

Five-Year Review Report

Second Five-Year Review Report for Gurley Pit Superfund Site Edmondson, Arkansas



September 2002

Region 6
United States Environmental Protection Agency
Dallas, Texas



917453

DCN: 02-4412

**FIVE-YEAR REVIEW
Gurley Pit Superfund Site
EPA ID# ARD035662469
Crittenden County, Arkansas**

This memorandum documents the United States Environmental Protection Agency's (EPA's) performance, determinations, and approval of the Gurley Pit Superfund Site Second Five-Year Review Report.

Summary of Five-Year Review Findings

The results of this Second Five-Year Review, which covers the period since the First Five-Year Review dated January 1997, indicate that the remedy continues to be protective of human health and the environment. The Remedial Actions performed appear to be functioning as designed, and no deficiencies were noted that directly impact the protectiveness of the remedy. The site is secure, and the landfill cap vegetative cover is in very good condition. A ground water sampling event was completed in June 2002 and liquids from the leak detection and collection sumps were removed in August 2002. Analytical results obtained from this event indicate that the remedy continues to be protective of ground water.

Actions Needed

It is recommended that long-term Operation and Maintenance activities be implemented in accordance with the approved plans to ensure that the remedy remains protective of human health and the environment. Minor maintenance issues, as identified in this report, should be addressed as part of the long-term site Operation and Maintenance program.

Determinations


I have determined that the remedy for the Gurley Pit Superfund Site is protective of human health and the environment, and will remain so provided the action items identified in the Five-Year Review Report are addressed as described above.

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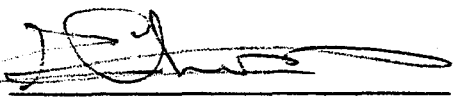
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CONCURRENCES


FIVE-YEAR REVIEW
Gurley Pit Superfund Site
EPA ID# ARD035662469

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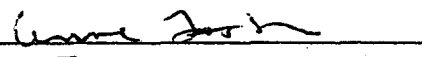
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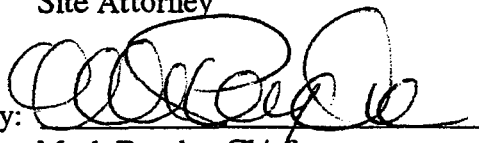
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SECOND FIVE-YEAR REVIEW REPORT
FOR THE
GURLEY PIT SUPERFUND SITE
EDMONDSON,
CRITTENDEN COUNTY, ARKANSAS

Prepared by:

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EPA Region	:	6
Date Prepared	:	September 24, 2002
Contract No.	:	68-W6-0036
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Executive Summary

The Second Five-Year Review of the Remedial Actions performed at the Gurley Pit Superfund Site located in Edmondson, Crittenden County, Arkansas, was completed in September 2002. This Five-Year Review covers the period since the First Five-Year Review was completed in January 1997. The current review indicates that the remedy continues to be protective of human health and the environment. The Remedial Actions appears to be functioning as designed, and the site is in good condition. No deficiencies were noted that directly impact the protectiveness of the remedy. To ensure the remedy continues to be protective, the approved Operations and Maintenance Plan and Sampling and Analysis Plan should be implemented. Some site monitoring wells and landfill cap drainage outfalls need minor repairs to keep them in good working order.

The remedy at the site was divided into two Operable Units (OUs). The Source Control Operable Unit (OU1) remedy, as stated in the Enforcement Decision Document signed on October 6, 1986, consisted of the treatment of contaminated surface waters; solidification of contaminated sludge, sediments, and soil and placement of this material in a Resource Conservation and Recovery Act (RCRA) compliant landfill; installation of an appropriate monitoring well network; and implementation of for long-term Operation and Maintenance. The Groundwater Operable Unit (OU2) Record of Decision (ROD), signed on September 26, 1988, concluded that no further action was necessary provided the source control measure was implemented. The Remedial Actions performed at the site have been implemented as planned and continue to be protective of human health and the environment.

In June 2002, the six site wells and one background well were sampled. Groundwater analytical results from the June 2002 sampling event indicate that the remedy continues to be protective of human health and the environment. Liquids present within the leak detection and the leachate collection sumps were removed in August 2002.

Table of Contents

Section	Page
Executive Summary	ES-1
List of Acronyms	iii
Five-Year Review Summary Form	iv
1.0 Introduction	1
2.0 Site Chronology	2
3.0 Background	2
3.1 Physical Characteristics	2
3.2 Land and Resource Use	3
3.3 History of Contamination	3
3.4 Initial Response	4
3.5 Basis for Taking Action	5
4.0 Remedial Actions	5
4.1 Remedy Objectives	5
4.2 Remedy Selection	6
4.3 Remedy Implementation	7
4.4 Operational and Functional Activities	7
4.5 Progress Since the Last Five-Year Review	10
5.0 Five-Year Review Process	11
5.1 Administrative Components	11
5.2 Community Involvement	11
5.3 Document Review	11
5.4 Data Review	12
5.5 Site Inspection and Field Investigation	12
5.6 Groundwater and Leachate Monitoring	13
5.7 Interviews	15
6.0 Technical Assessment	15
6.1 Question A	15
6.2 Question B	16
6.3 Question C	17
6.4 Technical Assessment Summary	17
7.0 Issues	18
8.0 Recommendations and Follow-up Actions	19
9.0 Protectiveness Statement	19
10.0 Next Review	19

Table of Contents

	Page
Figures	21
Figure 1: Site Location	21(a)
Figure 2: Site Plan	21(b)
Tables	22
Table 1: Chronology of Site Events	22(a)
Table 2: Quarterly Groundwater Sampling Results	22(b)
Attachments	23
Attachment 1: List of Documents Reviewed	23(a)
Attachment 2: Interview Record Forms	23(b)
Attachment 3: Site Inspection Checklist/Inspection Roster	23(c)
Attachment 4: Site Inspection Photographs	23(d)

List of Acronyms

ADEQ	Arkansas Department of Environmental Quality
ADPC&E	Arkansas Department of Pollution Control and Ecology
ARARs	Applicable or Relevant and Appropriate Requirements
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
EPA	United States Environmental Protection Agency
GRC	Gurley Refining Co., Inc.
NCP	National Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU1	Source Control Operable Unit
OU2	Groundwater Operable Unit
OUs	Operable Units
PCB	Polychlorinated Biphenyl
RAOs	Remedial Action Objectives
RCRA	Resource Conservation and Recovery Act
Report	Second Five-Year Review Report
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
USACE	Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Services

Five-Year Review Summary Form		
SITE IDENTIFICATION		
Site name (from WasteLAN): Gurley Pit Superfund Site		
EPA ID (from WasteLAN): ARD035662469		
Region: EPA Region 6	State: AR	City/County: Edmondson/Crittenden County
SITE STATUS		
NPL Status: <input type="checkbox"/> Final <input checked="" type="checkbox"/> Deleted <input checked="" type="checkbox"/> Other (specify):		
Remediation status (choose all that apply): <input checked="" type="checkbox"/> Under Construction <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Complete		
Multiple OUs? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Construction completion date: September 12, 1994	
Has site been put into reuse? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Portions of the site)		
REVIEW STATUS		
Reviewing agency: <input type="checkbox"/> EPA <input checked="" type="checkbox"/> State <input checked="" type="checkbox"/> Tribe <input checked="" type="checkbox"/> Other Federal Agency:		
Author: EPA Region 6, with support from RAC6 contractor CH2M HILL		
Review period: January 1997 through August 2002		
Date(s) of site inspection: July 25, 2002		
Type of review: <input checked="" type="checkbox"/> Statutory <input type="checkbox"/> Policy <input checked="" type="checkbox"/> Post-SARA <input type="checkbox"/> Pre-SARA <input checked="" type="checkbox"/> NPL-Removal only <input checked="" type="checkbox"/> Non-NPL Remedial Action Site <input checked="" type="checkbox"/> NPL State/Tribe-lead <input checked="" type="checkbox"/> Regional Discretion		
Review number: <input checked="" type="checkbox"/> 1 (first) <input type="checkbox"/> 2 (second) <input checked="" type="checkbox"/> 3 (third) <input checked="" type="checkbox"/> Other (specify):		
Triggering action: <input checked="" type="checkbox"/> Actual RA Onsite Construction <input checked="" type="checkbox"/> Actual RA Start <input checked="" type="checkbox"/> Construction Completion <input checked="" type="checkbox"/> Recommendation of Previous <input type="checkbox"/> Other (specify): First Five-Year Review Report		
Triggering action date (from WasteLAN): January 1997		
Due date (five years after triggering action date): 2002		

Five-Year Review Summary Form

Issues:

Water had collected inside the above grade protective casings of two of the onsite ground water monitoring wells, wells E and F. The water may have entered the casing around the locked protective casing lid. In the case of well E, water was within approximately one foot of the top of the PVC well casing. Water in the well F protective casing was only approximately six inches deep. A concrete pad around background monitoring well BG-30 was absent and the pad around well BG-31 was damaged.

The leak detection sump had a PVC discharge pipe extending in from the sump. The presence of this pipe prevents the locking cover from being closed. Consequently, the well is open to precipitation and vandals throwing trash down the pipe.

The wire mesh rodent barrier was missing from the outlet pipe located at the northwest corner and the south end of the capped area. The drainage pipe located near the southwest corner of the cap appears to have been damaged.

Ground water samples were collected from the six site wells and one background well in June, 2002, and the analytical results are comparable to previous sample results. Continued ground water sampling in accordance with the approved Operations and Maintenance Plan and Sampling and Analysis Plan should be implemented at the site in order to ensure future protectiveness.

Recommendations and Follow-up Actions:

The Operations and Maintenance Plan and Sampling and Analysis Plan should be implemented and the above minor maintenance issues should be addressed.

Protectiveness Statement(s):

Because the remedial action at all OUs are protective, the site is protective of human health and the environment.

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Other Comments:

The site appears to be in very good condition. The vegetative cover is well established and the site is properly secured with fencing, locks, and sign postings. Local community response, as documented on the Interview Forms, is positive.

Second Five-Year Review Report Gurley Pit Superfund Site

The United States Environmental Protection Agency (EPA) Region 6 has conducted a Five-Year Review of the Remedial Action implemented at the Gurley Pit Superfund Site for the period 1997 through September 2002. The Gurley Pit Superfund Site (or “site”) is located near Edmondson, Crittenden County, Arkansas. This is the Second Five-Year Review for this site. The purpose of a Five-Year Review is to determine whether the remedy at a site remains protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and recommendations to address them. This Five-Year Review Report (Report) documents the results of the review for this site, conducted in accordance with EPA guidance on Five-Year Reviews. EPA RAC6 contractor CH2M HILL provided support for conducting this review and the preparation of this report.

