

**Final Five-Year Review Report**

**Third Five-Year Review Report**

**For**

**Powersville Landfill Superfund Site  
(EPA ID #: GAD980496954)**

**Powersville  
Peach County, Georgia**

**August 2008**

**Prepared for:**

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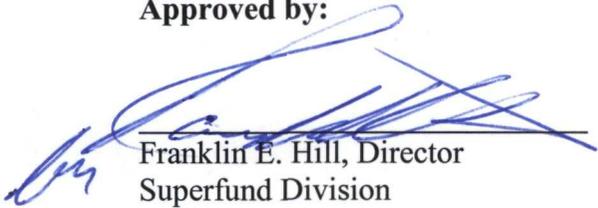
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## List of Acronyms

ARAR	Applicable or Relevant and Appropriate Requirement
BDL	Below Detection limit
BHC	Benzene hexachloride
bls	Below land surface
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Contaminants of Concern
DOJ	Department of Justice
EPA	U.S. Environmental Protection Agency
EPD	Georgia Environmental Protection Division
GCL	Geosynthetic Clay Liner
HQ	Hazard Quotient
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MDL	Method Detection Limit
NA	Not Applicable
NAH	Not Analyzed
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
NR	Not Reported
O&M	Operations and Maintenance
OUs	Operable Units
PCE	Tetrachloroethene
POTW	Publicly Owned Treatment Works
ppm	Parts Per Million
PRP	Potentially Responsible Party
QA/QC	Quality Assurance/Quality Control
RA	Remedial Action
RAOs	Remedial Action Objectives
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SARA	Superfund Amendment and Reauthorization Act
SVOCs	Semi-Volatile Organic Compounds
UAO	Unilateral Administrative Order
ug/L	Micrograms Per Liter
USACE	U.S. Army Corps of Engineers
VOCs	Volatile Organic Compounds

## **Executive Summary**

The United States Environmental Protection Agency (EPA) Region 4 has conducted a five-year review of the remedial actions implemented at the Powersville Landfill Superfund Site (Site) in Peach County, Georgia. Technical support for the review was provided by the U.S. Army Corps of Engineers, Savannah District. This review was conducted from February 2008 through September 2008. This report documents the results of that review. This is the third five-year review for the Site. The first five-year review was completed on January 6, 1998.

The trigger for this third five-year review corresponds to the EPA concurrence signature date on the second Five-Year Review Report (September 12, 2003). This statutory five-year review is required by CERCLA because the remedial action that was selected has left hazardous substances, pollutants, or contaminants on site above levels that allow for unlimited use and unrestricted exposure.

The remedial action at the Site continues to operate and function as designed. The review of ground-water monitoring data indicates that the detected concentrations for the Site constituents of concern have generally decreased over time at the site. During the fourth quarter 2005 sampling event, Lead was detected in monitoring well MW-7R at 66 ug/L, exceeding both the ROD Cleanup Goal and EPA revised ground-water cleanup goal. This was the only constituent of concern detected above either the ROD Cleanup Goal or revised cleanup goal. It was believed that this exceedance was due to high turbidity of the sample. The well was purged and resampled on February 2, 2006. This sample was analyzed and Lead was detected at 2.4 ug/L. This concentration is below both the ROD Cleanup Goal and revised cleanup goal.

No new contaminants or contaminant sources have been identified on the Site. There have been no changes in contaminant characteristics or toxicity factors.

Access to the Site is limited by fencing around the perimeter of the property and exposure to contaminated soil is prevented by the soil cap and ground cover. The ROD requires that deed notices and deed restrictions (restrictive covenants) be placed on the landfill parcel and surrounding properties to prohibit the drilling of water wells or any activities that could cause damage to the remedy. The institutional controls have been implemented at the Site as required in the ROD. The institutional controls were reviewed by EPA in 2005 and determined to be appropriate and protective. Upon further review, it was determined that six parcels had restrictive covenants but three parcels still needed restrictive covenants. EPA is attempting to implement restrictive covenants or other appropriate institutional controls on these parcels. The restrictive covenants that currently exist on six parcels will expire in 2013 pursuant to state law. As a result, new restrictive covenants must be recorded for these parcels prior to 2013.

The remedial actions at the Powersville Landfill Superfund Site are protective, in the short-term, of human health and the environment, and exposure pathways that could result in unacceptable risks are being controlled. However, in order for the remedy to be protective in the long term, restrictive covenants or other appropriate institutional controls must be implemented or renewed on Site parcels.

**Five-Year Review Summary Form**

<b>SITE IDENTIFICATION</b>		
Site name: Powersville Landfill Superfund Site		
EPA ID: GAD980496954		
Region: 4	State: GA	City/County: Powersville, Peach County
<b>SITE STATUS</b>		
NPL status: Final		
Remediation status (under construction, operating, complete): Complete		
Multiple OUs*: No Construction completion date: 6/30/1993		
Has site been put into reuse? No		
<b>REVIEW STATUS</b>		
Lead agency (EPA, State, Tribe Federal agency): US EPA		
Author name: Steven M. Bath, P.E.		
Author title: Environmental Engineer	Author affiliation: US Army Corps of Engineers, Savannah District	
Review period: February 2008 to September 2008		
Date(s) of site inspection: March 18, 2008		
Type of Review: Statutory		
Review Number: 3 (Third)		
Triggering action event: Second Five-Year Review Report Completion Date		
Trigger action date (from CERCLIS): 09/12/2003		
Due date: 9/12/2008		

## **Five –Year Review Summary Form, cont'd.**

### **Issues:**

1. Deed restrictions (restrictive covenants) required by the ROD have not been implemented on three parcels at the Site.
2. Restrictive covenants recorded on six parcels at the Site expire in 2013 pursuant to state law.

### **Recommendations and Follow-up Actions:**

1. Implement restrictive covenants or other appropriate institutional controls on three parcels at the Site.
2. Renew deed restrictions for six parcels at the Site by recording new restrictive covenants.

### **Protectiveness Statements:**

The remedial actions at the Powersville Landfill Superfund Site are protective, in the short-term, of human health and the environment, and exposure pathways that could result in unacceptable risks are being controlled. However, in order for the remedy to be protective in the long term, restrictive covenants or other appropriate institutional controls must be implemented or renewed on Site parcels.

### **Other Comments:**

None

## I. Introduction

The United States Environmental Protection Agency (EPA) Region 4 has conducted a five-year review of the remedial actions implemented at the Powersville Superfund Site in Peach County, Georgia. Technical support for the review was provided by the U.S. Army Corps of Engineers, Savannah District. This review was conducted from February 2008 through September 2008. This report documents the results of that review. 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 identify recommendations to address them.

EPA oversaw this review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121 and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). CERCLA §121 states:

*If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with Section 9604 (CERCLA §104) or Section 9606 (CERCLA §106) the President shall take action or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

The EPA interpreted this requirement further in the NCP, as stated in 40 CFR 300.430(f)(4)(ii):

*If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.*

This site consists of one Operable Unit (OU). The OU consist of the source of contamination including landfill wastes, as well as the surrounding soils and ground water contaminated by the site's landfill material.

The U.S. Army Corps of Engineers conducted the FYR for EPA and prepared this report. This is the third five-year review for the Powersville Superfund Site. The first five-year review was completed on January 6, 1998. The trigger for this third five-year review corresponds to the EPA concurrence signature date on the second Five-Year Review Report (September 12, 2003). This is a statutory five year review, which, in accordance with CERCLA §121 and the NCP, is triggered by remedial action that leaves hazardous

substances, pollutants, or contaminants on site above levels that allow for unlimited use and unrestricted exposure. The next five-year review will be required in August 2013.

## II. Site Chronology

Table 1 lists the chronology of events for the Powersville Superfund Site.

**Table 1: Chronology of Site Events**

<b>Event</b>	<b>Start Date</b>	<b>Completion Date</b>
Discovery		12/01/1979
Site Inspection		12/01/1979
Hazard Ranking System Package		06/24/1983
Proposal to National Priorities List (NPL)		09/08/1983
Preliminary Assessment		04/01/1984
NPL Potentially Responsible Party (PRP) Search		05/15/1984
Final Listing NPL		09/21/1984
Notice Letters Issued		09/27/1984
Remedial Investigation/Feasibility Study (RI/FS) Negotiations	11/15/1984	11/15/1985
Community Involvement	12/28/1984	08/30/1987
PRP RI/FS	12/28/1984	09/30/1987
Record of Decision (ROD)		09/30/1987
Remedial Design (RD)/Remedial Action (RA) Negotiations	08/25/1987	01/29/1988
Health Assessment	12/15/1987	04/15/1988
Administrative Records	05/16/1988	05/16/1988
Consent Decree Lodged by Department of Justice (DOJ)		09/29/1988
Consent Decree	05/23/1988	12/13/1988
Admin Order on Consent		08/16/1990
PRP Remedial Design	12/02/1988	01/08/1991
Removal Assessment	09/05/1991	09/05/1991
PRP Remedial Action	01/08/1991	09/30/1992
Preliminary Close-Out Report		06/30/1993
PRP Remedial Action	01/08/1991	09/17/1993
Close Out Report		09/17/1993
Operations and Maintenance	09/30/1992	Ongoing
First Five-Year Review	11/01/1996	01/06/1998
Second Five-Year Review	10/01/2002	09/12/2003
Non-NPL PRP Search	07/24/2007	07/27/2007

### **III. Background**

#### **Physical Characteristics**

The Powersville Landfill Superfund Site is located just north of the intersection of Georgia Highway 49 and Newell Road, a cross-road in the small community of Powersville in Peach County, Georgia. The landfill, which occupies approximately 15 acres, is centered on latitude 32°36'36" north and longitude 83°47'33" west. The landfill is located in a rural area of Peach County.

The Site consists of two landfill areas. The municipal landfill is approximately 10 acres in size. The hazardous waste landfill area is approximately 0.5 acres in size and is located in the northern portion of the Site. The Site is bordered by private property to the north, Newell Road to the west, GA highway 49 and Lizzie Chapel Church to the south/southeast and other Peach County properties to the east. A Site map is included in Attachment A.

