shows indications above the current action threshold (788 ppm) for a specific sample, that sample shall be sent to the off-site contract laboratory for TCLP volatile organic analysis for vinyl chloride. Sample analytical requirements are listed in Table 2-2.

Table 2-1: Bin Sample Identification Numbers

A-1	B-15	C-30	D-45	E-60	F-75	G-90	H-105
A-5	B-20	C-35	D-50	E-65	F-80	G-95	H-110
A-10	B-25	C-40	D-55	E-70	F-85	G-100	H-115*

\* The last bucket regardless of the number (i.e. H-113 if the 113 bucket is the last)

The grid squares that contain the target volume of material will be identified when they are placed. It is projected that grids E, F, G, & H will contain this material. If none of the samples exhibit a PID greater than the action level, then the two samples with the highest PID readings from the target volume will be selected for TCLP vinyl chloride analysis.

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Table 2-2: Sampling and Analytical Requirements

Analyte/TAL (Target Analyte List)	Sample Matrix	Lab	ASL	Preservation	Holding Time	Container	Sample Volume/ Mass
VOC (by PID) TAL A	Solid	On-site	A	N/A	ASAP after sample collection	glass, suitable for PID test	350-400 grams
TCLP VOC Vinyl Chloride TAL B	Solid	Off-site	B	Cool 2°-6° C	14 days	glass, with polyvinyl (or equivalent) coated lid	100 grams

#### 2.4 EQUIPMENT DECONTAMINATION

Decontamination is performed on the sampling equipment to protect worker health and safety and to prevent the introduction of contaminants into subsequent waste samples. Sampling equipment will be decontaminated in compliance with IT Procedure AL-200-035, "Waste Sampling and Compositing".

#### 2.5 WASTE DISPOSITION

All sample material remaining following both on-site and off-site laboratory analysis will be managed in compliance with IT Procedure AL-300-004, "Sample Off-Site Shipment and Return".

### 3.0 QUALITY ASSURANCE/QUALITY CONTROL REQUIREMENTS -

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#### 3.1 FIELD QUALITY CONTROL SAMPLES, ANALYTICAL REQUIREMENTS AND DATA VALIDATION

In accordance with the requirements of DQO SL-060, Revision 0 (see Appendix A), no field QC samples will be required. All off-site laboratory analytical data will be validated to ASL B and require a certificate of analysis and associated quality assurance/quality control results.

#### 3.2 PROJECT-SPECIFIC PROCEDURES, MANUALS AND DOCUMENTS

To assure consistency and data integrity, sampling activities in support of this PSP will follow the requirements and responsibilities outlined in controlled procedures and manufacturer operational manuals. Applicable procedures, manuals, and documents include:

- IT AL-100-009, Chain of Custody
- IT AL-200-033, Photo-Ionization Detector (PID) Screening
- IT AL-200-035 Waste Sampling and Compositing
- IT AL-300-004, Sample Off-site Shipment and Return
- IT AL-300-005, Analytical Laboratory Sample Login
- RM-0020, Radiological Control Requirements Manual
- RM-0021, Safety Performance Requirements Manual
- Sitewide CERCLA Quality Assurance Project Plan (SCQ)

#### 3.3 PROJECT REQUIREMENTS FOR INDEPENDENT ASSESSMENTS

Project management has ultimate responsibility for the quality of the work processes and the results of the sampling activities covered by this PSP. The QA organization may conduct independent assessments of the work processes and operations to assure the quality of performance. Assessments may encompass technical and procedural requirements of this PSP and the SCQ.

### 3.4 IMPLEMENTATION OF FIELD CHANGES

If field conditions require changes or variances, the project manager must prepare a V/FCN. The completed V/FCN must contain the signatures of all affected organizations, which at a minimum includes the Project Manager, Operations Manager, and Quality Assurance (QA). A time-critical variance may be obtained in cases where expedited approval is needed to avoid costly project delays. In the case of a time-critical variance, verbal or written approval (electronic mail is acceptable) must be received from the Operations Manager and from QA prior to implementing the variance. The completed approved V/FCN form must be completed within five working days after the time-critical variance is approved.