EPA guidance on conducting Five-Year Reviews is provided by OSWER Directive 9355.7-03B-P, *Comprehensive Five-Year Review Guidance (EPA, June 2001)* replaces and supercedes all previous guidance on conducting five-year reviews. Guidance provided in this document has been incorporated into the Second Five-Year Review performed for the site.

1.0 Introduction

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) call for Five-Year Reviews of certain Remedial Actions. EPA policy also calls for Five-Year Reviews of Remedial Actions in some other cases. The statutory requirement to conduct a Five-Year Review was added to CERCLA as part of the Superfund Amendments and Reauthorization Act of 1986 (SARA). The EPA classifies each Five-Year Review as either “statutory” or “policy” depending whether it is being required by statute or is being conducted as a matter of policy. This Five-Year Review for the site is being conducted as a matter of policy.

It is a Remedial Action selected pre-SARA (in a ROD signed on October 6, 1986), and contaminants remain onsite above levels that allow for unlimited use and unrestricted exposure (EPA, 1986). The triggering action for this review is the date of the previous Five Year Review, which was signed on January 9, 1997 (EPA, 1997).

2.0 Site Chronology

A chronology of significant site events and dates is included in **Table 1**, provided at the end of the report text. The table provides citations to reports where the information is documented and the references are listed in **Attachment 1**, Documents Reviewed.

3.0 Background

This section describes the physical setting of the site, including a description of the land use, resource use, and environmental setting. Finally, this section briefly describes the history of contamination associated with the site, the initial response actions taken at the site, and the basis for each action.

3.1 Physical Characteristics

The site is located 1.2 miles north of the City of Edmondson, in Crittenden County, Arkansas. It is on the northwest corner of the intersection of County Roads 14 and 175. The site is located within the floodplain of Fifteen Mile Bayou, a tributary of the St. Francis River. The site is surrounded to the north, west, and south by soybean fields. To the east of the site, across County Road 175, are two residences. There are a total of five residences within a half-mile radius of the site. The City of Edmondson, located 1.2 miles to the south of the site, has about 500 residences). **Figure 1** presents the site location and **Figure 2** is a site plan.

The site originally consisted of one large pit which was excavated for the clay material contained within this area. Gurley Refining Company later leased the property from Robert Caldwell for use as a disposal area in 1970. The site was divided into three pits for disposal of sludges from the refining of used oil with major contaminants including lead, barium, zinc, and polychlorinated

biphenyls (PCBs) (EPA, 1997).

The area is generally flat, sloping gently toward Fifteen Mile Bayou. There are three major ground water aquifers at the following depths: 90 to 200 feet below ground surface (bgs); 300 to 1125 feet bgs; and 1400 to 1700 feet bgs. The shallow aquifer is used for domestic wells. Due to the water quality of the shallow aquifer, most of the domestic wells are used for agricultural irrigation purposes. The middle aquifer is comparatively undeveloped, and the deep aquifer is used for municipal wells. The residences in the vicinity of the site are supplied with drinking water from the Midway Water Association municipal well located in the deep (1,585 feet) aquifer, which is 2.2 miles southeast of the Site (EPA, 1997).

3.2 Land and Resource Use

The site is surrounded to the north, west, and south by soybean farms. East of the site, across County Road 175, are two residences. There are a total of five residences within a half-mile radius of the site. The City of Edmondson is located 1.2 miles south of the site (EPA, 1986).

3.3 History of Contamination

Gurley Refining Company (GRC), leased the property from property owner, Robert Caldwell, for use as a disposal area in 1970. The site was divided into three pits for disposal of sludges from the refining of used oil with major contaminants including lead, barium, zinc, and PCBs. Waste disposal operations were permitted by the Arkansas Department of Pollution Control and Ecology (ADPC&E) from 1970 until 1975 (EPA, 1997).

In May 1975, an inspection by the ADPC&E revealed that GRC was discharging contaminated stormwater from the pit into Fifteen Mile Bayou without treatment. ADPC&E notified GRC they had one year to implement site cleanup and remedial measures. In October 1975, GRC said that it had closed the part of their refining operation which generated the wastes disposed at the site. In December 1975, GRC notified ADPC&E that waste disposal at the site had ceased and that the site was secure. Releases to the bayou from the pit were documented in both 1978 and 1979

(EPA, 1997).

3.4 Initial Response

During 1978, personnel from the United States Fish and Wildlife (USFWS) reported to EPA and ADPC&E that chronic overflows from the pit due to accumulated stormwater had resulted in damage to fish and waterfowl in the bayou. On July 12, 1978, GRC responded to EPA requests to contain and clean up the stormwater discharges. GRC vacuumed oil from areas outside the pit and pumped untreated stormwater into Fifteen Mile Bayou. EPA and ADPC&E halted this discharge of contaminated stormwater to the bayou. By July 28, 1978, the spill was cleaned up by EPA, and water levels in the pit were lowered sufficiently to provide adequate capacity for further rainfall (EPA, 1998).

During the first week of April 1979, heavy rainfall caused extensive flooding in Fifteen Mile Bayou. In response to citizen complaints, ADPC&E performed an inspection. This inspection revealed that 400,000 to 500,000 gallons of oil contained in the pit had been washed onto adjoining farmland, borrow ditches, adjacent roads, and into Fifteen Mile Bayou some six miles downstream of the Site. EPA Region 6 ordered a contractor cleanup of the site under Section 311(c) of the Clean Water Act (CWA). Periodic pumping of stormwater from the pit continued during the summer and fall of 1979 (EPA, 1998).

The site was proposed for inclusion on the NPL in December 1982 and listed on the NPL in August 1983. The site was divided into two Operable Units (OUs): Source Control (OU1) and Groundwater (OU2). EPA conducted a Remedial Investigation/Feasibility Study (RI/FS) for OU1 in April 1986. The RI/FS included an investigation of the characteristics of the wastes contained in the pits and contaminated soil and surface water, as well as an evaluation of remedial alternatives. Based on the information presented in the RI/FS report, a remedy was selected in the ROD signed on October 6, 1986 for OU1 (EPA, 1998).

From April 1987 to July 1988, a groundwater RI investigation was conducted to address ground

water potentially contaminated by the site. A ROD for OU2 was signed on September 26, 1988. The OU2 ROD concluded that no further action was necessary for groundwater provided the Source Control remedy was implemented. (EPA, 1998).

3.5 Basis for Response Actions

Response actions were necessary at the site to address contamination resulting from chronic overflows from the pit into adjoining farmland, borrow ditches, adjacent roads, and into Fifteen Mile Bayou. These overflows had adverse effects on fish and waterfowl. The sludge, soil, sediments, and oil contained in the pit were contaminated with lead, barium, zinc and PCBs (EPA, 1986).

4.0 Remedial Actions

This section provides a description of the Source Control (OU1) ROD remedy objectives, selection, and implementation. It also describes the process through which minor modifications to the Source Control remedy have been implemented, the ongoing Operation and Maintenance (O&M), and the overall progress made at the site. No Remedial Actions were necessary for ground water (OU2) provided the Source Control remedy was implemented (EPA, 1988).

4.1 Remedy Objectives

The Remedial Action Objectives (RAOs) defined for OU1 were to: (1) adequately protect against physical contact with oily waste material and contaminated stormwater; (2) minimize damage to and provide adequate protection to the groundwater from migrating contaminants; (3) adequately protect against the discharge of contaminated stormwater to Fifteen Mile Bayou; (4) adequately protect against site inundation by the 100 year flood of Fifteen Mile Bayou; (5) adequately protect against potential emissions into the air; and (6) prevent spreading of material by flooding to offsite areas (EPA, 1986).

4.2 Remedy Selection

The remedy selected for OU1 was defined to include the following::

- An onsite water treatment unit to provide both physical and chemical treatment resulting in NPDES compliance, with treated water discharged to Fifteen Mile Bayou. Solid contaminants removed from the water would be disposed of with the pit sludge;
- Removal of oil from the water with an oil/water separator. Incineration of oil in an offsite PCB- approved incinerator;
- Excavation and stabilization of pit sludge, sediments and contaminated soil, with disposal of stabilized material onsite;
- Construction of a RCRA-compliant onsite landfill with an appropriate ground water monitoring system;
- Placement of stabilized waste material in the onsite RCRA landfill;
- Installation of appropriate monitoring wells, and provisions for long-term operation and maintenance for the RCRA landfill and related monitoring wells.

During the Remedial Design it was determined that an insignificant change to the remedy in the OU1 ROD was necessary from a cost and constructability standpoint. This change involved moving the location of the RCRA landfill from the north pit to the south pit. This was deemed necessary because the north pit contained approximately 85% of the contaminated materials. Rather than moving the contaminated materials out of the north pit for construction of the landfill, the south pit (which contained less volume of contaminated material) was used for construction of the landfill. This was a more efficient and cost effective approach in terms of material handling (EPA, 1997).

4.3 Remedy Implementation

Full-scale construction activities implementing the source control remedy commenced on November 13, 1992. Remedial activities were conducted as planned, and no additional areas of contamination were identified. The EPA, ADPC&E and the Army Corps of Engineers (USACE)

conducted a pre-final inspection of the site on August 12, 1994, and a final inspection on August 31, 1994. A letter from EPA to the USACE on September 12, 1994, certified that the Remedial Action construction activities were performed according to the Remedial Design package.

4.4 Operational and Functional Activities

The ROD called for implementation of a ground water monitoring and leachate water sampling and analysis/removal program at the site associated with the RCRA landfill, and included maintenance of the associated sumps, fence, and the site wells. Ground water samples are to be analyzed for total organic carbon (TOC) and three metals: barium, lead, and zinc. Because sediments in ground water samples affect observed concentrations of inorganics, dissolved (filtered) metals samples have been used to provide a reliable indication of ground water quality. Six new monitoring wells (MW-A through MW-F) were installed and developed onsite during the Remedial Action, and two off-site existing monitoring wells (MW-30 & MW-31) were included in the monitoring program. Monitoring wells MW-30 and MW-31 serve as background monitoring wells and are also known as BG-30 and BG-31. Results from ground water monitoring events from 1994 to present are provided in **Table 2**.