#### **Land and Resource Use**

The Site is surrounded by farmland and forested areas. The Site itself is zoned as Rural Agricultural. Land areas in the county are predominant in cultivation (45%) or woodland (43%). General crop farming is the major agricultural practice in the region; however, cattle farms and orchards are also common. Lizzie Chapel Baptist Church, located southeast of the landfill on Georgia Highway 49, is the only building in the immediate vicinity of the landfill, but several residences are located nearby. The nearest residence is located northwest and up gradient of the site along Newell Road. The land use of the area has not changed significantly since the Record of Decision (ROD) was issued in 1987.

The major portion of the Site is represented by broad sloping topography with rough grass cover. The maximum relief at the Site is 76.5 feet. Monitoring well MW-09, near the center of the Site, is located at the lowest point. Monitoring well MW-10, on the northwest side of the Site, is near the highest elevation. The entire Site slopes generally toward the southeast. Portions of the Site historically have contained vertical banks of exposed earth which were heavily eroded. The steep banks adjacent to the hazardous waste areas were repaired by remedial actions in 1985.

The landfill is drained by Mule Creek to the south and its unnamed tributary to the east, which are part of the Ocmulgee/Altamaha system. Surface drainage from the site itself is minimal due to the permeable soils and runoff moves eastward toward Georgia Highway 49 along channels established just south of Lizzie Chapel Baptist Church.

The Powersville Site is located in the recharge zone of the Providence Sand Aquifer. Locally this aquifer system is a potential source of water for both consumption and irrigation. Approximately 15 individual water wells were located within ¼ mile of the site during the landfill operation. The Providence Sand is at least 148 feet thick in the Powersville area. Clay lenses are common in the unit and vary from a few inches to a

few feet in thickness. The Gosport Sand, which stratigraphically overlies the Providence Sand, occurs sporadically in the area and was exposed in the borrow pit on the north side of the Site. This sand is highly permeable and rainfall at the site passes through it rapidly to recharge the Providence Sand Aquifer below. The soil overlying the Providence and Gosport units is generally less than six feet thick at the Site and sandy to sandy clay loam soils with characteristically dark red color.

### **History of Contamination**

The Powersville Landfill originated as a borrow area which provided sand and fill material to the County for local construction projects. The excavation of soils continued from the early 1940s to 1969. During 1969, Peach County began operating the Site as a sanitary landfill receiving municipal and industrial wastes.

In 1972, The Georgia Environmental Protection Division (EPD) determined that pesticides and pesticide wastes were being disposed at the landfill. The Landfill had been accepting waste from Woolfolk Chemical Company, Fort Valley, Georgia since the late 1960s. In December 1972, the Georgia EPD sent a letter to Peach County documenting an inspection of the landfill and suggesting a separate area be set aside and maintained in a rigidly prescribed manner to contain pesticides and other industrial wastes. This area was established and began operating as a hazardous waste area in 1973. Waste documented to have been disposed of in the hazardous waste portion of the site include: DDT, methyl parathion, aldrin, chlordane, benzene hexachloride (BHC), gamma-BHC, and dieldrin. It is strongly believed that hazardous wastes were disposed of in the municipal portion of the landfill prior to June 1973. Neither the quantity nor the location of this waste in the municipal landfill is known.

In March 1977, the Georgia EPD sent a letter to the Peach County Board of Commissioners recommending that the site be closed due to its location in the highly permeable sands and gravel of the Providence Aquifer. The landfill stopped accepting wastes and was officially closed by the County in 1979.

The Georgia EPD began investigating the Site in April 1983, when local residents began to complain of a peculiar taste in their well water. In May 1983, EPD collected a water sample from the private well at Lizzie Chapel Baptist Church. Laboratory analysis indicated that trace amounts of pesticides (BHC – 0.30 ug/L, dieldrin – 0.15 ug/L, and gamma-BHC – 0.22 ug/L) existed in the well water. Of these contaminants, only gamma-BHC had a Federal Drinking Water Standard (4 ug/L). Sampling and analyses of surrounding wells on May 17, 1983, showed no contamination.

On June 22, 1983, EPD resampled the Lizzie Chapel well and found the concentrations of pesticides in the well water had risen slightly (BHC – 0.30 ug/L, dieldrin – 0.2 ug/L, and gamma-BHC – 0.4 ug/L). Even though the contaminant levels were still below Federal Drinking Water Standards, the EPD requested the church discontinue use of the well on August 15, 1983.

### **Initial Response**

Due to the cost and complexity of the investigation needed at the Site, on August 19, 1983, EPD requested that EPA investigate the Site and work with the State to determine what remedial action may be necessary. The initial hydrogeologic investigation was performed by NUS Corporation, EPA contractor, from October 1983 through August 1984. Monitoring wells were installed at the site and documented in a NUS Report, *Monitoring Well Installation*. In addition, ground-water samples were collected from nine monitoring wells and five private wells. The following toxic chemicals were detected in the monitoring well samples: BHC, vinyl chloride, 1,2 dichloroethane, Lead, and Chromium. The Site was finalized for placement on the National Priorities List (NPL) in September 1984. The NPL is a list of priority releases for long-term evaluation and remedial response, and was promulgated pursuant to section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended. The NPL list is found in the NCP (Appendix B of 40 CFR part 300).

### **Basis for Taking Action**

The initial Remedial Investigation and Feasibility Study (RI/FS) letters were mailed on September 28, 1984. The recipients included Peach County and the U.S. Department of Agriculture. On November 20, 1984, a notice was also sent to Canadyne Georgia Corporation (CGC), which owns Woolfolk Chemical Company. On July 15, 1985, EPA issued an Administrative Order on Consent granting Peach County and CGC until November 1, 1985 to present a revised administrative order on consent (AOC) to EPA. Neither party issued a revised order by that date so negotiations were terminated and EPA initiated RI/FS activities.

From December 1984 to June 1987, Camp Dresser & McKee, Inc. conducted the Remedial Investigation (RI) and Feasibility Study (FS) at the Site. The combined RI/FS report was completed in September 1987.

The purpose of the RI was to collect the data necessary to evaluate the degree and extent of contamination at the Site. The data from the RI was also used during the feasibility study to develop appropriate remedial action alternatives for addressing the site. To achieve these goals, the existing data from previous studies were evaluated and data gaps were identified for the Site. During the RI, surface water, sediment, soil and ground-water samples were collected and analyzed by the EPA Contract Lab Program (CLP) to fill in the data gaps.

Surface-water and sediment samples were collected from locations adjacent to the landfill and runoff channels to determine if any contaminants had migrated to nearby streams. No chlorinated organics or other compounds associated with the pesticides disposed at the Site were detected in either the surface-water or sediment samples. A summary of the analytical results for surface water is shown in Table 2.

Soil sampling was conducted during the RI to define the horizontal and vertical limits and composition of materials in the municipal waste portion of the landfill and to determine if any contaminant leaching is occurring from the hazardous waste area. A summary of the analytical results for surface soil is shown in Table 3. Thirteen vertical soil borings were drilled in or around the municipal fill area. The boundary and depth of the municipal

waste fill area was derived from these borings and the volume of the municipal waste was calculated to be approximately 292,000 cubic yards. Three areas within the municipal fill were identified as potential sources of hazardous contaminants. Two angled borings were drilled under the hazardous waste area. A noticeable pesticide odor was present in one of the borings. The analysis of samples collected from these two borings did not show any detectable concentrations of alpha-BHC, toxaphene, or chlordane. These chemicals were identified during the Endangerment Assessment as the indicator chemicals for soils. A summary of the analytical results for subsurface soil is shown in Table 4.

At the start of the RI there were nine operational monitoring wells at the site (MW-02 through MW-8, MW-10 and MW-11). The first monitoring well, MW-01, was abandoned. During the RI, nine new monitoring wells were installed (MW-9A, and MW-12 through MW-19). Twelve private wells were also sampled. The monitoring wells at the site consist of shallow wells, wells screened above the locally confining clay lenses (screen depth 30 to 60 feet), and deep wells screened below the clay lenses.

The analytical results of the RI indicate a presence of vinyl chloride, gamma-BHC, Lead, and Chromium in the ground water. Vinyl chloride was detected in three shallow monitoring wells. All three detections exceeded the MCL (1 ug/L at the time of the RI). The contaminant gamma-BHC was detected in three monitoring wells at concentrations below the MCL (4 ug/L). Concentrations of Chromium and Lead were detected in almost all of the monitoring wells. Chromium exceeded the MCL (50ug/L) in three shallow monitoring wells. Lead was detected at concentrations exceeding the MCL (50 ug/L) in five monitoring wells. A summary of the analytical results for ground water is shown in Table 5.

The majority of organic contaminants were detected in the shallow wells. All of the contaminants that exceeded the MCLs were detected in shallow wells. This data indicates that contamination is limited to the upper zone of the aquifer where the water is perched on the clay lenses. Although there is a hydraulic connection between the upper and lower zones of the aquifer, the overlapping clay lenses are restricting the downward migration of contaminants.

Concentrations of gamma-BHC, dieldrin, chlordane, and toxaphene were detected in site soil samples. The off-site soil samples were found to have no detectable chemical concentrations.