#### 4.0 HEALTH AND SAFETY

The Health and Safety Lead, Field Sampling Leads, and team members will assess the safety of performing sampling activities in the Waste Storage Area. This will include vehicle/equipment positioning limitations and fall hazards.

Technicians will conform to precautionary surveys performed by Radiological Control, Safety, and Industrial Hygiene personnel. All work on this project will be performed in accordance with applicable Environmental Monitoring procedures, RM-0020 (Radiological Control Requirements Manual), RM-0021 (Safety Performance Requirements Manual), Fluor Fernald work permit, Radiological Work Permit (RWP), and other applicable permits. Concurrence with applicable safety permits is required by each team member in the performance of their assigned duties.

Sampling project team members will also comply with any specific WPRAP requirements for activity conducted within the project area, including access restrictions, respiratory requirements, and health and safety briefings that may be required by International Technology (IT) procedures.

A safety briefing will be conducted prior to the initiation of sampling activities. All emergencies will be reported immediately to the site communication center at 648-6511 by cell phone, 911 by on-site phone, or by contacting "control" by portable radio.

## 5.0 DATA MANAGEMENT

A data management process will be implemented so information collected during the investigation will be properly managed to satisfy data end use requirements after completion of the sampling activities.

All sampling measurements, observations, and sample collection information associated with physical sample collection will be recorded, as applicable, on the sampling activity forms included in IT Procedure AL-200-035, Revision 5.

Samples will be assigned a unique sample number as explained in Section 2.3. This unique sample identifier will appear on all associated sampling documentation and will be used to identify the samples during analysis, data entry, and data management.

Analytical data that is designated for data validation will be forwarded to the Data Validation Group. Analytical data from the on- and off-site laboratories will be reviewed by the Data Management Lead prior to transfer of the data to the final database.

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FEMP-WPRAP BIN4 SAMPLING  
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September 26, 2001

## **APPENDIX A**

### **Data Quality Objective SL-060, Rev. 0**

DQO #: SL-060  
Effective Date: 8/22/01

Fernald Environmental Management Project

Data Quality Objective

Title: Investigation of Vinyl Chloride in Bin 4

Number: SL-060

Revision: 0

Effective Date: August 22, 2001

Contact Name: Tim Arnold

Approval: \_\_\_\_\_

James Chambers  
DQO Coordinator

Date: \_\_\_\_\_

Approval: \_\_\_\_\_

Mark Cherry  
WPRAP Project Director

Date: \_\_\_\_\_

Rev. #	0						
Effective Date:	8/22/01						

DQO #: SL-060  
Effective Date: 8/22/01

## DATA QUALITY OBJECTIVES Sitewide Certification Sampling and Analysis

### Members of Data Quality Objectives (DQO) Scoping Team

The members of the scoping team included individuals with expertise in QA, analytical methods, field sampling, statistics, laboratory analytical methods and data management.

### Conceptual Model of the Site

The WPRAP Project has been operating under the requirements of an approved Sampling and Analysis Plan for Waste Pit Materials (SAP: approved by USEPA & OEPA as part of the Remedial Action Workplan). The SAP was developed to document sampling and analysis activities performed in support of the remedial action activities for the Waste Pits Remedial Action Project (WPRAP). Specifically, it was prepared to support the transportation of waste and its disposal at Envirocare of Utah, Inc. The objectives for the WPRAP SAP are to satisfy the requirements of the Operable Unit 1 Record of Decision, Envirocare's requirements for waste characterization, and identify where additional sampling is required to further reduce the possibility of material rejection upon its arrival at Envirocare.

On July 24, 2001, the IT Analytical Laboratory (ITAL), received bin sample WAC-0328-B4. The initial screening test that led to the identification of the material as potential RCRA Characteristic waste was a Photoionization Detector (PID). The PID screen resulted in a sample being submitted for TCLP organics analysis. The PID screen on the material showed PID headspace levels higher than the preshipment sample tolerances. Per the SAP, analysis for TCLP organics were ordered based on the PID headspace action level of 788 ppm.

On July 31, 2001, the sample results for WAC-0328-B4 were received in the ITAL. Final review of the sample results identified slightly elevated levels of vinyl chloride that had been missed during the preliminary review. Vinyl chloride levels had exceeded the TCLP regulatory limit (0.2 mg/L) by 0.05 mg/L for the first discrete PID screen sample.