The final inspection for the Source Control remedy was completed on August 31, 1994. In September 1995, the end of the first year of operation, there was a significant volume of liquid observed in the leak detection and leachate collection systems. The ADPC&E was concerned that this liquid might indicate the liner had been damaged during landfill construction. Measurements were made which indicated that the liquid was approximately eight (8) feet in depth, but the total volume of liquid within the landfill was unknown. Removal (pumping) of liquids was principally from the secondary leak detection sump, which was attributed to significant rainfall events during the landfill construction process. Based upon the volume of water present in the two collection systems, it was decided by EPA and the ADPC&E that the site could not be considered to be Operational and Functional as defined in 40 CFR(Code of Federal Regulations) Part 300.435(f)(2).

Based on the volume of liquid in the leak detection systems, and in accordance with 40 CFR Part

300.435(f)(2), the one-year O&F period was extended by the EPA. By an interagency agreement, EPA continued to utilize the USACE for activities at the Site. In October 1995, Halliburton Services was contacted to cut additional slots into the sump pipes using a hydrojet to increase the volume of liquid that could enter the sumps. After the slots were cut, the recharge of the water into the sump pipes increased appreciably. The USACE secured a contractor and installed a permanent electrical supply box, flow meter, pump high and low limit switches, circuit and wiring modifications for automated water pumping activities, project signs, and performed site mowing and other related activities. The USACE staff began pumping operations on May 20, 1996, and pumped 63,530 gallons of non-contaminated water through March 12, 1997 (**EPA, 1998**). Pumping continued until January 1999.

Griffin Electric of West Memphis, Arkansas was contracted to install a control system on one of the pumps that would turn the pumps on and off automatically according to the water levels in the sump pipe. A flow totalizer was installed to record the amount of water removed from the landfill. Operational shakedown and system performance was completed on July 11, 1997, after which the system was set up to run automatically. The contractor pumped 5,820 gallons of water during the shakedown period while perfecting the control system. On July 25, 1997, the totalizer read 7,170 gallons pumped on full automatic mode, which was only a 86.4 gallons per day average over the last eleven-day average. Average daily readings further decreased in August to 26.0 gallons per day between 23rd through 28th, with the total pumped through August 28, 1997, being 71,570 gallons. This total includes the above-referenced 63,530 gallons (**EPA, 1998**).

The results of the test analyses for contaminant concentrations in the pumped and tank-stored waters were below the maximum stated in the ROD, as applicable for surface discharge. Therefore, the water was discharged to surface flow. The presence of this water was ultimately attributed to the heavy rainfall received during construction of the landfill, which evidently saturated the sand drainage system in the landfill. Because the significant volume of liquids were attributable to the heavy rains received during construction and since pumping rates substantially

decreased over time, it was determined that the presence of liquid in the sumps did not indicate any problems with the remedy nor the integrity of the landfill (EPA, 1998).

Ground water elevations were monitored quarterly throughout the duration of the extended O&F activities and related pumping. The ground water elevations in the site monitoring wells did not appear to be affected by the water pumping activities in the sumps. This indicated that the hydraulic conditions in the landfill are not in hydraulic connection with the ground water.

Several types of data were collected over the course of USACE O&F activities, including recharge rate to the sumps, volumetric data, hydraulic characteristics and analytical data. Based upon this data, the final engineering report prepared by USACE concluded that the site landfill currently appeared to be Operational and Functional as designed and constructed. The following items were presented to support this conclusion (EPA, 1998):

- Recharge rates into the detection and collection sumps continued to decrease throughout the USACE pumping period, refuting the possibility of a major influx of water table flow and/or re-occurring rainwater into the pit during or between the pumping events.
- The volume of water pumped continued to steadily decrease over each pumping event or work period, further negating the possibility of major infiltration of groundwater and/or bearing evidence of minimum rainfall permeability of the landfill.
- The comparison of elevation data collected over the course of the USACE work period did not indicate hydraulic communication between the pumping water and the water-bearing zone which is being monitored.
- Similarities in types of chemical constituents detected in the samples collected by USACE in both the primary and secondary leachate collection systems indicate that the two systems may be in hydraulic communication. A general trend in the data was that the majority of the water pumped was from the secondary detection system.
- Contaminant concentrations have remained consistently low and uniform in the ground water monitoring events.

4.5 Progress Since Last Five-Year Review

Since the First Five Year Review conducted in January 1997, one ground water sampling event has occurred at the site. In June 2002, EPA conducted ground water sampling at the six onsite wells (Well A, Well B, Well C, Well D, Well E, and Well F), the leachate collection sump and leak detection sump, and one background well (BG-31). The other background well (BG-30) was not sampled due to an insufficient volume of water in the well. Samples were submitted for dissolved metals and total organic carbon analysis. The concentrations of monitored constituents were consistent with historical values. Results are presented on **Table 2**.

The liquid accumulated in the leak detection and leachate collection sumps since the USACE pumping stopped was measured and removed by EPA in August 2002. Measurements indicated that 3.04 feet and 1.38 feet of liquid were present in the leak detection and the leachate collection sumps, respectively. The liquid was removed by the existing site pumps that are installed in each sump; the pumps were determined to be operational during this event. The estimated volume of water purged from the leak detection sump was approximately 870 gallons. The estimated volume of water purged from the leachate collection sump was approximately 320 gallons. Based upon the analytical results and concurrence with EPA and the Arkansas Department of Environmental Quality (ADEQ), the leachate water and well purge waters were discharged onsite.

5.0 Five-Year Review Process

This Five-Year Review has been conducted in accordance with the EPA's Comprehensive FiveYear Review Guidance, dated June 2001 (**EPA, 2001**). Interviews were conducted with relevant parties, a site inspection was conducted, and a review of applicable data and documentation covering the period of the review was evaluated. The findings of the review are described in the following sections.

5.1 Administrative Components

The Second Five Year Review for this site was initiated by the EPA in April 2002, when the EPA

Contractor, CH2M HILL, received work plan approval and, was tasked by the EPA to perform the technical components of the review. The components of the review included community involvement, document review, standards review, data review, one round of ground water sampling and leachate removal, site inspection, interviews, and development of the report, as described below.

5.2 Community Involvement

This report will be placed in the information repositories located for this site at the EPA Region 6 office in Dallas, Texas, and the ADEQ Office in Little Rock, Arkansas. A public notice will be issued by EPA announcing completion of the Five Year Review and the availability of the report in the information repositories.

5.3 Document Review

The Five Year Review included a review of relevant documents. A list of the documents reviewed can be found in **Attachment 1**.

5.4 Data Review

Existing site data was reviewed as part of this Five-Year Review. The document review process identified relevant data for use in completing this report.

5.5 Site Inspection and Field Investigation

A site inspection was conducted on July 25, 2002. The inspection was conducted by one representative of EPA, two employees of RAC6 contractor CH2M HILL, and three representatives from ADEQ. The purpose of the inspection was to assess current site conditions as they relate to the protectiveness of the remedy. The site-inspection checklist is included as **Attachment 3**, and photographs taken during the site inspection are included as **Attachment 4**.

The site inspection established that it is in good condition, and only minor maintenance issues should be addressed. There was no visible evidence of vandalism or dumping. The perimeter

fence was in good condition and the gate was locked (**Photograph Nos. 1, 8, 9, 11, 16, 19, 21, 22**). Signs were properly posted and secured to the site fence at appropriate intervals. The site is covered by heavy vegetative growth, primarily Bermuda grass with a few weeds and wildflowers (**Photograph Nos. 3, 8, 16, 17, 18, 19, 20, 21**). There was no deep rooted vegetation present such as trees or shrubs. There was no visible evidence of erosion or settlement on the capped area of the site.

All existing ground water monitoring wells (onsite wells and offsite background wells) were located during the site inspection (**Photograph Nos. 2, 9, 10, 11, 13, 14, 23, 24**). All six of the above-grade completions for the onsite ground water monitoring wells, wells MW-A through MW-F, were secure and in good condition. New keyed-alike locks were installed on all site wells and the two offsite background wells. Water had collected inside the above-grade protective casings of two of the onsite ground water monitoring wells, wells MW-E and MW-F. The water may have entered the casing around the locked protective casing lid. In the case of well MW-E, water was within approximately one foot of the top of the PVC well casing. Water in well MW-F protective casing was only approximately six inches deep. Both of the background ground water monitoring wells, BG-30 (**Photograph No. 24**) and BG-31 (**Photograph No. 23**), have flush completions. Both of these wells were secure; however, there was no concrete pad around BG-30, and the concrete pad at BG-31 was broken.

The surface completions for the leachate collection sump and the leak detection sump, located at the top-center of the capped area, were found to be in good condition (**Photograph No. 6**). Both of the sumps were equipped with dedicated submersible pumps that were operable. At the time of the site inspection the leak detection sump had a PVC discharge pipe extending out from the sump. The discharge pipe is connected to the dedicated pump and discharges liquid when the pump is operational. The presence of this pipe prevents the locking cover from being closed. Consequently, the well is open to precipitation and possibly rodent intrusion.

All of the drainage layer outlet pipes for the capped area were located. Four of the drainage outlets

are located within the fenced area, two on the west side (one northwest and one southwest) and one on the north and one on the south ends of the capped area (**Photograph Nos. 4, 5, 7, 12, 15**). These outlet pipes were inspected. The wire mesh rodent barrier was missing from the outlet pipe located at the northwest corner and the south end of the capped area (**Photograph Nos. 7, 15**). The drainage pipe located near the southwest corner of the cap appears to have been damaged (**Photograph No. 5**). Two drainage layer outlet pipes are located outside of the fence on the east side of the capped area. These outlet pipes were not inspected because heavy undergrowth, including poison ivy, restricted access.

The two passive gas vents were found to be in good condition (**Photograph No. 21**). The outlet for each was covered with a mesh rodent barrier.

5.6 Groundwater and Leachate Monitoring.

The ROD called for implementation of a ground water monitoring and leachate water sampling and analysis program at the site. The ROD states that ground water samples should be collected on an annual basis. An Operation and Maintenance Plan and Sampling and Analysis Plan was developed by ADEQ and approved by EPA in January, 1999. As part of this Five-Year Review for the site, a ground water sampling and leachate removal event was conducted by EPA. ADEQ has indicated that it will initiate operation and maintenance activities following EPA's Five-Year review sampling and leachate removal.