**Table 2: Summary of RI Analytical Results  
Surface Water**

<b>Compound</b>	<b>Upgradient Sample Concentration</b>	<b>Range of Detected Concentrations</b>	<b>Number of Samples above Detection Limit/ Total Number of Samples</b>
<b>Metals (ug/L)</b>			
Barium	12	15 – 34	3/3
Calcium	760	1,400 – 3,900	3/3
Copper	< 2.8	3	1/3
Iron	1,700	1,600 – 4,300	3/3
Lead	< 5	< 5	0/3
Magnesium	440	1,000 – 1,400	3/3
Manganese	89	97 – 260	3/3
Sodium	1,900	1,700 – 3,600	3/3
Zinc	6	7 – 12	3/3
<b>Organics (ug/L)</b>			
Methylethylketone	< 5	16	1/3

**Table 3: Summary of RI Analytical Results  
Surface Soils**

<b>Compound</b>	<b>Range of Detected Concentrations</b>	<b>Number of Samples above Detection Limit/ Total Number of Samples</b>
<b>Metals (mg/Kg)</b>		
Aluminum	260 – 18,000	11/11
Arsenic	5.1 – 37	3/11
Barium	3.4 – 48	6/11
Calcium	160 – 510	5/11
Chromium	9.1 – 30	10/11
Iron	3,200 – 32,000	11/11
Lead	2.6 – 27	3/11
Magnesium	45 – 250	3/11
Manganese	6 – 240	11/11
<b>Pesticides (ug/Kg)</b>		
Dieldrin	7.9 – 37	2/11

**Table 4: Summary of RI Results for Indicator Chemicals  
Subsurface Soil Samples**

<b>Compound</b>	<b>Range of Detected Concentrations</b>	<b>Number of Samples above Detection Limit/ Total Number of Samples</b>
<b>Metals (ug/Kg)</b>		
Chromium	4 – 91	35/35
Lead	4.3 – 320	13/35
<b>Organics (ug/Kg)</b>		
1,2-dichloroethane	No Detections	0/35
Vinyl chloride	No Detections	0/35
<b>Pesticides (ug/Kg)</b>		
Alpha-BHC	27 – 130	2/35
Gama-BHC	0.91 J	1/35
Dieldrin	74 – 440	2/35
Toxaphene	2,400 – 14,000	2/35
Alpha-Chlordane	3.8 – 660	7/35
Gamma-Chlordane	5.6 – 1400	6/35

**Table 5: Summary of RI Results for Indicator Chemicals  
Monitoring Wells and Private Wells**

<b>Compound</b>	<b>Range of Detected Concentrations</b>	<b>Number of Samples above Detection Limit/ Total Number of Samples</b>
<b>Metals (ug/L)</b>		
Chromium	7 – 220	14/30
Lead	6.3 – 2000	13/30
<b>Organics (ug/L)</b>		
1,2-dichloroethane	17	1/30
Vinyl chloride	4 – 18	3/30
<b>Pesticides (ug/L)</b>		
Alpha-BHC	0.19 – 0.42	5/30
Gama-BHC	0.32 – 0.78	3/30

**Summary of Risk Assessment**

As part of the RI/FS Report, an Endangerment Assessment was conducted to evaluate the potential risks to public health and the environment from chemicals detected in the ground water and soil on site. This baseline assessment evaluated the Site in the absence of remediation and was based on the data generated during the remedial investigation.

Two scenarios were used to evaluate exposure pathways at the Powersville Site: a current-use scenario and a future-use scenario. Under the current-use scenario, current onsite and offsite contamination is assessed relative to exposure pathways for which exposures are currently occurring. The future-use scenario considers additional exposures that could occur under a complete no-action situation. It is assumed under the future-use scenario that the Site is abandoned and redevelopment takes place with a home and drinking water well established.

The risk assessment conducted as part of the RI/FS and summarized in the 1987 ROD noted that current-use exposure pathways for the Site were defined as:

- Ingestion of drinking water from offsite well.
- Ingestion of Site soils by children playing on the Site.

The potential future-use pathways for the Site were defined as:

- Ingestion and dermal contact of contaminated ground water by an onsite well.
- Ingestion and dermal contact of contaminated soil by an onsite resident.

Using an excess lifetime cancer risk of  $1 \times 10^{-6}$  and a hazard index of 1 as points of comparison, under the current use scenario, the assessment indicates that there is a potential long-term health risk associated with the consumption of ground water from the Lizzie Chapel well; no health risk is associated with contact with landfill surface soils. Under a future-use scenario in which the Site is redeveloped and a drinking water well is established onsite, a potential long term health risk is associated with ground water consumption, but not with soil contact during construction. A marginal risk of  $5 \times 10^{-6}$  is associated with future residents who may come in contact with landfill soils under a plausible worse case scenario.

### **Remedial Action Objective**

The 1987 ROD noted that the Remedial Action Objectives (RAOs) for the Powersville Landfill Superfund Site include the following: eliminate the primary exposure pathways of concern to contaminated soil and contaminated ground water. The contaminated soil were noted to include areas at the site contaminated with benzene hexachloride, 1,2-dichloroethane, dieldrin, chlordane, and toxaphene. The contaminated ground water were noted to include areas at the site contaminated with benzene hexachloride, 1,2-dichloroethane, vinyl chloride, lead and chromium. Chemicals detected at the Site were screened during the endangerment assessment so that indicator chemicals (chemicals most likely to contribute to risk at the Site) could be selected for detailed risk analysis. This screening included an evaluation of the frequency of detection, comparison with background or up gradient concentrations and a qualitative assessment of concentration and toxicity. Chemicals passing this screening were then evaluated for risks considering their exposure pathways and Site use scenarios. The indicator chemicals identified in surface soil and ground water as capable of posing a substantial present or potential hazard to human health or the environment were incorporated into the ROD.

The ROD identified cleanup goals for the selected indicator chemicals in ground water and surface soils in order to address the RAOs for the Site.

The soil cleanup goals identified in the ROD were as follows: dieldrin, 20 ug/mg in surface soils.

The ground-water cleanup goals identified in the ROD were as follows: use of EPA's Maximum Contaminant Levels (MCLs) for ground-water contaminants of concern in ground water, shown in the Table 6 below. As noted in the following table, EPA revised the ground-water cleanup goals that were used as criteria for measuring whether the remedial objectives have been met in the Site Closeout Report dated June 30, 1993. The revised cleanup goals were included in the Operations and Maintenance Plan for the Site in July 1993 as concentration limits for the ground-water monitoring program.

**Table 6: Ground-water Cleanup Goals**

<b>Constituent</b>	<b>ROD Cleanup Goals (ug/L)</b>	<b>Revised EPA Cleanup Goals (ug/L)</b>
Gamma-BHC	4	4
Vinyl chloride	1	2
1,2-dichloroethane	5	5
Lead**	50	15
Chromium	50	100
Toxaphene	NA	3

\*\* Action Level

The function of the remedy was to provide source control that ensures there is no exposure to or migration of contaminants of concern noted within the ROD at the Site.

#### **IV. Remedial Actions**

##### **Remedy Selection**

The original selected Record of Decision was signed on September 30, 1987. Contaminated soils and contaminated ground water are the principal threats at the site. The selected remedial action for this site included surface cover systems for the hazardous waste and municipal landfill areas, installation of ground-water monitoring wells, provision of an alternative water source, deed restrictions, and O&M plan. The function of this remedy is to ensure that there is no exposure to or migration of contaminants. At the time the remedy was selected, the estimated present worth cost for this remedial action was \$4,000,000 with O&M of \$577,013.

The major components of the selected remedy as stipulated in the 1987 Record of Decision include:

- Surface cover systems for the hazardous waste and municipal landfill area;
- Installation of a minimum of eight additional ground-water monitoring wells;
- Provision of an alternative water supply for selected residents near site;
- Imposition of onsite and offsite deed restrictions to prohibit specific actions; and
- Development and implementation of an operation and maintenance (O&M) plan for the remedy.
- Consideration of including provisions for venting and monitoring of landfill gas.

A map of the Site showing location of the cap and ground-water monitoring wells is included as Attachment A.

##### **Remedy Implementation**

In September 1988, EPA entered into a Consent Decree with Peach County and Canadyne-Georgia Corporation (CGC) to implement the remedy. CGC agreed to conduct the necessary design studies, develop design specifications and drawings, construct the selected remedy, and develop the operation and maintenance plan. Peach County agreed to implement the operations and maintenance plan over the 30-year period following completion of construction. The EPA approved the Remedial Design on January 8, 1991. The Remedial Action was formally initiated in January, 1991, with the acceptance of the Remedial Design. Canadyne-Georgia Corporation contracted with Clean Sites, Inc. to manage the Remedial Action activities. The Remedial Action at the site was conducted in two events: Remedial Event #1 addressed the landfill and monitoring wells; and Remedial Event #2 addressed the water line, deed restrictions, and operation and maintenance plan development and implementation. EPA issued the final Close Out Report on 17 September 1993, documenting that the remedy was constructed in accordance with the remedial design plans and specifications.

The major components of the remedy as implemented included:

**Remedy Component 1- Surface Cover**

A low permeability liner was installed over both the hazardous waste disposal area and the municipal waste disposal area. The municipal waste area liner consists of a 40 mil thick high density polyethylene (HDPE) liner. The hazardous waste area liner has an additional 0.25 inch thick bentonite liner. The liners are covered with 1.5 feet of sandy soil for better drainage. Two feet of soil is then layered on top of the liner. A vegetative layer was then used to secure the soil cover. Terracing was used to alleviate the steepness of the slope to reduce erosional issues. Other grading was done to divert stormwater away from either landfill cover.

**Remedy Component 2 – Installation of Ground-Water Monitoring Wells**

The ground-water monitoring system was designed to yield samples from the uppermost aquifer that are representative of the water that passes through the downgradient area of the landfill site. There were two existing wells; seven more were added (6 down gradient, 1 up gradient). These seven wells were installed during three separate field events.

**Remedy Component 3 – Alternate Water Source**

The alternate water supply system is owned and operated by the Fort Valley Utility Commission. The municipal water system was extended to include the properties possibly affected by the site. This included residents on streets both up gradient and down gradient of the Site. The Fort Valley Utility Commission conducts O & M on the water supply system. The water supply well for this system is over two miles from the Landfill.

**Remedy Component 4 – Institutional Controls**

Two types of notices were filed for the Powersville Site. A Record of Waste was filed with the local zoning authority. This record contains the type, location, and quantity of hazardous waste disposed of within each fill area. A Notation on Deed is the second type of notice that was filed. The notation states that the land has been used to manage hazardous waste and is therefore use-restricted. The site itself and properties between it and the unnamed tributary to Mule Creek were required by the ROD to have deed restrictions placed upon them to prohibit the drilling of water wells or any activities that could cause damage to the remedy. Activities that could cause damage to the remedy include, but are not limited to, drilling or construction activities which could compromise the integrity of the final cover, or any component of the containment or treatment system, or the function of the monitoring system. The method for executing the deed restrictions is through restrictive covenant agreements. Restrictive covenants were placed on 6 properties adjacent to the landfill prohibiting the drilling of water wells. The covenants last 20 years (through 2013) and can be renewed for 20 year periods with the execution of additional instruments.