### 1.0 Statement of Problem

Levels of vinyl chloride slightly above the regulatory limit were discovered in Bin 4. The appropriate sampling, analytical and information management criteria must be developed to provide the required data necessary to determine the extent of vinyl chloride contamination in the bin. The appropriate analytical methodologies must be selected to provide the required data.

DQO #: SL-060  
Effective Date: 8/22/01

## 2.0 Identify the Decision

Determine the extent of vinyl chloride contamination in Bin 4 material with respect to the regulatory limit.

## 3.0 Inputs That Affect the Decision

**Informational Inputs** - The three PID readings previously performed on the bin material, the subsequent TCLP analysis, and knowledge of how the bin was loaded will be used to establish a sampling plan to delineate the extent of contamination above the regulatory limit. The project-specific plan will identify the optimal sampling density.

### **Contaminant-Specific Action Level**

The action level is based on the TCLP regulatory limit of 0.2mg/L for vinyl chloride.

### **Methods of Sampling and Analysis**

Physical soil samples will be collected in accordance with the currently applicable bin sampling procedures. As per the WPRAP SAP, laboratory analysis will be conducted at ASL B. The analytical method used will meet the required precision, accuracy and detection capabilities necessary to achieve the regulatory limit.

## 4.0 The Boundaries of the Situation

**Temporal Boundaries** - Sampling must be completed within a time frame sufficient to meet the remediation schedule. Time frames must allow for the scheduling of sampling and analytical activities, the collection of samples, analysis of samples and the processing of analytical data when received.

**Spatial Boundaries** - The boundaries of this DQO extend to the investigation area, which is Bin 4.

**Parameter of Interest** - The parameter of interest is vinyl chloride, since this is the analyte discovered in the original sampling.

## 5.0 Decision Rule

If existing data provide an unacceptable level of uncertainty in the delineation of vinyl chloride, then additional sampling will take place to decrease the uncertainty. When deciding what additional data is needed, the costs of additional sampling and analysis must be weighed against the benefit of reduced uncertainty.

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Effective Date: 8/22/01

## 6.0 Limits on Decision Errors

In order to be useful, data must be collected with sufficient density to ensure an accurate delineation of vinyl chloride concentrations. Analytical sensitivity and reproducibility must be sufficient to differentiate the vinyl chloride concentrations below the target level.

### Types of Decision Errors and Consequences

Decision Error 1 - This decision error occurs when the decision-maker determines that the extent of contaminated waste pit material above the regulatory limit is not as extensive as it actually is. This error could result in a material above the regulatory limit being shipped to Envirocare, which could result in returned train loads of material or require remediation at Envirocare.

Decision Error 2 - This decision error occurs when the decision maker determines that the extent of waste pit material contaminated above the regulatory limit is more extensive than it actually is. This error could result in the treatment of more waste pit material necessary.

True State of Nature for the Decision Errors - The true state of nature for Decision Error 1 is that the maximum extent of contamination above the regulatory limit is more extensive than was determined. The true state of nature for Decision Error 2 is that the maximum extent of contamination above the regulatory limit is less extensive as was determined. Decision Error 1 is the more severe error.

## 7.0 Optimizing Design for Useable Data

### 7.1 Sample Collection

Vinyl chloride is the analyte of concern. The PSP will identify the sampling density necessary to obtain the desired accuracy of the delineation. The PSP will also identify the sampling increments to be selectively analyzed. Analytical requirements will be listed in the PSP. The chosen analytical methodologies are able to achieve a detection limit capable of resolving the regulatory limit.

### 7.2 Vinyl Chloride Delineation

The media COC delineation will use all data collected under the PSP, including data obtained from physical samples and information obtained through PID screening.

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### 7.3 QC Considerations

#### Laboratory Analysis

As defined in the PSP, samples will be submitted to a FDF approved laboratory for analysis. All analyses will meet ASL B requirements per the SAP.

#### Data Assessment

All laboratory data will be assessed against the acceptance criteria given in the SAP.

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**Data Quality Objectives  
Sitewide Certification Sampling and Analysis**

1.A. Task/Description: Waste Acceptance Sampling and Analysis

1.B. Project Phase: (Circle the appropriate selection.)