The ground water and leachate monitoring was conducted on June 19 and 20, 2002, by EPA. This event was conducted in accordance with the procedures described in the Sampling and Analysis Plan (consisting of a Field Sampling Plan and a Quality Assurance Project Plan) (CH2M HILL, 2002a) and the Field Health and Safety Plan (CH2M HILL, 2002b). The height of the liquid in the leak detection sump and the leachate collection sump was measured. Samples were collected from the six site wells (MW-A through MW-F) and one background well (BG-31). Background well BG-30 was not sampled due to an insufficient volume of ground water in the well. Samples were also collected from the leak detection sump and the leachate collection sump. Samples were

collected from the six site wells and the one background well using low-flow sampling techniques. An electric submersible pump was used to purge the wells and collect the samples. All wells were purged until the water quality criteria stabilized in accordance with the Sampling and Analysis Plan (EPA, 2002a). The samples from the two sumps were collected using dedicated Teflon bailers.

Samples collected from the site monitoring wells were analyzed for TOC and dissolved barium, lead, and zinc. Samples collected from the two sumps were analyzed for TOC and total barium, lead, and zinc. The dissolved metal and total organic carbon concentrations detected during the most recent sampling event are consistent with the concentrations detected during previous sampling events. Results from this sampling event and certain other ground water sampling activities can be found on **Table 2**.

The height of the leachate was measured at 3.09 feet in the leak detection sump and at 2.59 feet in the leachate collection sump. Based upon the analytical results from the sampling event, EPA and ADEQ determined that the leachate was acceptable for discharge to the ground surface on site. Pumping and discharge of the leachate to the heavy vegetative grass surface was conducted on August 14, 2002.

5.7 Interviews

Interviews for this Five-Year Review were conducted with one representative from ADEQ, one from the City of Edmondson, and one local resident. All interview responses were positive regarding the site. The representative from the City of Edmondson indicated that he would like to see some form of re-development or re-use of the site, if it would be feasible and safe. Interview Record Forms are provided in **Attachment 2**.

6.0 Technical Assessment

The Five Year Review must determine whether the remedy at a site is protective of human health and the environment. The EPA guidance describes three questions used to provide a framework

for organizing and evaluating data and information and to ensure all relevant issues are considered when determining the protectiveness of a remedy. These questions are assessed for the site in the following paragraphs. At the end of the section is a summary of the technical assessment.

6.1 Question A: Is the Remedy Functioning as Intended by the Decision Documents?

The results of this Five Year Review indicate the remedy is functioning as intended by the Source Control ROD. The cap is in good condition, and the site is secure and well posted. The recent ground water monitoring results show no significant change in ground water quality associated with the RCRA landfill. Limited leachate was detected in the two site sumps which was subsequently pumped from the sumps and discharged to the ground surface.

6.2 Question B: Are the Exposure Assumptions, Toxicity Data, Cleanup Levels, and RAOs Used at the Time of the Remedy Selection Still Valid?

The purpose of this question is to evaluate the effects of any significant changes in standards or assumptions used at the time of remedy selection. Changes in promulgated standards or “to be considered” (TBCs) and assumptions used in the original definition of the Remedial Action may indicate an adjustment in the remedy is necessary to ensure the protectiveness of the remedy.

The RAOs used in the original remedy selection included: (1) adequate protection against physical contact with oily waste material and contaminated stormwater; (2) minimization of damage to and providing adequate protection to the groundwater from migrating contaminants; (3) adequate protection against the discharge of contaminated stormwater to Fifteen Mile Bayou; (4) adequate protection against site inundation of site contaminants by the flooding of Fifteen Mile Bayou; (5) adequate protection against potential emissions into the air; and (6) prevention of spreading of material by flooding to offsite areas (**EPA, 1986**). The selected remedy has met the RAOs for the site. No known changes to toxicity data, cleanup levels, or exposure assumptions were identified as part of this Five Year Review which effect the validity of the RAOs.

Superfund Remedial Actions are required to meet all Federal standards that are determined to be

legally applicable or relevant and appropriate requirements (ARARs) under Section 121 (d)(2)(A) of CERCLA, as amended by SARA. In addition to the Federal ARARs, all State ARARs enforced by ADEQ, which are equal to or more stringent than Federal regulations and laws, must be met.

The following Federal regulations and laws, as presented and identified in the Source Control ROD (EPA, 1986) and the First Five Year Review (EPA, 1997), were determined to have an impact on the remedy at the site:

RCRA: Applicable to the hazardous waste landfill and ground water monitoring program. RCRA establishes the minimum requirements for the construction and monitoring of hazardous waste landfills. A liner system, leachate collection system, and multi-layer cap were incorporated into the hazardous waste landfill design and construction according to RCRA regulations listed under 40 CFR Part 264. A ground water monitoring system was constructed according to RCRA regulations as listed under 40 CFR Part 264, Subpart F. An O&M program through the State of Arkansas was developed according to 40 CRF Part 264, Subpart N.

The ADEQ and the Federal RCRA regulations have not been revised so as to call into question the effectiveness of the remedy selected for the site.

6.3 Question C: Has any Other Information Come to Light that Could Call into Question the Protectiveness of the Remedy?

The Five Year Review identifies no other information, such as, new potential future land use changes in the vicinity of the site, other expected changes in site conditions or exposure pathways that might call into question the protectiveness of the selected remedy.

6.4 Technical Assessment Summary

Based upon the data reviewed as part of this Five Year Review, the site inspection, the interviews, and the ground water and leachate monitoring event, the Source Control remedy is functioning as intended by the ROD. There have been no observed changes in the physical conditions at the site that would affect the protectiveness of the remedy. The ARARs for the site have been met, and there have been no known changes to exposure routes, toxicity values, or cleanup levels that would affect the remedy. There is no other additional information that would call into question the protectiveness of the selected remedy.

7.0 Issues

No major issues were identified as part of this Five Year Review for the period covering January 1997 through August 2002. Five minor maintenance issues were identified as a result of the site inspection:

- The presence of water between the protective casing and well riser pipe at site wells MW-E and MW-F.
- One damaged landfill cap drainage outfall pipe located on the southwest side of the landfill.
- Two landfill cap drainage outfall pipes with rodent barrier screens missing, one on the northwest side and one on the south end of the landfill.
- The concrete flush mount pad around background well BG-30 is missing and the pad around well BG-31 is cracked and damaged.
- The protective casing cap cannot be closed on the leak detection sump due to the PVC pipe extending from the sump.

The Source Control ROD requires ground water monitoring to be performed at the site on an annual basis, and that regular O&M activities be performed to protect the integrity of the landfill and ensure site security. The most recent ground water sampling event was completed as part of this Five Year Review in June 2002. Previous to this, the last sampling event was completed in June 1997. While analytical results indicate that concentrations in ground water have not significantly changed during this period, the ground water monitoring required by the ROD, and as described in the approved ADEQ O&M Plan and Sampling and Analysis Plan, should be implemented. In addition, regular O&M activities should be administered in accordance with the approved ADEQ O&M Plan.

8.0 Recommendations and Follow-up Actions

It is recommended that long-term Operation and Maintenance activities be implemented in accordance with the approved ADEQ O&M Plan and SAP to ensure that the remedy remains protective of human health and the environment. The trapped water identified in site wells MW-E and MW-F can be removed, and further prevented, by installing weep drainage holes at the bottom of the protective casing. This measure should be done to all site wells as a preventative measure. New rodent screens should be attached to the two outfall pipes. New concrete pads should be placed around background wells BG-30 and BG-31. The PVC discharge line from the leak detection sump should be reconfigured so that the protective casing cap can be properly closed and secured.

9.0 Protectiveness Statement

The remedy for the Gurley Pit Superfund Site is protective of human health and the environment and will remain so provided the action items identified in this Five-Year Review Report are addressed.

10.0 Next Review

The Next Five Year Review, the third for the site, should be completed on or before August 2007. This review should occur whether or not, in the interim, the site has been deleted from the NPL. It is EPA's policy that the Five Year Review requirement is independent of and unaffected by the process by which sites are deleted from the NPL.