### **Remedy Component 5– Operation & Maintenance Plan**

The Operations and Maintenance Plan was completed and approved by EPA in September 1993. There are eight major tasks involved in the schedule for ordinary O&M activities. They are the following:

- Ground-Water Monitoring - The ground-water monitoring program consists of quarterly ground-water monitoring. Ground-water samples are collected from nine monitoring wells (MW2, MW7, MW20, MW21, MW22, MW23, MW24, MW25 and MW26). All samples are analyzed for the constituents of concern at the Site: VOCs (1,2-dichloroethane and vinyl chloride), Pesticides (gamma-BHC and toxaphene), and metals (Lead and Chromium).
- Maintenance of Vegetation – Mowing of the covers and other vegetated site areas is conducted twice per year. Fertilization of the covers is conducted once per year. Lime may be added every four to six years to maintain a pH between 6 and 7.
- Cover Settlement – Inspection and monitoring for cover settlement was conducted quarterly for the first two years then semi-annually since that time.
- Site Structure – The following structures are inspected quarterly: concrete channels, rip rap, fence and signs, drainage areas, benchmarks, gas vents, settlement monitoring stations, all guard posts, and cover drainage pipes cleanout ports. Repairs are performed as needed.
- Gas Production Monitoring – Each gas vent is checked semi-annually for the first two years and has been annually since that time.
- Cost Estimate Updates – The cost estimate shall be updated annually.
- Deed Restrictions – The deed restrictions/covenant agreements remain in effect for a period of 20 years, beginning when the deed restrictions/agreements are executed. These are to be renewed for subsequent 20-year periods as required by the O&M Plan.
- Deliverables – Regular reports are submitted to the O&M administrator, which is Clean Sites.

### **Performance Standards**

The EPA required that the preliminary remedial goals (PRGs) be referred to as remedial goal options (RGOs). The RGOs for ground water at the site were developed for the future resident and they were calculated for the contaminants of concern in ground water using the following equation:  $RGO = (TR \times EC) / CR$ . Where RGO = Remedial Goal Options; TR = Target risk level (HQ = 1.0 for noncarcinogenic effects and risk level =  $1E-06$  and  $1E-04$  for carcinogenic effects); EC = Exposure concentration in soil and ground water; and CR = Calculated risk level. The RGOs for soil were computed using the same equation. The cleanup goals for soil and ground water are shown on the following tables. The cleanup goals for surface water were considered to be the same as ground water as implied by the ROD.

**Table 7: ROD Cleanup Goals for Ground Water**

<b>Contaminant</b>	<b>Risk-Based GW Action Level (ug/L)</b>
gamma-BHC	4
Vinyl chloride	1
1,2-dichloroethane	5
Lead	50
Chromium	50

As noted in the following table, EPA revised the ground-water cleanup goals that were used as criteria for measuring whether the remedial objectives have been met in the Site Closeout Report dated June 30, 1993.

**Table 8: Revised Ground-water Cleanup Goals**

<b>Constituent</b>	<b>Revised EPA Cleanup Goals (ug/L)</b>
Gamma-BHC	4
Vinyl chloride	2
1,2-dichloroethane	5
Lead	15
Chromium	100
Toxaphene	3

The soil cleanup goals identified in the ROD were as follows:

**Table 9: Surface Soil Cleanup Goals**

<b>Constituent</b>	<b>Revised EPA Cleanup Goals</b>
Dieldrin	20 ug/mg

**System Operations/Operations and Maintenance (O&M)**

The Operation and Maintenance Plan was approved by EPA in September 1993. The O&M Plan presents the operation and maintenance activities and requirements for the Site. The O&M Manual describes the step-by-step field procedures to comply with the O&M Plan. The O&M plan required inspection and monitoring for cover settlement to be conducted quarterly for the first two years and semi-annually thereafter. Landfill structures also required inspecting semi-annually.

The Operations and Maintenance Plan included the EPA revised cleanup goals as concentration limits for the ground-water monitoring program. Nine ground-water monitoring wells (MW-2, MW-7, MW-20, MW-21, MW-22, MW-23, MW-24, MW-25, and MW-26) were designated to be sampled as the O&M monitoring well network. The

O&M Plan required quarterly ground-water monitoring for a period of two years. After two years, the monitoring program could be reevaluated and modified if appropriate. The constituents and corresponding concentration limits included in the monitoring program are shown in Table 10 below.

**Table 10: Ground-water Cleanup Goals**

<b>Constituent</b>	<b>ROD Cleanup Goals (ug/L)</b>	<b>Revised EPA Cleanup Goals (ug/L)</b>
Gamma-BHC	4	4
Vinyl chloride	1	2
1,2-dichloroethane	5	5
Lead	50	15
Chromium	50	100
Toxaphene	NA	3

At the time of the ROD, present worth costs for operation and maintenance of the remedy for 30 years were estimated to be \$577,013. In the O&M Plan, the total cost for O&M activities for 30 years was estimated at \$3,151,558 in 1992 dollars. Peach County is responsible for the general maintenance of the Site. Inmates from the County jail conduct the mowing and fertilization of the Site. County personnel conduct any additional required maintenance and inspect the Site as required in the O&M Plan. The County uses in-house resources to maintain the Site and does not specifically track the costs associated with Site maintenance.

The Georgia EPD was responsible for the ground-water monitoring occurring at the Site. Ground water was monitored quarterly at the Site for the indicator chemicals listed in the O&M plan. Through an agreement with EPA and GA EPD, vinyl chloride, gamma-BHC, and toxaphene were removed from the sampling program after the second quarter 2004 sampling event (Williams e-mail to Farrier, 3/5/04). None of these analytes had exceeded regulatory levels since the ground-water monitoring program began in 1994. Georgia EPD used the money saved by the reduced analytical cost to replace two of the older monitoring wells, MW-2 and MW-7. These wells were made of galvanized steel and were believed to be causing problems with the analytical results for Lead and Chromium. Through an agreement between EPA and GA EPD, the ground-water monitoring program was ended after the fourth quarter 2005 sampling event (Cash letter to EPA, July 19, 2006). The agreements between EPA and GA EPD concerning the ground-water monitoring program are included in Attachment C. A more detailed analysis of the ground-water monitoring results is included in the Data Review Section of this Report.

The Georgia EPD has also regularly inspected the site to ensure the conditions of the remedy and monitoring well network. The County has a contract with the firm Hulsey,

McCormick, and Wallace for monitoring methane at the Site twice a year. Reports from the monitoring program are maintained by both EPA and the Georgia EPD. Estimated Annual O&M costs for the Site are listed in the table below.

There have been no problems with the operation or maintenance of the landfill covers, methane vents, or ground-water monitoring network. The Site remains fenced and secured. The O&M costs for the site include ground-water sampling completed in 2005 and methane sampling beginning in 2005. These costs do not indicate any problems with the remedy.

**Table 11: Estimated Annual O&M Costs**

Year	O&M Costs
2003	\$48,650 (ground-water sampling)
2004	\$48,650 (ground-water sampling)
2005	\$48,650 (ground-water) + \$414 (1 methane event)
2006	\$830 (2 methane events)
2007	\$825 (2 methane events)

## **V. Progress Since Last Review**

### *Protectiveness Statement from the last Five-Year Review*

In August 2003, the second Five-Year Review's protectiveness statement was as follows:

“The remedial actions at the Site are expected to be protective of human health and the environment upon attainment of ground-water cleanup goals. Contaminant levels in ground water appear to be declining to acceptable risk based concentrations. There is still a problem with metals. Continued ground-water monitoring is required to ensure contaminants are not migrating offsite.”

### *Recommendations from the Previous Five Year Review:*

The following discussion summarizes the issues and recommendations made in the 2003 FYR and any follow up actions that have been taken to address those recommendations.

Ground water was monitored quarterly at the Site through December 5, 2005 (fourth quarter of 2005). Monitoring Wells MW-2, MW-7, and MW-20 through MW-26 were sampled and analyzed for VOCs (1,2 dichloroethane and vinyl chloride), pesticides (gamma-BHC and toxaphene), and metals (Lead and Chromium). Monitoring well MW-26 was properly abandoned and replaced by MW-26R in September 2005. Galvanized monitoring wells MW-2 and MW-7 were plugged in place and PVC replacement wells were installed in September 2004. Beginning with the third quarter 2004 sampling, sample analysis was discontinued for gamma-BHC, vinyl chloride, and toxaphene as per EPA and EPD agreement dated March 5, 2004 (Williams e-mail to Farrier, 3/5/04). A more detailed analysis of the ground-water monitoring results is included in the Data Review Section of this Report.

Methane has been monitored at the Site twice yearly since October 2005. High concentrations of methane have been detected exiting from the vents of the engineered methane venting system. No methane has been detected in the Lizzie Chapel Baptist Church building. These results indicate the system is operating as designed and preventing the buildup of methane under the landfill caps. A table summarizing the Methane data is included in Data Review Section of the Report.

In September 2005, the Site underwent an Institutional Controls Review. EPA conducted the review and determined that appropriate institutional controls had been implemented at the Site. Upon further review, it was determined that six parcels had restrictive covenants but three parcels still needed restrictive covenants. EPA is attempting to implement restrictive covenants or other appropriate institutional controls on these parcels. The restrictive covenants that currently exist on six parcels will expire in 2013 pursuant to state law. As a result, new restrictive covenants must be recorded for these parcels prior to 2013.

The second Five-Year Review Report documented several recommendations. These recommendations and the actions that were taken are summarized below in Table 12.

Any remaining issues or recommendations still requiring attention will be included as recommendations in this third Five-Year Review Report.

**Table 12: Action Taken Since the Last Five-Year Review**

<b>Recommendations/ Follow-up Actions</b>	<b>Party Responsible</b>	<b>Milestone Date</b>	<b>Action Taken and Outcome</b>	<b>Date of Action</b>
Continue monitoring to ensure that ground-water contamination is not migrating offsite.	PRP	None given	Quarterly monitoring of Site ground water continued through December 2005.	As scheduled
Reexamine use of bailer for sampling method. Consider adding turbidity as a measurement. Also, consider taking filtered and unfiltered samples	PRP	None given	Turbidity was measured and recorded for all samples. Ground-water samples were collected with disposable bailers.	As scheduled
Door-to-door interview of landowners to make sure no new wells or major construction.	PRP	None given	Contaminant concentrations have continued to decline and do not pose a risk to adjacent landowners	
Check with A-E and Director of Public Works for Peach County to reinstate methane monitoring if necessary.	PRP	None given	Methane monitoring occurs twice yearly. The engineered methane venting system is operating as designed	Since October 2005

## **VI. Five-Year Review Process**

### **Administrative Components**

The Powersville Landfill Superfund Site Five-Year Review Team is led by Brian Farrier, EPA Remedial Project Manager for the Site. Technical expertise for the review was provided by Steven Bath and Judson Smith with the US Army Corps of Engineers, Savannah District. Mr. Eddie Williams of the Georgia Environmental Protection Division (EPD) was interviewed to determine the States concerns for the Site. EPD also provided peer review of the draft Five-Year Review Report. The schedule for the review extends through September 12, 2008. The components of the review include:

- Community notification;
- Document review;
- Data review;
- Site inspection;
- Interviews; and
- Five-Year Review Report development and review.