RI      FS       RD      RA      RvA      Other (specify)

1.C. DQO No.: \_\_\_\_\_ DQO Reference No.: \_\_\_\_\_

2. Media Characterization: (Circle the appropriate selection(s).)

Air                      Groundwater                       Soil                      Waste                       Other (specify)  
Biological                      Sediment                      Surface Water                      Waste Water                      Waste Pit Material

3. Data Use with Analytical Support Level (A-E): (Circle the appropriate Analytical Support Level selection(s) for each applicable Data Use.)

Site Characterization	Risk Assessment
A <input checked="" type="checkbox"/> B   C   D   E	A   B   C   D   E
Evaluation of Alternatives	Engineering Design
A   B   C   D   E	A   B   C   D   E
Monitoring during remediation activities	Other (Certification)
A   B   C   D   E	A   B   C   D   E

4.A. Drivers: Waste Pit Remedial Action Plan (WPRAP), Envirocare Waste Acceptance Criteria, WPRAP Sampling and Analysis Plan for Waste Pit Materials.

4.B. Objective: Delineate the extent of soil contaminated with vinyl chloride in Bin 4.

5. Site Information (Description): The Envirocare specifies that the soil sent there for disposal must meet their Waste Acceptance Criteria. Analysis of the Bin 4 material is necessary to ensure soil sent to Envirocare does not exceed the regulatory limit.

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6.A. Data Types with appropriate Analytical Support Level Equipment Selection and SCQ Reference: (Circle the appropriate box or boxes selecting the type of analysis or analyses required. Then select the type of equipment to perform the analysis if appropriate. Please include a reference to the SCQ Section.)

- |   |  |   |
|---|--|---|
| 1. pH<br>Temperature<br>Specific Cond.<br>Diss. Oxygen<br>Technetium-99 | 2. Uranium<br>Full Radiological<br>Metals<br>Cyanide<br>Silica | 3. BTX<br>TPH<br>Oil/Grease                                       |
| 4. Cations<br>Anions<br>TOC<br>TCLP<br>CEC<br>COD                       | 5. VOA<br>BNA<br>Pesticides<br>PCBs                            | 6. Other (Specify)<br><input type="text" value="Vinyl Chloride"/> |

6.B. Equipment Selection Reference:

Equipment Selection	Reference
ASL A	Section:
ASL B Per SAP and PSP	Section: Per SAP and PSP
ASL C	Section:
ASL D	Section:
ASL E	Section:

7.A. Sampling Methods: (Circle the appropriate selection(s).)

- |   |                                       |  |  |                                 |
|---|---------------------------------------|--|--|---------------------------------|
| <input type="checkbox"/> Biased               | <input type="checkbox"/> Composite    | <input type="checkbox"/> Environmental | <input checked="" type="checkbox"/> Grab | <input type="checkbox"/> Grid   |
| <input checked="" type="checkbox"/> Intrusive | <input type="checkbox"/> Nonintrusive | <input type="checkbox"/> Random        | <input type="checkbox"/> Phased          | <input type="checkbox"/> Source |

7.B. Sample Work Plan Reference: Project Specific Plan for Bin 4 Sampling

Background samples: \_\_\_\_\_

7.C. Sample Collection Reference:

Sample Collection Reference: Associated PSP, WPRAP SOPs

DQO #: SL-060  
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8. Quality Control Samples: (Circle the appropriate selection.)

8.A. Field Quality Control Samples:

- |                           |                                |
|---------------------------|--------------------------------|
| Trip Blanks (VOCs Only)   | Container Blanks               |
| Field Blanks              | Duplicate Samples              |
| Equipment Rinsate Samples | Split Samples                  |
| Preservative Blanks       | Performance Evaluation Samples |
| Other (specify)           |                                |

No field QC samples will be taken. All positive results will be attributed to analyte levels in the soil.

8.B. Laboratory Quality Control Samples:

Method Blank
Matrix Spike

Matrix Duplicate/Replicate
Surrogate Spikes

Tracer Spike  
Other (specify)

9. Other: Please provide any other germane information that may impact the data quality or gathering of this particular objective, task or data use.