Figures

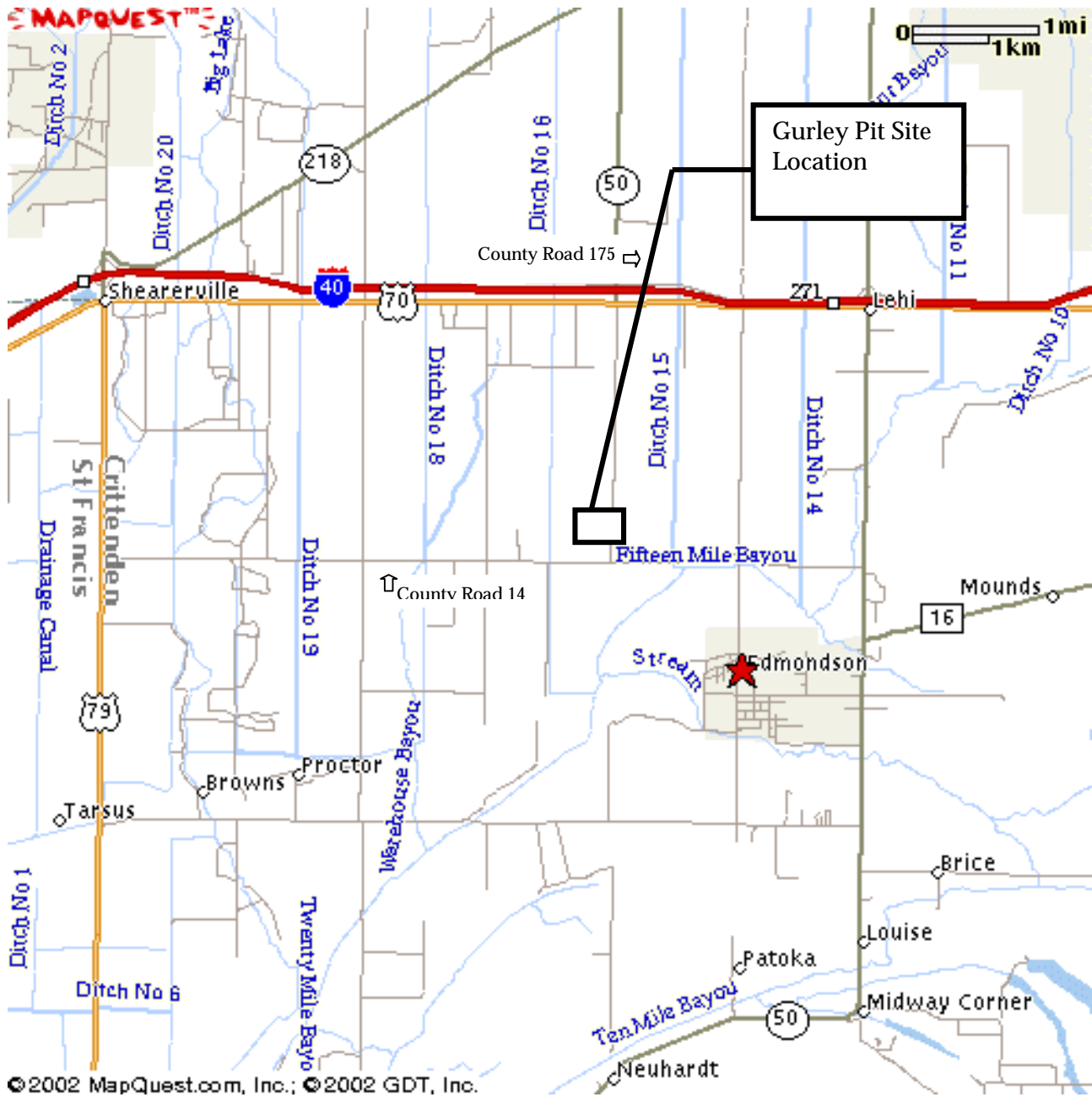


Figure 1
Site Location Map
Gurley Pit Superfund Site
Edmondson, Arkansas



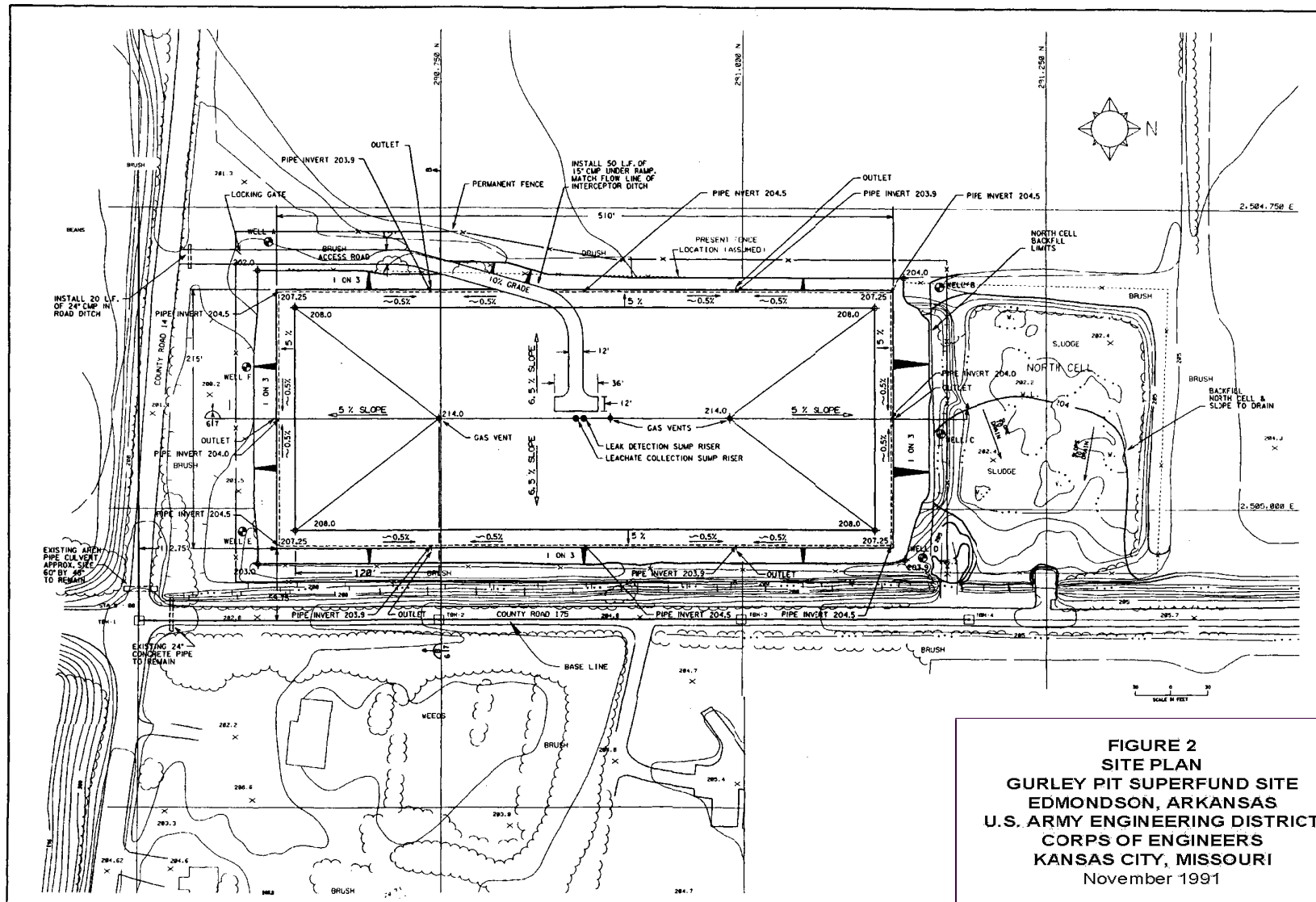


FIGURE 2
SITE PLAN
GURLEY PIT SUPERFUND SITE
EDMONDSON, ARKANSAS
U.S. ARMY ENGINEERING DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI
 November 1991



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Tables

Well ID	Sample Date	Dissolved Barium (ppm)	Dissolved Lead (ppm)	Dissolved Zinc (ppm)	Total Organic Carbon (ppm)	pH-1 ⁽¹⁾	pH-2	pH-3	pH-4
WELL A	10-Nov-94	0.262	0.006	0.091	4.2	8.30	8.10	8.00	8.00
	13-Feb-95	0.333	0.010	0.037	4.6	7.10	7.50	7.50	7.60
	25-May-95	0.293	0.006	0.050	4.1	7.28	7.30	7.26	7.29
	17-Aug-95	0.278	0.004	0.103	<3.0	6.50	6.54	6.82	7.03
	9-Nov-95	0.319	<0.00	0.026	4.1	7.31	7.01	7.04	6.98
	4-Apr-96	0.269	0.006	0.023	5.8	6.65	5.75	5.26	5.19
	30-Aug-96	0.270	<0.04	0.013	2.0	7.00	6.97	6.93	6.96
	Duplicate	0.270	<0.04	0.012	1.9	--	--	--	--
	Triplicate	0.263	<0.10	0.085	<1.0	--	--	--	--
	14-Nov-96	0.270	<0.04	0.008	1.9	7.18	6.97	6.94	6.93
	12-Mar-97	0.230	<0.04	0.002	1.6	7.24	7.18	7.20	7.19
	25-Jun-97	0.150	<0.04	0.100	3.7	7.09	7.12	7.13	7.08
19-Jun-02	0.261	<0.003	<0.020	3.0	5.93	5.94	5.94	5.95	
WELL B	10-Nov-94	0.648	0.025	0.147	3.5	8.30	8.10	8.10	8.10
	13-Feb-95	0.459	0.014	0.067	5.2	7.00	7.50	7.60	7.60
	25-May-95	0.348	0.004	0.048	4.7	7.40	8.02	7.41	7.40
	17-Aug-95	0.568	0.018	0.103	<3.0	6.15	6.74	6.97	7.14
	9-Nov-95	0.511	0.013	0.072	4.0	6.88	6.86	6.85	6.82
	4-Apr-96	0.363	0.006	<0.02	14.7	6.66	6.20	6.81	6.98
	30-Aug-96	0.330	<0.04	0.014	2.0	6.76	6.79	6.83	6.79
	14-Nov-96	0.320	<0.04	0.007	1.9	7.24	6.97	6.88	6.93
	12-Mar-97	0.320	<0.04	0.012	2.6	7.28	7.21	7.24	7.20
	25-Jun-97	0.330	<0.04	0.009	2.5	7.11	7.25	7.29	7.30
19-Jun-02	0.330	<0.003	<0.020	2.0	5.77	5.77	5.75	5.79	

Well ID	Sample Date	Dissolved Barium (ppm)	Dissolved Lead (ppm)	Dissolved Zinc (ppm)	Total Organic Carbon (ppm)	pH-1 ⁽¹⁾	pH-2	pH-3	pH-4
WELL E	10-Nov-94	*	*	*	*	*	*	*	*
	13-Feb-95	0.831	0.029	0.147	6.8	7.50	7.60	7.60	7.60
	25-May-95	0.584	0.013	0.077	5.1	7.37	7.34	7.35	7.31
	17-Aug-95	0.362	<0.003	0.027	<3.0	6.81	7.02	7.23	7.14
	9-Nov-95	0.614	0.016	0.086	4.4	6.70	6.41	5.44	4.33
	4-Apr-96	0.436	0.009	0.038	4.6	7.10	7.20	6.85	6.70
	30-Aug-96	0.380	<0.04	0.013	1.7	6.98	6.76	7.00	6.99
	14-Nov-96	0.350	<0.04	0.026	1.8	7.16	7.01	6.97	6.96
	12-Mar-97	0.330	<0.04	<0.00	3.8	7.27	7.25	7.19	7.22
	25-Jun-97	0.260	<0.04	0.076	2.8	7.26	7.27	7.22	7.19
	20-Jun-02	0.423	<0.003	<0.020	3.0	6.11	6.12	6.14	6.15
WELL F	10-Nov-94	1.210	0.068	0.413	3.6	8.20	8.00	8.00	8.00
	Duplicate	1.320	0.068	0.455	3.3	--	--	--	--
	Triplicate	0.957	<0.050	0.188	< 1.0	--	--	--	--
	13-Feb-95	0.589	0.030	0.138	4.7	7.50	7.60	7.70	7.90
	Duplicate	0.562	0.027	0.126	6.9	--	--	--	--
	Triplicate	0.612	<0.050	0.166	1.9	--	--	--	--
	25-May-95	0.536	0.020	0.123	4.2	7.50	7.34	7.43	7.38
	17-Aug-95	0.344	0.008	0.051	3.1	7.80	7.50	7.40	7.60
	9-Nov-95	0.380	0.006	0.040	3.9	6.70	6.91	6.85	7.22
	4-Apr-96	0.321	0.004	<0.02	4.4	6.26	6.44	6.22	6.26
	30-Aug-96	0.330	<0.04	0.015	1.5	6.93	6.96	6.91	6.94
	14-Nov-96	0.310	0.04	0.015	1.8	6.94	6.89	6.89	6.88
	12-Mar-97	0.320	<0.04	0.021	1.8	--	--	--	--
	25-Jun-97	0.250	<0.04	0.080	2.6	7.11	7.15	7.17	7.21
	20-Jun-02	0.367	<0.003	<0.020	2.0	6.58	6.58	6.59	6.59