### **Community Notification**

The United States Environmental Protection Agency, Region 4 conducted the community notification relating to the third Five-Year Review. A public notice was placed in the Fort Valley Leader Tribune newspaper. There have been no citizen comments or concerns regarding cleanup activities at the Site during this review period. Local officials for Peach County were interviewed and were not aware of any community concerns over the Site. Within thirty (30) calendar days of the Third Five-Year Review Report finalization, a notice will be published in the local newspaper announcing that the Third Five-Year Review Report for Powersville Superfund Site is complete, and the results of the review and the report are available to the public at the EPA Region 4 office in Atlanta, Georgia. A copy of the community notification is included as Attachment G.

### **Document Review**

This Third Five-Year Review included an examination of relevant Site documents and project files. Documents that were reviewed were related to Site investigations, feasibility studies, remedial design, the ROD, construction reports, operation and maintenance plans, interagency communications, monitoring data and the previous Five-Year Review Reports.

The complete list of documents reviewed is included in Attachment B.

### **ARAR Review**

Section 121 (d) (2) (A) of CERCLA specifies that Superfund remedial actions must meet any federal standards, requirements, criteria, or limitations that are determined to be legally applicable or relevant and appropriate requirements (ARARs). ARARs are those standards, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other

circumstance at a CERCLA site. To-Be-Considered criteria (TBCs) are nonpromulgated advisories and guidance that are not legally binding, but should be considered in determining the necessary level of cleanup for protection of human health or the environment. While TBCs do not have the status of ARARS, EPA's approach to determining if a remedial action is protective of human health and the environment involves consideration of TBCs along with ARARS.

Chemical-specific ARARS are specific numerical quantity restrictions on individually listed contaminants in specific media. Examples of chemical-specific ARARS include the MCLs specified under the Safe Drinking Water Act as well as the ambient water quality criteria that are enumerated under the Clean Water Act. Because there are usually numerous contaminants of potential concern for any Site, various numerical quantity requirements can be ARARS. The final remedy selected for this Site was designed to meet or exceed all chemical-specific ARARS and meet location- and action-specific ARARS.

As was completed in 2003, an ARAR review was repeated for the Site in accordance with the EPA guidance document, *Comprehensive Five-Year Review Guidance*, EPA 540-R-01-007, OSWER No. 9355.7-03B-P June 2001. The following documents were reviewed to determine initial and current ARARS:

- Record of Decision (ROD), September 30, 1987
- Five Year Review, December 1997
- Second Five Year Review, September 12, 2003
- Safe Drinking Water Act (SDWA) Maximum Contaminant Levels 40 CFR 141 and 143
- Clean Water Act Ambient Water Quality Criteria requirements – CERCLA Compliance Manual, 33 USC 300
- Resource Conservation and Recovery Act (RCRA)
- Georgia Solid Waste Management Chapter 391-3-4
- Georgia Safe Drinking Water Chapter 391-3-5

Chemical-specific ARARS identified in the selected remedy within the ROD for the ground water at this Site and considered for this FYR for continued ground-water monitoring are listed previously in Table 10. The review of ARARS for ground-water COCs with cleanup goals suggests that federal standards (i.e., MCLs) and state standards for three contaminants have changed since the 1987 ROD was signed.

Changes to action levels (i.e., cleanup goals) presented by ARARS are discussed in Section VII of this report.

#### **Data Review**

Ground-water monitoring data for the Powersville Landfill Site were reviewed for the 11 sampling reports from the five-year interval covered by this review. Ground water was monitored quarterly at the Site through December 5, 2005 (fourth quarter of 2005). Monitoring Wells MW-2, MW-7, and MW-20 through MW-26 were sampled and

analyzed for VOCs (1,2 dichloroethane and vinyl chloride), pesticides (gamma-BHC and toxaphene), and metals (Lead and Chromium). Through an agreement with EPA and GA EPD, vinyl chloride, gamma-BHC, and toxaphene were removed from the sampling program after the second quarter 2004 sampling event (Williams e-mail to Farrier, 3/5/04). None of these analytes had exceeded regulatory levels since the ground-water monitoring program began in 1994. Georgia EPD used the money saved by the reduced analytical cost to replace two of the older monitoring wells, MW-2 and MW-7. These wells were made of galvanized steel and were believed to be causing problems with the analytical results for Lead and Chromium. Monitoring wells MW-2 and MW-7 were plugged in place and PVC replacement wells were installed in September 2004. Monitoring well MW-26 was properly abandoned and replaced by MW-26R in September 2005.

Review of the ground-water monitoring data indicates concentrations of Lead, Chromium, and 1,2-dichloroethane exceeded their respective ROD Action Levels and EPA revised ground-water cleanup goals for at least one sampling event during the last five-years. Vinyl chloride and gamma-BHC were not detected above their ROD Cleanup Goals or EPA revised ground-water cleanup goals. Toxaphene was not detected in any well during the monitoring events. The ROD Cleanup Goals and the EPA revised ground-water cleanup goals are noted within the tables included under Section IV's 'performance standards' discussion, and are reiterated later under the 'Question B' discussion within Table 13.

Lead exceeded its EPA revised ground-water cleanup goal (15 ug/L) in monitoring wells MW-2R, MW-7 R, MW-24, and MW-25. The Lead concentrations in MW-24 and MW-25 above the revised cleanup goal were observed during the second quarter 2003 sampling event. Detection in these two wells during subsequent sampling events did not exceed the revised cleanup goal. Lead concentrations in MW-2R and MW-7 exceeded the ROD Cleanup Goal for Lead (50 ug/L) from the first quarter 2003 event until the third quarter 2004 sampling event. Lead was detected in the wells during the fourth quarter 2004 through third quarter 2005 at concentrations below the ROD Cleanup Goal and EPA revised ground-water cleanup goal. During the fourth quarter 2005 sampling event, Lead was detected in monitoring well MW-7R at 66 ug/L, exceeding both the ROD Cleanup Goals and revised cleanup goal. It was believed that this exceedance was due to high turbidity of the sample. The well was purged and resampled on February 2, 2006. This sample was analyzed and Lead was detected at 2.4 ug/L, less than both the ROD Cleanup Goal and revised cleanup goal.

Chromium exceeded its ROD Cleanup Goals (50 ug/L) and EPA revised ground-water cleanup goal (100 ug/L) one time in two different monitoring wells. Monitoring well MW-7R contained Chromium at 410 ug/L during the third quarter 2004 sampling event. Monitoring well MW-25 contained Chromium at 198 ug/L during the second quarter 2003 event. All other detections of Chromium were below the Cleanup Goals.

The EPA revised ground-water cleanup goal and ROD Cleanup Goal for 1,2-dichloroethane (both 5.0 ug/L) were exceeded in MW-24 for the first, third, and fourth

quarter sampling events of 2003 and the first quarter sampling event of 2004 at concentrations of 6 ug/L, 7.2 ug/L, 6.4 ug/L and 5ug/L, respectively. Traces of 1,2-dichloroethane were commonly detected below the Cleanup Goals in MW-7R, MW-20, MW-21, MW-22, MW-23, and MW-25.

There were no detections of vinyl chloride above the ROD Cleanup Goal or EPA revised ground-water cleanup goal during the review period. Laboratory analysis of vinyl chloride was suspended after the second quarter 2004 sampling event as per an agreement with EPA and GA EPD (Williams e-mail to Farrier, 3/5/04). Vinyl chloride had not exceeded either the ROD Cleanup Goal or EPA revised ground-water cleanup goal since the ground-water monitoring program began in 1994.

Traces of gamma-BHC were commonly found in MW-20, MW-21, MW-22, MW-23, and MW-24. There were no detections of gamma-BHC above either the ROD Cleanup Goal or EPA revised ground-water cleanup goal. Laboratory analysis of gamma-BHC was suspended after the second quarter 2004 sampling event as per an agreement with EPA and GA EPD (Williams e-mail to Farrier, 3/5/04). Gamma-BHC had not exceeded either the ROD Cleanup Goal or EPA revised ground-water cleanup goal since the ground-water monitoring program began in 1994.

Toxaphene was not detected in any well during this review period. Laboratory analysis of toxaphene was suspended after the second quarter 2004 sampling event as per an agreement with EPA and GA EPD (Williams e-mail to Farrier, 3/5/04). Toxaphene had not exceeded either the ROD Cleanup Goal or EPA revised ground-water cleanup goal since the ground-water monitoring program began in 1994.

Through an agreement between EPA and Georgia EPD, the ground-water monitoring program was ended after the fourth quarter 2005 sampling event (Cash letter to EPA, July 19, 2006). There had been no exceedances of the ROD Action Levels or EPA revised ground-water cleanup goals for the organic indicator chemicals since December 2003. The concentrations of Lead and Chromium, historically exceeding regulatory levels in monitoring wells MW-2 and MW-7, drastically decreased after the installation of the replacement monitoring wells. There were no exceedances of any indicator chemicals from the fourth quarter of 2004 through the third quarter of 2005. During the fourth quarter 2005 sampling event, Lead was detected in monitoring well MW-7R at 66 ug/L, exceeding both the ROD Cleanup Goals and EPA revised ground-water cleanup goals. It was believed that this exceedance was due to high turbidity of the sample. The well was purged and resampled on February 2, 2006. This sample was analyzed and Lead was detected at 2.4 ug/L. This concentration is below both the ROD Cleanup Goals and EPA revised ground-water cleanup goal.

In summary, the review of ground-water monitoring data indicates that the detected concentrations for the Site constituents of concern have generally decreased over time at the site. During the fourth quarter 2005 sampling event, Lead was detected in monitoring well MW-7R at 66 ug/L, exceeding both the ROD Cleanup Goals and EPA revised ground-water cleanup goals. This was the only constituent of concern detected above

either the ROD Cleanup Goal or EPA revised ground-water cleanup goal. It was believed that this exceedance was due to high turbidity of the sample. The well was purged and resampled on February 2, 2006. This sample was analyzed and Lead was detected at 2.4 ug/L. This concentration is below both the ROD Cleanup Goals and EPA revised ground-water cleanup goal.

Methane has been monitored at the Site twice yearly since October 2005. High concentrations of methane have been detected exiting from the vents of the engineered methane venting system. No methane has been detected in the Lizzie Chapel Baptist Church building. These results indicate the system is operating as designed and preventing the buildup of methane under the landfill caps.

Summary tables of the quarterly ground-water sampling are included in Attachment D. Methane data from the last four monitoring events is also included in Attachment D.

### **Site Inspection**

A Site inspection was conducted on 18 March 2008. The purpose of the Site inspection was to assess the protectiveness of the remedy. The following people attended the inspection:

- Brian Farrier, US EPA
- Steven M. Bath, USACE
- Eddie Williams, Georgia Environmental Protection Division.
- Billie Segars, Peach County Public Works.

The Site inspection included inspection of the cap and the ground-water monitoring system. The landfill covers appeared to be intact, and the surface appeared to be in good condition with no significant erosion problems. The methane vents and subsurface drainage system were found to be in good condition. The ground-water monitoring system was inspected and all monitoring wells were located and observed to be in good condition. The inspection team observed the routine maintenance of the Site. There were no indications of any problems at the Site.

Site Photographs are included in Attachment E. The Site Inspection Checklist is included as Attachment F.

### **Interviews**

Interviews were conducted by Mr. Steven Bath with several parties associated with the Powersville Landfill Site. Interviews included telephone conversations, in person meetings and e-mail correspondence. Interviews were documented on Interview Record forms for the project files.

Mr. Billie Segars, Peach County Director of Public Works, was interviewed during the Site inspection. Mr. Segars stated the remedy was functioning as intended and that the county had no significant issues associated with the site. Mr. Segars was also extremely helpful in providing the O&M costs for the site and recent methane monitoring data.

Ms. Marcia Johnson, Peach County Administrator, was interviewed by phone on June 2, 2008. Ms. Johnson stated that she was not aware of any problems with remedy and the County had no concerns about the Site. Ms. Johnson described the passive methane venting system that was installed at the new fire station adjacent to the Site. Although the County did not expect methane to be a hazard at the fire station, the passive system was relatively inexpensive to install during building construction and provided an additional margin of safety for the facility. The methane system consists of a series of collection pipes placed in the foundation below the floor slabs and vented through the building roof. Ms. Johnson also discussed a location northeast of the fire station that the county had previously considered to construct a pond. Mr. Bath explained that if the pond was far enough downgradient of the Site, it should not have any impact on the operation of the remedy. Mr. Bath also stated that EPA should be consulted if the County considers the pond again because it would be important to select a location for the pond that would not create a pathway that would allow constituents present in the landfill to endanger the public. Ms. Johnson assured me that EPA would be consulted if the County considered the pond site again.

Mr. Eddie Williams, Geologist with the Georgia Environmental Protection Division, was interviewed during the site inspection and also over the phone on May 8, 2008. Mr. Williams is the State regulator assigned to the Site. Mr. Williams was instrumental in providing background information on the Site and explaining the roles of the different entities that have been involved with the Site. The State has been responsible for the ground-water monitoring performed at the Site and has conducted inspections of the landfill. The State is satisfied with the operation and maintenance of the Site and with the results of the ground-water monitoring. Mr. Williams had no concerns about the remedy at the Site.

Mr. Tony Rodriguez, Project Manager with Hulsey, McCormick and Wallace, Inc. was contacted on March 23, 2008. Mr. Rodriguez is responsible for the methane monitoring at the Site. Mr. Rodriguez provided the methane data for the landfill and the O& M cost associated with it. Mr. Rodriguez had no concerns about the Site.

Captain Ryan Roberts of the Peach County Fire Department was interviewed during the Site Inspection. The new fire station is directly adjacent to the Site on Peach Parkway (GA Hwy 49). Captain Roberts stated the fire Department had no issues with the Site. The old fire station served as the local repository for the Site. The new station no longer maintains the records for the site. Captain Roberts also helped locate the monitoring well adjacent to the station.

No other persons were interviewed with respect to the Site. No significant problems were discovered or identified with the Site as a result of the interviews. No persons interviewed were aware of any negative impacts on the community from the Site.

## VII. Technical Assessment

### Question A: Is the remedy functioning as intended by the decision documents?

The remedial action at the Site continues to operate and function as designed. The review of ground-water monitoring data indicates that the detected concentrations for the Site constituents of concern have generally decreased over time at the site. Through an agreement between EPA and Georgia EPD, the ground-water monitoring program was ended after the fourth quarter 2005 sampling event (Cash letter to EPA, July 19, 2006). There had been no exceedances of the ROD Action Levels or EPA revised ground-water cleanup goals for the organic indicator chemicals since December 2003. The concentrations of Lead and Chromium, historically exceeding regulatory levels in galvanized monitoring wells MW-2 and MW-7, drastically decreased after the installation of the replacement monitoring wells. There were no exceedances of any indicator chemicals from the fourth quarter of 2004 through the third quarter of 2005. During the fourth quarter 2005 sampling event, Lead was detected in monitoring well MW-7R at 66 ug/L, exceeding both the ROD Cleanup Goals and EPA revised ground-water cleanup goals. It was believed that this exceedance was due to high turbidity of the sample. The well was purged and resampled on February 2, 2006. This sample was analyzed and Lead was detected at 2.4 ug/L. This concentration is below both the ROD Cleanup Goals and EPA revised ground-water cleanup goal.

Access to the Site is limited by fencing around the perimeter of the property and exposure to contaminated soil is prevented by the soil cap and ground cover. Restrictive covenants have been implemented on six parcels at the Site but three parcels still needed restrictive covenants. EPA is attempting to implement restrictive covenants or other appropriate institutional controls on these parcels. The restrictive covenants that currently exist on six parcels will expire in 2013 pursuant to state law. As a result, new restrictive covenants must be recorded for these parcels prior to 2013.

<b>Checklist for question A: Is the remedy functioning as intended by the decision documents?</b>	
<b>Remedial Action Performance</b>	
Yes	Does the remedial action continue to operate and function as designed?
Yes	Is the remedial action performing as expected and are treatment standards (i.e., cleanup goals) noted in the ROD being achieved?
Yes	Is containment effective?
<b>System Operations /O&amp;M</b>	
Yes	Will operating procedures as implemented maintain the effectiveness of response actions?
No	Are there large variances in O&M cost that could indicate a potential remedy problem or remedy issue?
<b>Opportunities for Optimization</b>	
No	Do opportunities exist to improve the performance and/or reduce the cost of monitoring, sampling, and treatment systems?
<b>Early Indicators of Potential Issues</b>	
No	Do frequent equipment changes or breakdown indicate a potential problem?
No	Do issues or problems place protectiveness at risk?
<b>Implementation of Institutional Controls and Other Measures</b>	
Yes	Are access controls in place to prevent exposure?
No	Are institutional controls in place to prevent exposure?
No	Are other actions necessary to ensure that immediate threats have been addressed?

Question B: Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

As done in 2003, current standards for chemical-specific ARARs identified in the 1987 ROD were reviewed to assess whether the standards set in the 1987 ROD for these ARARs have changed, in accordance with the EPA guidance document, Comprehensive Five-Year Review Guidance, EPA 540-R-01-007, OSWER No. 9355.7-03B-P June 2001. Per EPA guidance, only those ARARs that address risk posed to human health or the environment need be reviewed during a Five-Year Review. Other ARARs listed in the ROD and not evaluated in this review were location- and action-specific requirements that were germane to the construction and operational activities of the landfill. Those ARARs were not considered pertinent to evaluating the protectiveness of the remedy. Only ARARs associated with the protectiveness of the remedy are reviewed.

Federal chemical-specific ARARs

- Safe Drinking Water Act (SDWA) Maximum Contaminant Levels (40 CFR 141 and 143)
- Georgia Safe Drinking Water Chapter 391-3-5

Federal action-specific ARARs

- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- Resource Conservation and Recovery Act (RCRA)
- Clean Water Act
- Clean Air Act
- Georgia Solid Waste Management Chapter 391-3-4

There have been three changes in MCLs impacting the contaminants of concern at this site since the ROD was signed. The MCL for gamma-BHC changed from 4.0 ug/L to 0.2 ug/L; the MCL for lead decreased from 50 ug/L to 15 ug/L; and the MCL for vinyl chloride increased from 1 µg/L to 2 µg/L. The revised MCL for gamma-BHC was noted in the December 1997 Five-Year Review. The changes for vinyl chloride and lead were incorporated into the EPA revised ground-water cleanup goals in the ground-water monitoring requirements noted below in Table 13. Past ground-water monitoring data for the Site indicated that the detected concentrations for both of these constituents had decreased and were below the revised MCLs for these constituents. Laboratory analysis of gamma-BHC and vinyl chloride was suspended after the second quarter 2004 sampling event as per an agreement with EPA and GA EPD (Williams e-mail to Farrier, 3/5/04). The toxicity data, cleanup levels and RAOs are still valid with the updated MCL requirements. MCLs for the COCs are listed on Table 13.

In addition to the ARARs Review, an evaluation of the Remedy Risk Assessment was conducted. Physical conditions at the Site have not changed. No new contaminants or contaminant sources have been identified on the Site, and there are no toxic byproducts

of the remedy not previously considered and addressed by the ROD. There have been no changes in contaminant characteristics or toxicity factors. Standardized risk assessment methodologies have not changed in any way that would affect the protectiveness of the remedy.