Well ID	Sample Date	Dissolved Barium (ppm)	Dissolved Lead (ppm)	Dissolved Zinc (ppm)	Total Organic Carbon (ppm)	pH-1 ⁽¹⁾	pH-2	pH-3	pH-4
LEAK DETECTION SUMP	10-Nov-94	0.061	0.006	<0.020	<3.0	9.90	9.50	9.30	9.10
	13-Feb-95	0.034	<0.003	<0.020	<3.0	--	--	--	--
	25-May-95	0.351	0.007	0.022	9.5	--	--	--	--
	17-Aug-95	0.534	<0.003	<0.020	29.5	--	--	--	--
	9-Nov-95	1.480	0.008	<0.020	131.0	--	--	--	--
	4-Apr-96	2.260	0.008	<0.020	67.1	--	--	--	--
	30-Aug-96	0.200	<0.04	0.007	310.0	--	--	--	--
	14-Nov-96	0.095	<0.04	0.002	270.0	--	--	--	--
	12-Mar-97	0.380	<0.04	0.002	240.0	6.79	6.70	6.71	--
	25-Jun-97	1.400	0.093	0.045	250.0	7.59	8.06	8.23	8.43
LEACHATE SUMP	19-Jun-02	0.146	0.018	0.138	78.0	--	--	--	--
	20-Jun-02	0.057	0.022	0.098	103.0	--	--	--	--

Notes:

ppm = parts per million

* Obstructed Well

** Dry Well

"--" Information Not Recorded / Not Available on Historic Records

11/10/1994 Incomplete Sampling Event, Not Accepted

(1) = pH values recorded for samples collected on June 19 & 20, 2002, are the last 4 measurements recorded during the purging process.

Attachment 1
Documents Reviewed

Attachment 1 Documents Reviewed

- CH2M HILL, Inc. 2002a. *Final Sampling and Analysis Plan for Groundwater Sampling, Gurley Pit Superfund Site, Edmondson, Arkansas*. May 7, 2002.
- CH2M HILL, Inc. 2002b. *Health and Safety Plan, Gurley Pits Superfund Site, Edmondson, Arkansas*. May 10, 2002.
- United States Army Corps of Engineers (USACE), 1992. *Sludge Solidification, Landfill Construction, and Water Treatment Drawings, Gurley Pits, Edmondson, Crittenden County, Arkansas*. 1992
- United States Environmental Protection Agency (EPA), 2002. Office of Solid Waste and Emergency Response Directive 9355.7-03B-P, *Comprehensive Five-Year Review Guidance*. June 2002
- United States Environmental Protection Agency (EPA), 1997. *First Five-Year Review Report, Gurley Pit Superfund Site, Edmondson, Crittenden County, Arkansas*. January, 1997.
- United States Environmental Protection Agency (EPA), 1986. *Record of Decision for Operable Unit 1 (Source Control Enforcement Decision Document), Gurley Pit Superfund Site, Edmondson, Arkansas*. October 6, 1986.
- United States Environmental Protection Agency (EPA), 1988. *Record of Decision for Operable Unit 2 (Groundwater Enforcement Decision Document), Gurley Pit Superfund Site, Edmondson, Arkansas*. September 26, 1988.
- United States Environmental Protection Agency (EPA), 1998. *Summary of Remedial Alternative Selection, Gurley Pit Site Groundwater Operable Unit, Edmondson, Crittenden County, Arkansas*. September, 1998.
- United States Environmental Protection Agency (EPA), 1998. *Superfund Site Close Out Report, Final Operable Unit Remedial Action, Gurley Pit Superfund Site, Edmondson, Arkansas*. July 31, 1998.

Attachment 2
Interview Record Forms

Attachment 2 Interview Record Forms

INTERVIEW DOCUMENTATION FORM			
The following is a list of individual interviewed for this five-year review. See the attached contact record(s) for a detailed summary of the interviews.			
Name	Title/Position	Organization	Date of Interview
Kin Siew	Project Manager	ADEQ	07/25/2002
Sherry Smith	Not Applicable	Local Resident	07/25/2002
Edward Coleman	Fire Chief	City of Edmondson, Arkansas	08/28/2002

Second Five-Year Review Interview Record Gurley Pit Edmondson, Arkansas		Interviewee: Kin Siew, P.E./ Project Manager, Arkansas Department of Environmental Quality (ADEQ)			
Site Name		EPA ID No.		Date of Interview	Interview Method
Gurley Pit Superfund Site		EPA ID# ARD035662469		7/25/02	In person
Interview Contacts	Organization	Phone	Email	Address	
Ernie Franke, P.E.	EPA Region 6	214-665-2178	Franke.Ernest@epamail.epa.gov	1445 Ross Ave Dallas, Texas 75204	
Scott Irving	CH2M HILL, as rep of EPA	972-980-2170	sirving@ch2m.com	12377 Merit Dr. 10 th Floor Dallas, Texas 75251	
Interview Questions (Please address the period since the first five-year review was completed in January 1997)					
<p>1. From your perspective, what effect have remedial actions at the site had on the surrounding community since completion of the first five-year review on January 9, 1997? Are you aware of any community concerns regarding the site or its operation and administration?</p> <p>Response: Mr. Siew indicated that he has received no comments from anyone since taking over the project approximately 2 years ago.</p>					
<p>2. Have there been routine communications or activities conducted by your office regarding the site since the first five-year review? If so, please describe purpose and results.</p> <p>Response: Mr. Siew indicated that the only routine communication is with EPA and there has been no other communication with any other parties.</p>					

3. Are you aware of any events, incidents, or activities that have occurred at the site since the first five-year review, such as dumping, vandalism, trespassing, or emergency response from local authorities? If so, please give details.

Response: Mr. Siew indicated that there were no incidents, such as those stated above, that he was aware of having occurred at the site.

4. Since the first five-year review have there been any complaints, violations, or other incidents related to the site that required a response by your office? If so, please summarize the events and result.

Response: Mr. Siew indicated that there have been no complaints, violations, or other incidents related to the site that have required a response by ADEQ.

5. Have there been any changes in state environmental standards since the last five-year review which may call into question the protectiveness or effectiveness of the remedial action.

Response: Mr. Siew indicated that he is not aware of any changes to state environmental standards that would call into question the protectiveness or effectiveness of the remedial action.

6. Have there been opportunities to optimize the operation, maintenance, or sampling efforts since the first five-year review? Please describe the changes and resultant or desired cost savings or improved efficiency.

Response: Mr. Siew is not aware of any opportunities that have been identified to optimize the operation, maintenance, or sampling efforts since the first five-year review.

7. Do you feel well-informed about the site's condition and status since the first five-year review?

Response: Mr. Siew indicated that he was comfortable with the level of information pertaining to the site.

8. Do you have any comments, suggestions, or recommendations regarding the remedy for the site or its operation and administration since the first five-year review?

Response: Mr. Siew indicated that the State suggests that EPA pump leachate from the leak detection system.

Second Five-Year Review Interview Record Gurley Pit Edmondson, Arkansas		Interviewee: Local Resident Sherry Smith 998 Mudline Road Box 41 Edmondson, AR 72332			
Site Name		EPA ID No.		Date of Interview	Interview Method
Gurley Pit Superfund Site		EPA ID# ARD035662469		7/25/02	In person
Interview Contacts	Organization	Phone	Email	Address	
Ernie Franke, P.E.	EPA Region 6	214-665-2178	Franke.Ernest@epamail.epa.gov	1445 Ross Ave Dallas, Texas 75204	
Scott Irving	CH2M HILL, as rep of EPA	972-980-2170	sirving@ch2m.com	12377 Merit Dr. 10 th Floor Dallas, Texas 75251	
Interview Questions (Please address the period since the first five-year review was completed in January, 1997)					
1. From your perspective, what effect have remedial actions at the site had on the surrounding community since completion of the first five-year review on January 9, 1997? Are you aware of any community concerns regarding the site or its operation and administration?					
Response: Ms. Smith indicated she has no problems with the site and that the site is fenced nicely. Ms. Smith indicated that it is something nicer to look at than what it was before.					
2. Since the first five-year review, do you have any concerns regarding the remedy at the site?					
Response: Ms. Smith indicated that she did not have any concerns regarding the remedy at the site.					

3. Are you aware of any community concerns regarding the site or its operation and administration since the first-five year review?

Response: Ms. Smith indicated that she is not aware of any community concerns regarding the site or its operation and administration.

4. Are you aware of any events, incidents, or activities that have occurred at the site, such as dumping, vandalism, trespassing, or emergency response from local authorities since the first five-year review? If so, please give details.

Response: Ms. Smith indicated that she was not aware of any of the above stated issues pertaining to the site.

5. Do you feel well-informed about the site's condition and status since the first five-year review?

Response: Ms. Smith indicated that she was well informed about the sites status and condition.

6. Do you have any comments, suggestions, or recommendations regarding the remedy for the site or its operation or administration?

Response: Ms. Smith indicated that she had no comments or suggestions pertaining to the site.

Second Five-Year Review Interview Record Gurley Pit Edmondson, Arkansas		Interviewee: Representative from City of Edmondson, Arkansas Edward Coleman - Fire Chief Volunteer Fire Dept. of Edmondson, AR. 61 Waterford, Edmondson, AR 72332			
Site Name		EPA ID No.		Date of Interview	Interview Method
Gurley Pit Superfund Site		EPA ID# ARD035662469		08/28/02	Telephone 870-733-9430
Interview Contacts	Organization	Phone	Email	Address	
Ernie Franke, P.E.	EPA Region 6	214-665-2178	Franke.Ernest@epamail.epa.gov	1445 Ross Ave Dallas, Texas 75204	
Scott Irving	CH2M HILL, as rep of EPA	972-980-2170	sirving@ch2m.com	12377 Merit Dr. 10 th Floor Dallas, Texas 75251	
Interview Questions (Please address the period since the first five-year review was completed in January, 1997)					
<p>1. From your perspective, what effect have remedial actions at the site had on the surrounding community since completion of the first five-year review on January 9, 1997? Are you aware of any community concerns regarding the site or its operation and administration?</p> <p>Response: Mr. Coleman expressed no concerns pertaining to the site, but did indicated that he would be interested or would like to see the potential re-development of the site if it would be safe to do.</p>					
<p>2. Since the first five-year review do you have any concerns regarding the remedy at the site or its maintenance and administration?</p> <p>Response: Mr. Coleman expressed no concerns pertaining to the site and indicated that he felt the site was well maintained.</p>					

3. Have there been routine communications or activities conducted by your office regarding the site since the first five-year review? If so, please describe purpose and results.