**Table 13: Cleanup Levels for Ground Water**

Contaminant of Concern	ROD Cleanup Goals (ug/L)	EPA revised ground-water cleanup goals (ug/L)	Georgia MCL * (ug/L)	Federal MCL ** (ug/L)
gamma-BHC	4	4	0.2	0.2
Vinyl chloride	1	2	2	2
1,2-Dichloroethane	5	5	5	5
Lead	50	15	15	15
Chromium	50	100	100	100
Toxaphene		3		

\* = Georgia Rule For Safe Drinking Water Chapter 391-3-5

\*\* = EPA Safe Drinking Water Act (SDWA)

<b>Checklist for question B: Are the exposure assumptions, toxicity data, treatment standards (i.e., cleanup goals) and remedial action objectives (RAOs) used at the time of the remedy selection still valid?</b>	
<b>Changes in ARARS and TBCs</b>	
No	Have ARARS identified in the ROD been revised to call into question the protectiveness of the remedy?
No	Do newly promulgated ARARS call into question the protectiveness of the remedy?
No	Have TBCs used in selecting treatment standards (i.e., cleanup goals) at the site changed to affect the protectiveness of the remedy?
<b>Change in Exposure Pathways</b>	
No	Has land use or expected land use on or near the site changed?
No	Have human health or ecological routes of exposure or receptors been newly identified or changed in a way that could affect the protectiveness of the remedy?
No	Are there any newly identified contaminants or contaminant sources?
No	Are there any unanticipated toxic byproducts of the remedy not previously addressed by the decision documents?
No	Have physical site conditions or the understanding of these conditions changed in a way that could affect the protectiveness of the remedy?
<b>Change in Toxicity and Other Contaminant Characteristics</b>	
No	Have toxicity factors for contaminants of concern at the site changed in a way that could affect the protectiveness of the remedy?
No	Have other contaminant characteristics changed that could affect the protectiveness of the remedy?
<b>Changes in Risk Assessment Methods</b>	
No	Have standardized risk assessment methods changed in a way that could affect the protectiveness of the remedy?
<b>Expected Progress Towards meeting RAOs</b>	
Yes	Is the remedy progressing as expected?

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No additional information beyond that noted in discussion under Questions A and B has been identified that would call into question the protectiveness of the remedy. No new ecological risks have been identified. There have been no impacts to the Site from natural disasters.

<b>Checklist for question C: Has any other information come to light that could call into question the protectiveness of the remedy?</b>	
<b>Other Information</b>	
No	Have newly identified ecological risk been found?
No	Are there any impacts from natural disasters?
No	Has any other information come to light that could affect the protectiveness of the remedy?

Technical Assessment Summary

The remedial action at the Site continues to operate and function as designed. The review of ground-water monitoring data indicates that the detected concentrations for the Site constituents of concern have generally decreased over time at the site. Through an agreement between EPA and Georgia EPD, the ground-water monitoring program was ended after the fourth quarter 2005 sampling event (Cash letter to EPA, July 19, 2006). There had been no exceedances of the ROD Action Levels or EPA revised ground-water cleanup goals for the organic indicator chemicals since December 2003. The concentrations of Lead and Chromium, historically exceeding regulatory levels in galvanized monitoring wells MW-2 and MW-7, drastically decreased after the installation of the replacement monitoring wells. There were no exceedances of any indicator chemicals from the fourth quarter of 2004 through the third quarter of 2005. During the fourth quarter 2005 sampling event, Lead was detected in monitoring well MW-7R at 66 ug/L, exceeding both the ROD Cleanup Goals and EPA revised ground-water cleanup goals. It was believed that this exceedance was due to high turbidity of the sample. The well was purged and resampled on February 2, 2006. This sample was analyzed and Lead was detected at 2.4 ug/L. This concentration is below both the ROD Cleanup Goals and EPA revised ground-water cleanup goal.

Access to the Site is limited by fencing around the perimeter of the property and exposure to contaminated soil is prevented by the soil cap and ground cover. Restrictive covenants have been implemented on six parcels at the Site but three parcels still needed restrictive covenants. EPA is attempting to implement restrictive covenants or other appropriate institutional controls on these parcels. The restrictive covenants that currently exist on six parcels will expire in 2013 pursuant to state law. As a result, new restrictive covenants must be recorded for these parcels prior to 2013.

No new contaminants or contaminant sources have been identified on the Site, and there have been no changes in contaminant characteristics or toxicity factors. Standardized risk assessment methodologies have not changed in any way that would affect the protectiveness of the remedy.

**VIII. Issues**

<b>Issue</b>	<b>Currently Affects Protectiveness (Y/N)</b>	<b>Affects Future Protectiveness (Y/N)</b>
Deed restrictions (restrictive covenants) required by the ROD have not been implemented on three parcels at the Site.	N	Y
Restrictive covenants recorded on six parcels at the Site expire in 2013 pursuant to state law.	N	Y

**IX. Recommendations and Follow-up Actions**

<b>Recommendation/ Follow-Up Actions</b>	<b>Party Responsible</b>	<b>Oversight Agency</b>	<b>Milestone Date</b>	<b>Affects Protectiveness (Y/N)</b>	
				<b>Current</b>	<b>Future</b>
Implement restrictive covenants or other appropriate institutional controls on three parcels at the Site.	EPA, GAEPD, property owners.	EPA, GAEPD.		N	Y
Renew deed restrictions for six parcels at the Site by recording new restrictive covenants.	EPA, GAEPD, property owners.	EPA, GAEPD.		N	Y

**X. Protectiveness Statement**

The remedial actions at the Powersville Landfill Superfund Site are protective, in the short-term, of human health and the environment, and exposure pathways that could result in unacceptable risks are being controlled. However, in order for the remedy to be protective in the long term, restrictive covenants or other appropriate institutional controls must be implemented or renewed on Site parcels.

**XI. Next Review**

The next review for the Powersville Landfill Superfund Site is required to be completed within five years of the approval date of this Five-Year Review Report.

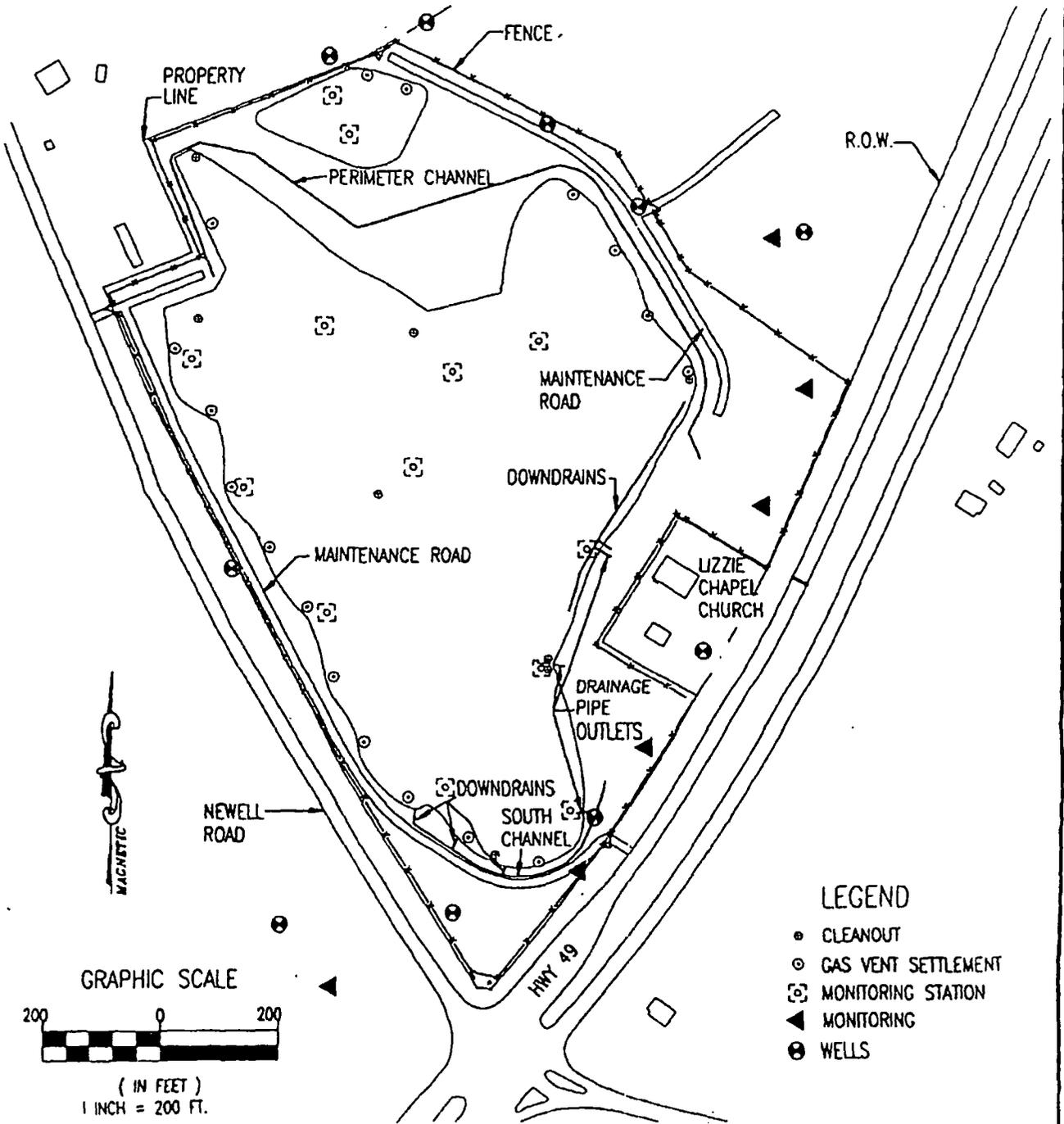
# POWERSVILLE LANDFILL

NPL SITE PEACH COUNTY, GEORGIA

## INSPECTION OF SITE STRUCTURES

PAGE 11 OF 11

### SITE SKETCH



**Attachment B**  
**Documents Reviewed for Powersville Site**

Superfund Preliminary Site Close Out Report (Final Operable Unit Remedial Action), Powersville Landfill Superfund Site, Powersville, Peach County, Georgia, June 1993.

Operation and Maintenance Plan for Powersville Landfill NPL Site, Powersville, Georgia, Remedial Action, July 1993.

Revision 1 Five-Year Review Final Report, Powersville Landfill Site, Powersville, Peach County, Georgia. December 1997.

Williams, Eddie, Georgia EPD e-mail to Brian Farrier, US EPA, March 5 2004.

Cash, Tim, Georgia EPD letter to Mr. Randall Chaffins, US EPA, July 19 2006.

U.S. EPA, Record of Decision (ROD), Powersville Site, September 1987.