Response: Mr. Coleman indicated that there have been no routine communications or activities conducted by his office regarding the site since he became Fire Chief in 2000.

4. Are you aware of any events, incidents, or activities that have occurred at the site, such as dumping, vandalism, trespassing, or emergency response from local authorities since the first five-year review? If so, please give details.

Response: Mr. Coleman indicated that there have been no problems at the site that required a response from his office. He indicated that the site is well maintained and he has not observed any dumping or vandalism, and that the site is well posted with signs.

5. Have there been any complaints, violations, or other incidents related to the site that required a response by your office since the first five-year review? If so, please summarize the events and result.

Response: Mr. Coleman indicated that no fire or emergency calls have been received by his department regarding this site.

6. From the city's perspective what future use would be preferred for the property?

Response: Mr. Coleman indicated that if feasible and safe, he would like to see something done to help beautify the site and possibly have it turned into a park..

7. Do you feel well-informed about the site's condition and status since the first five-year review?

Response: Mr. Smith indicated that he feels comfortable with current site awareness and feels that the site is safe.

8. Do you have any comments, suggestions, or recommendations regarding the remedy for the site or its operation or administration?

Response: Mr. Coleman indicated that he had no comments or suggestions specific to operation or administration, but would like to see some form of re-development or re-use of the site if feasible and safe.

Attachment 3
Site Inspection Checklist

2. Local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency: ADEQ

Contact:

Name: Kin Siew

Title: Engineer Supervisor, Inactive Sites Branch

Date: 07/25/2002

Phone Number: 501-682-0855

Problems, suggestions: Additional report attached (if additional space required).

Agency: Volunteer Fire Department, Edmondson, Arkansas

Contact:

Name: Edward Coleman

Title: Fire Chief

Date: 08/28/2002

Phone Number: 870-735-6946

Problems, suggestions: Additional report attached (if additional space required).

Agency:

Contact:

Name:

Title:

Date:

Phone Number:

Problems, suggestions: Additional report attached (if additional space required).

Agency:

Contact:

Name:

Title:

Date:

Phone Number:

Problems, suggestions: Additional report attached (if additional space required).

3. Other interviews (optional) N/A Additional report attached (if additional space required).

Local Resident: Ms. Sherry Smith, Edmondson, Arkansas (07/25/2002)

Interview Record Forms are provided in Attachment 2 to the Five-Year Review Report.

III. ONSITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)				
1. O&M Documents	<input type="checkbox"/> O&M Manuals	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> As-Built Drawings	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Maintenance Logs	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<u>Remarks:</u>				
2. Health and Safety Plan Documents	<input type="checkbox"/> Site-Specific Health and Safety Plan	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Contingency plan/emergency response plan	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<u>Remarks:</u>				
3. O&M and OSHA Training Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
<u>Remarks:</u>				
4. Permits and Service Agreements	<input type="checkbox"/> Air discharge permit	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Effluent discharge	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Waste disposal, POTW	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Other permits	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<u>Remarks:</u>				
5. Gas Generation Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
<u>Remarks:</u>				
6. Settlement Monument Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
<u>Remarks:</u> Monuments were not observed during the site inspection. Documents reviewed as part of this five-year review do not clearly indicate that they were installed.				
7. Groundwater Monitoring Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
<u>Remarks:</u> Historic analytical records are contained in the Five-Year Review Report (EPA, 1997).				
8. Leachate Extraction Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
<u>Remarks:</u> Historic leachate measurements and extraction information is contained in the Five-Year Review Report (EPA, 1997)				
9. Discharge Compliance Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
<u>Remarks:</u>				
10. Daily Access/Security Logs	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
<u>Remarks:</u>				

IV. O&M Costs				<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1. O&M Organization					
<input checked="" type="checkbox"/> State in-house	<input type="checkbox"/> Contractor for State				
<input type="checkbox"/> PRP in-house	<input type="checkbox"/> Contractor for PRP				
<input type="checkbox"/> Other:					
2. O&M Cost Records					
<input type="checkbox"/> Readily available		<input type="checkbox"/> Up to date		<input type="checkbox"/> Funding mechanism/agreement in place	
Original O&M cost estimate: \$21,000/year		<input type="checkbox"/> Breakdown attached (described in report)			
<u>Total annual cost by year for review period if available</u>					
<u>From (Date):</u>	<u>To (Date):</u>	<u>Total cost:</u>	<input type="checkbox"/> Breakdown attached		
<u>From (Date):</u>	<u>To (Date):</u>	<u>Total cost:</u>	<input type="checkbox"/> Breakdown attached		
<u>From (Date):</u>	<u>To (Date):</u>	<u>Total cost:</u>	<input type="checkbox"/> Breakdown attached		
<u>From (Date):</u>	<u>To (Date):</u>	<u>Total cost:</u>	<input type="checkbox"/> Breakdown attached		
<u>From (Date):</u>	<u>To (Date):</u>	<u>Total cost:</u>	<input type="checkbox"/> Breakdown attached		
3. Unanticipated or Unusually High O&M Costs During Review Period					<input checked="" type="checkbox"/> N/A
<u>Describe costs and reasons:</u>					
V. ACCESS AND INSTITUTIONAL CONTROLS					
				<input type="checkbox"/> Applicable	<input type="checkbox"/> N/A
A. Fencing					
1. Fencing damaged					
<input type="checkbox"/> Location shown on site map		<input checked="" type="checkbox"/> Gates secured		<input type="checkbox"/> N/A	
<u>Remarks:</u> Site fencing and gate are in good condition; no signs of damage or vandalism.					
B. Other Access Restrictions					
1. Signs and other security measures					
<input type="checkbox"/> Location shown on site map				<input type="checkbox"/> N/A	
<u>Remarks:</u> Signs are present at regular intervals along fence; in good condition and were readily visible.					

C. Institutional Controls			
1. Implementation and enforcement			
Site conditions imply ICs not properly implemented:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Site conditions imply ICs not being fully enforced:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Type of monitoring (e.g, self-reporting, drive by): Site visits and quarterly groundwater monitoring visits			
Frequency:			
Responsible party/agency: ADEQ			
Contact:			
Name: Kin Siew			
Title: Engineer Supervisor, Inactive Sites Branch			
Date:			
Phone Number: 501-682-0855			
Reporting is up-to-date:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Reports are verified by the lead agency:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Specific requirements in deed or decision documents have been met:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Violations have been reported:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
<u>Other problems or suggestions:</u>	<input type="checkbox"/> Additional report attached (if additional space required).		
2. Adequacy			
	<input type="checkbox"/> ICs are adequate	<input type="checkbox"/> ICs are inadequate	<input checked="" type="checkbox"/> N/A
<u>Remarks:</u>			
D. General			
1. Vandalism/trespassing			
	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No vandalism evident	
<u>Remarks:</u>			
2. Land use changes onsite			
<u>Remarks:</u>			<input checked="" type="checkbox"/> N/A
3. Land use changes offsite			
<u>Remarks:</u>			<input checked="" type="checkbox"/> N/A
VI. GENERAL SITE CONDITIONS			
A. Roads			
<input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1. Roads damaged			
	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Roads adequate	<input type="checkbox"/> N/A
<u>Remarks:</u>			
B. Other Site Conditions			
<u>Remarks:</u> Site appears to be in good condition. Vegetative cover is heavy and well established predominantly with Bermuda grass, limited weed growth. There were no trees or scrub brush with deep root systems within the fenced boundary of the site.			

VII. LANDFILL COVERS			<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
A. Landfill Surface				
1. Settlement (Low spots) Areal extent: <u>Remarks:</u>	<input type="checkbox"/> Location shown on site map Depth:	<input checked="" type="checkbox"/> Settlement not evident		
2. Cracks Lengths: <u>Remarks:</u>	<input type="checkbox"/> Location shown on site map Widths: Depths:	<input checked="" type="checkbox"/> Cracking not evident		
3. Erosion Areal extent: <u>Remarks:</u>	<input type="checkbox"/> Location shown on site map Depth: surface	<input checked="" type="checkbox"/> Erosion not evident		
4. Holes Areal extent: <u>Remarks:</u>	<input type="checkbox"/> Location shown on site map Depth:	<input checked="" type="checkbox"/> Holes not evident		
5. Vegetative Cover <input checked="" type="checkbox"/> Cover properly established <u>Remarks:</u>	<input checked="" type="checkbox"/> No signs of stress	<input checked="" type="checkbox"/> Grass	<input type="checkbox"/> Trees/Shrubs	
6. Alternative Cover (armored rock, concrete, etc.) <u>Remarks:</u>	<input checked="" type="checkbox"/> N/A			
7. Bulges Areal extent: <u>Remarks:</u>	<input type="checkbox"/> Location shown on site map Height:	<input checked="" type="checkbox"/> Bulges not evident		
8. Wet Areas/Water Damage <input type="checkbox"/> Wet areas <input type="checkbox"/> Ponding <input type="checkbox"/> Seeps <input type="checkbox"/> Soft subgrade <u>Remarks:</u> Some water present in protective casing of two site wells (wells E and F). It is uncertain has to how the water accumulated in this location although it may be possible through localized flooding of adjacent ditch.	<input checked="" type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Location shown on site map Areal extent: <input type="checkbox"/> Location shown on site map Areal extent: <input type="checkbox"/> Location shown on site map Areal extent: <input type="checkbox"/> Location shown on site map Areal extent:			
9. Slope Instability Areal extent: <u>Remarks:</u>	<input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No evidence of slope instability		

B. Benches		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)			
1. Flows Bypass Bench	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> N/A or okay	
<u>Remarks:</u>			
2. Bench Breached	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> N/A or okay	
<u>Remarks:</u>			
3. Bench Overtopped	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> N/A or okay	
<u>Remarks:</u>			
C. Letdown Channels		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)			
1. Settlement	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of settlement	
Areal extent:	Depth:		
<u>Remarks:</u>			
2. Material Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of degradation	
Material type:	Areal extent:		
<u>Remarks:</u>			
3. Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of erosion	
Areal extent:	Depth:		
<u>Remarks:</u>			
4. Undercutting	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of undercutting	
Areal extent:	Depth:		
<u>Remarks:</u>			
5. Obstructions	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A	
Type:	Height:		
Areal extent:			
<u>Remarks:</u>			
6. Excessive Vegetative Growth	<input type="checkbox"/> No evidence of excessive growth		
<input type="checkbox"/> Evidence of excessive growth	<input type="checkbox"/> Vegetation in channels but does not obstruct flow		
<input type="checkbox"/> Location shown on site map	Areal extent:		
<u>Remarks:</u>			

D. Cover Penetrations		<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1. Gas Vents			<input type="checkbox"/> N/A
<input type="checkbox"/> Active	<input checked="" type="checkbox"/> Passive	<input type="checkbox"/> Routinely sampled	
<input type="checkbox"/> Properly secured/locked		<input checked="" type="checkbox"/> Functioning	<input checked="" type="checkbox"/> Good condition
<input type="checkbox"/> Evidence of leakage at penetration		<input type="checkbox"/> Needs O&M	
<u>Remarks:</u>			
2. Gas Monitoring Probes			<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Routinely sampled			
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning		<input type="checkbox"/> Good condition
<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs O&M		
<u>Remarks:</u>			
3. Monitoring Wells (within surface area of landfill)			<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Routinely sampled			
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning		<input type="checkbox"/> Good condition
<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs O&M		
<u>Remarks:</u>			
4. Leachate Extraction Wells			<input type="checkbox"/> N/A
<input type="checkbox"/> Routinely sampled			
<input type="checkbox"/> Properly secured/locked	<input checked="" type="checkbox"/> Functioning		<input checked="" type="checkbox"/> Good condition
<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs O&M		
<u>Remarks:</u> The cover to the leak detection sump can not be closed due to the presence of a PVC discharge pipe extending out of the sump. The pumps in both the leak detection sump and the leachate collection sump are operable.			
5. Settlement Monuments	<input type="checkbox"/> Located	<input type="checkbox"/> Routinely surveyed	<input type="checkbox"/> N/A
<u>Remarks:</u> Were not located during the site inspection.			
E. Gas Collection and Treatment		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1. Gas Treatment Facilities			<input type="checkbox"/> N/A
<input type="checkbox"/> Flaring	<input type="checkbox"/> Thermal destruction	<input type="checkbox"/> Collection for reuse	
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs O&M		
<u>Remarks:</u>			
2. Gas Collection Wells, Manifolds and Piping			<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs O&M		
<u>Remarks:</u>			
3. Gas Monitoring Facilities (e.g., gas monitoring of adjacent homes or buildings)			<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs O&M		
<u>Remarks:</u>			

F. Cover Drainage Layer		<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1. Outlet Pipes Inspected	<input checked="" type="checkbox"/> Functioning	<input type="checkbox"/> N/A	
Remarks: Some outlet pipes are missing rodent barriers. The outlet near the southwest corner of the cap has been damaged (appears crushed). Two drainage layer outlet pipes on the east side of the site are located outside of the east perimeter fence and were not inspected because of the ditch and heavy poison ivy growth.			
2. Outlet Rock Inspected	<input type="checkbox"/> Functioning	<input checked="" type="checkbox"/> N/A	
Remarks:			
G. Detention/Sedimentation Ponds		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1. Siltation	<input type="checkbox"/> Siltation evident	<input type="checkbox"/> N/A	
Areal extent:	Depth:		
Remarks:			
2. Erosion	<input type="checkbox"/> Erosion evident	<input type="checkbox"/> N/A	
Areal extent:	Depth:		
Remarks:			
3. Outlet Works	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A	
Remarks:			
4. Dam	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A	
Remarks:			
H. Retaining Walls		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1. Deformations	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Deformation not evident	
Horizontal displacement:	Vertical displacement:	Rotational displacement:	
Remarks:			
2. Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident	
Remarks:			
I. Perimeter Ditches/Off-site discharge		<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1. Siltation	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Siltation not evident	
Areal extent:	Depth:		
Remarks:			

2.	Vegetative Growth Areal extent: Remarks:	<input type="checkbox"/> Location shown on site map Type:	<input checked="" type="checkbox"/> Vegetation does not impede flow
3.	Erosion Areal extent: Remarks:	<input type="checkbox"/> Location shown on site map Depth:	<input checked="" type="checkbox"/> Erosion not evident
4.	Discharge Structure <input type="checkbox"/> Functioning Remarks:	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Good Condition	<input checked="" type="checkbox"/> N/A
VIII. VERTICAL BARRIER WALLS			<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A
1.	Settlement Areal extent: Remarks:	<input type="checkbox"/> Location shown on site map Depth:	<input type="checkbox"/> Settlement not evident
2.	Performance Monitoring <input type="checkbox"/> Performance not monitored <input type="checkbox"/> Performance monitored <input type="checkbox"/> Evidence of breaching Remarks:	Frequency: Head differential:	<input checked="" type="checkbox"/> N/A
IX. GROUNDWATER/SURFACE WATER REMEDIES			<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A
A. Groundwater Extraction Wells, Pumps, and Pipelines			<input type="checkbox"/> Applicable <input type="checkbox"/> N/A
1.	Pumps, Wellhead Plumbing, and Electrical <input type="checkbox"/> All required wells located Remarks: Ground water remediation has been postponed.	<input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M	<input type="checkbox"/> N/A
2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> System located Remarks:	<input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M	<input type="checkbox"/> N/A
3.	Spare Parts and Equipment <input type="checkbox"/> Readily available <input type="checkbox"/> Requires Upgrade Remarks:	<input type="checkbox"/> Good condition <input type="checkbox"/> Needs to be provided	<input type="checkbox"/> N/A
B. Surface Water Collection Structures, Pumps, and Pipelines			<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A

1. Collection Structures, Pumps, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <u>Remarks:</u>	<input type="checkbox"/> N/A
2. Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <u>Remarks:</u>	<input type="checkbox"/> N/A
3. Spare Parts and Equipment <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires Upgrade <input type="checkbox"/> Needs to be provided <u>Remarks:</u>	<input type="checkbox"/> N/A
C. Treatment System	<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A
1. Treatment Train (Check components that apply) <input type="checkbox"/> Metals removal <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Bioremediation <input type="checkbox"/> Air stripping <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Filters (list type): <input type="checkbox"/> Additive (list type, e.g., chelation agent, flocculent) <input type="checkbox"/> Others (list): Reverse Osmosis Plant <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <input type="checkbox"/> Sampling ports properly marked and functional <input type="checkbox"/> Sampling/maintenance log displayed and up to date <input type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually (list volume): <input type="checkbox"/> Quantity of surface water treated annually (list volume): <u>Remarks:</u>	
2. Electrical Enclosures and Panels (properly rated and functional) <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <u>Remarks:</u>	<input type="checkbox"/> N/A
3. Tanks, Vaults, Storage Vessels <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs O&M <u>Remarks:</u>	<input type="checkbox"/> N/A
4. Discharge Structure and Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <u>Remarks:</u>	<input type="checkbox"/> N/A

5.	Treatment Building(s) <input type="checkbox"/> Good condition (esp. roof and doorways) <input type="checkbox"/> Chemicals and equipment properly stored <u>Remarks:</u>	<input type="checkbox"/> Needs Repair	<input type="checkbox"/> N/A
6.	Monitoring Wells (pump and treatment remedy) <input type="checkbox"/> All required wells located <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <u>Remarks:</u>	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> N/A
D.	Monitored Natural Attenuation	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Monitoring Wells (natural attenuation remedy) <input type="checkbox"/> All required wells located <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M <u>Remarks:</u>	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> N/A
X. OTHER REMEDIES		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.)

The objectives of the remedy were to protect against physical contact with the oily waste material and contaminated storm water; minimize damage to and protect groundwater from migrating contaminants; adequately protect against discharge of contaminated storm water to Fifteen Mile Bayou; protect against inundation by a 100-year flood of Fifteen Mile Bayou; protect against emissions into the air; and prevent spreading of material offsite by flooding. This was accomplished by implementation of the Source Control Operable Unit remedy which included treatment of contaminated surface water; stabilization of contaminated sludge, sediments, and soil, and the placement of solidified material in a Resource Conservation and Recovery Act (RCRA) compliant vault; installation of appropriate monitoring wells; and implementation of a long-term operation and maintenance program. The Groundwater Operable Unit Record of Decision concluded that no further action was necessary for site groundwater provided the Source Control remedy was implemented. Construction of the Source Control remedy was complete on September 12, 1994.

Based on observations made during the site visit, the remedy appears to be functioning as designed.

The most recent groundwater quality monitoring event was conducted as part of this second five-year review and was completed in June, 2002. The previous sampling event was completed in June, 1997. A long-term groundwater monitoring plan should be prepared and implemented to meet the requirements of the remedy selected for this site. In addition, surface water monitoring of the north tributary to Gladys Creek and Gladys Creek should be addressed in the monitoring plan. Based on observations made during the site visit, the remedy appears to be functioning as designed.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

An Operations and Maintenance Plan and Sampling and Analysis Plan were prepared by the ADEQ and approved by EPA on January 8, 1999. This plan was not available for review during the second five-year review. An important part of the site remedy includes long-term operation and maintenance activities to ensure that the remedy is operating and functioning properly. Implementing the operation and maintenance activities at the site, including groundwater sampling, is critical to ensuring that the remedy remains protective of human health and the environment.

The most recent groundwater quality monitoring event was conducted as part of this second five-year review and was completed in June, 2002. The samples were collected for analysis of dissolved metals and total organic carbon. While analytical results indicate concentrations in the groundwater have not changed during this period, the groundwater monitoring as required by RCRA and as specified in the approved plans should be implemented at the frequency prescribed. In addition, regular operation and maintenance activities as prescribed in the approved plan should be implemented.

Leachate thickness measurements and leachate samples were collected from the two site sumps during the June, 2002, sampling event. The samples were analyzed for total metals and total organic carbon. If the leachate sump was sampled and analyzed during previous events, historical results were not available for review as part of this second five-year review. Analytical results from the leak detection sump were comparable to previous sampling events. Based upon the analytical results from the sampling event, EPA and ADEQ determined that the leachate was safe for discharge to the ground surface onsite. Pumping and discharge of the leachate from both sumps to the ground surface was conducted August 14, 2002. The estimated volume of liquid removed from the leak detection sump was 870 gallons and an estimated 320 gallons were removed from the leachate sump.

C. Early Indicators of Potential Remedy Failure

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.

None observed

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

Not applicable at the present time. This should be re-evaluated in the next five-year review.

Site Inspection Team Roster		
Personnel	Representing	Phone Number
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