U.S. EPA, Five-Year Review Report for Powersville Site, August 2003.

Weston Solutions, Inc., Quarterly Monitoring Report, 2<sup>nd</sup> Quarter 2003, Powersville Landfill NPL Site, Peach County, Georgia, July 2003.

Weston Solutions Inc., Quarterly Monitoring Report, 3<sup>rd</sup> Quarter 2003, Powersville Landfill NPL Site, Peach County, Georgia, October 2003.

Weston Solutions, Inc., Quarterly Monitoring Report, 4<sup>th</sup> Quarter 2003, Powersville Landfill NPL Site, Peach County, Georgia, January 2004.

Weston Solutions, Inc., Quarterly Monitoring Report, 1<sup>st</sup> Quarter 2004, Powersville Landfill NPL Site, Peach County, Georgia, April 2004.

Weston Solutions, Inc., Quarterly Monitoring Report, 2<sup>nd</sup> Quarter 2004, Powersville Landfill NPL Site, Peach County, Georgia, July 2004.

Weston Solutions, Inc., Quarterly Monitoring Report, 3<sup>rd</sup> Quarter 2004, Powersville Landfill NPL Site, Peach County, Georgia, November 2004.

Weston Solutions, Inc., Quarterly Monitoring Report, 4<sup>th</sup> Quarter 2004, Powersville Landfill NPL Site, Peach County, Georgia, January 2005.

Weston Solutions, Inc., Quarterly Monitoring Report, 1<sup>st</sup> Quarter 2005, Powersville Landfill NPL Site, Peach County, Georgia, April 2005.

Weston Solutions, Inc., Quarterly Monitoring Report, 2<sup>nd</sup> Quarter 2005, Powersville Landfill NPL Site, Peach County, Georgia, July 2005.

Weston Solutions, Inc., Quarterly Monitoring Report, 3<sup>rd</sup> Quarter 2005, Powersville Landfill NPL Site, Peach County, Georgia, October 2005.

Weston Solutions, Inc., Quarterly Monitoring Report, 4<sup>th</sup> Quarter 2005, Powersville Landfill NPL Site, Peach County, Georgia, January 2006.

**From:** Eddie Williams  
**To:** Farrier.Brian@epamail.epa.gov  
**Subject:** Re: Powersville Landfill NPL Site

Thanks, Brian. I will use this e-mail as concurrence on this proposal. Thanks for the input. I understand we have a ways to go with the 1,2-DCA at the site.

Eddie

>>> <Farrier.Brian@epamail.epa.gov> 3/5/04 9:39:18 AM >>>

FILE COPY

Eddie:  
Good to hear from and hope you are doing well.

I think it is a great idea to drop those organics from the sampling suite, then use the monies saved to replace the wells that may be causing problems with the two inorganics. I presume this email will be adequate to demonstrate EPA's concurrence with this approach.

Regarding how long we should conduct groundwater monitoring, that is a judgement call on which I would want some input from our groundwater technical folks first. Ideally, when you replace those two wells, the lead and chromium levels will drop off and we can conclude that previous hits were not representative; after that, it would be a simple matter of evaluating the 1,2-DCA history.

If you have any questions, let's discuss.

Thanks,

Brian

Eddie Williams  
<[Eddie\\_Williams@dnr.state.ga.us](mailto:Eddie_Williams@dnr.state.ga.us)> To: Brian Farrier/R4/USEPA/US@EPA  
cc:  
Subject: Powersville Landfill NPL Site  
03/05/2004 07:49 AM

Brian,

Last time I spoke with you, I mentioned that we had never had hits above regulatory levels of toxaphene or gamma-BHC in our sampling that has been conducted since 1994. You indicated that when it came time to re up our sampling contract with our vendor, to discuss it with you and

that we might be able to drop those constituents out of the continued sampling. I would also like to include vinyl chloride in that discussion. We have not had any hits above regulatory levels for that constituent since we started in 1994.

Lead, chromium and 1,2-dichloroethane continue to be concerns, however.

We would like to replace the two older wells (both downgradient), MW-2 and MW-7. These are older galvanized steel wells and may be causing problems in the analytical results for lead and chromium. Our budget is real tight now that the legislature has seized much of the State Superfund monies to help balance the budget. We would like to be able to take the money saved from dropping the pesticide analyses for toxaphene and gamma-BHC and use it to replace the two galvanized steel wells.

Our last sampling event was done this week and we would like to drop the pesticides sampling and analysis effective in the June sampling so that we could replace the two monitoring wells MW-2 and MW-7.

Also what time limit is required for consecutive years of non-detections above regulatory levels for all constituents before the State can request a release from further groundwater sampling at this facility?

If you have any questions, please feel free to call me at 404-657-8660. I will be in the office Friday, March 5 until 2:15 pm, out on March 8 and 9, and back in the office on March 10.

Thanks for your attention and consideration.

Eddie Williams  
Advanced Geologist  
Hazardous Waste Management Branch  
Environmental Protection Division  
Georgia Dept. of Natural Resources  
2 Martin Luther King, Jr. Dr., SE  
Suite 1154, East Tower  
Atlanta, GA 30334  
404/657-8660

**Georgia Department of Natural Resources**  
2 Martin Luther King, Jr. Dr., SE, Ste 1462 East, Atlanta, Georgia 30334  
Noel Holcomb, Commissioner  
Environmental Protection Division  
Carol A. Couch, Ph.D., Director  
404/656-2833

July 19, 2006

**COPY**

Mr. Randall Chaffins, Branch Chief  
South Superfund Remedial Branch  
U.S. Environmental Protection Agency Region IV  
Recipient Division  
61 Forsyth Street  
Atlanta, Georgia 30365

**FILE COPY**

RE: Powerville Landfill Site, HSI #10019  
Powerville, Peach County, Georgia

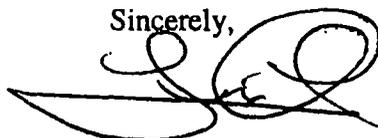
Dear Mr. Chaffins:

Pursuant to its contract requirements, the Georgia Environmental Protection Division (EPD) has completed and closed our current contract for groundwater sampling at the Powerville Landfill site. The analytical results for past sampling events revealed a general declining of the concentrations at the landfill for all constituents and, in particular, the chromium and lead concentrations have drastically decreased. There have been no exceedances of the EPA required level of the indicator chemicals since December 2003.

On March 28, 2006, EPD requested that EPA pursue the delisting of the Powerville Landfill from the NPL. Therefore, unless otherwise instructed by EPA, EPD will not be assigning a new contract for groundwater monitoring at the site.

Should you have any questions, please contact Ms. Jacki Scarbary at 404-657-8600.

Sincerely,



Tim Cash  
Program Manager  
Hazardous Sites Response Program

c: Eddie Williams ✓

File: HSI #10019

S:\DRIVE\Jacki\SITES\PWRSVLL\Delisting req1.doc

**Attachment D**  
**Analytical Data Summary Tables**

### 4<sup>th</sup> Quarter 2005 Data Summary

Sample	VOCs (ug/L)	Metals (ug/L)	
	1,2-Dichloroethane	Lead	Chromium
MW-2R	ND	4.6 J	1.7 J
MW-7R	0.92 J	66*	4.9 J
MW-20	1.5	5.3	4.3 J
MW-21	0.63 J	ND	3.2 J
MW-22	ND	4.0 J	4.9 J
MW-23	ND	ND	2.4 J
MW-24	2.4	ND	1.7 J
MW-25	ND	ND	7.2 J
MW-26R	ND	6.3	1.4 J
EPA revised cleanup goals	5.0	15	100
ROD Action Level	2.5	50	50

Notes: \* MW-7R was resampled for Lead February 2006. Result was 2.4 ug/L

ND = not detected

J flag = estimated value below the laboratory reporting limit

### 3rd Quarter 2005 Data Summary

Sample	VOCs (ug/L)	Metals (ug/L)	
	1,2-Dichloroethane	Lead	Chromium
MW-2R	ND	ND	0.83 J
MW-7R	0.63 J	8.8	0.93 J
MW-20	2.9	ND	ND
MW-21	0.67 J	ND	12
MW-22	ND	ND	3.3 J
MW-23	0.90 J	ND	ND
MW-24	1.0	ND	4.7 J
MW-25	ND	9.8	10
MW-26R	ND	2.4 J	2.7 J
EPA revised cleanup goals	5.0	15	100
ROD Action Level	2.5	50	50

Notes: ND = not detected

J flag = estimated value below the laboratory reporting limit

B flag = analyte was also detected in the blank sample

### 2nd Quarter 2005 Data Summary

Sample	VOCs (ug/L)	Metals (ug/L)	
	1,2-Dichloroethane	Lead	Chromium
MW-2R	ND	ND	ND
MW-7R	ND	3.5 J	1.4 J
MW-20	2.2	ND	1.2 J
MW-21	0.87 J	2.2 J	29
MW-22	ND	ND	2.2 J
MW-23	ND	ND	1.6 J
MW-24	3.2	ND	1.7 J
MW-25	ND	ND	ND
MW-26	NS	NS	NS
EPA revised cleanup goals	5.0	15	100
ROD Action Level	2.5	50	50

Notes: ND = not detected

J flag = estimated value below the laboratory reporting limit

B flag = analyte was also detected in the blank sample

### 1<sup>st</sup> Quarter 2005 Data Summary

Sample	VOCs (ug/L)	Metals (ug/L)	
	1,2-Dichloroethane	Lead	Chromium
MW-2R	ND	ND	ND
MW-7R	ND	ND	ND
MW-20	2.9	ND	7.4 J
MW-21	1.5	ND	17
MW-22	ND	NS	NS
MW-23	0.47 J	ND	5.8 J
MW-24	0.75 J	ND	1.6 J
MW-25	ND	ND	36
MW-26	NS	NS	NS
EPA revised cleanup goals	5.0	15	100
ROD Action Level	2.5	50	50

Notes: ND = not detected

J flag = estimated value below the laboratory reporting limit

B flag = analyte was also detected in the blank sample

#### 4<sup>th</sup> Quarter 2004 Data Summary

Sample	VOCs (ug/L)	Metals (ug/L)	
	1,2-Dichloroethane	Lead	Chromium
MW-2R	ND	ND	6.4 B
MW-7R	0.12 J	3.1 B	3.1 B
MW-20	2.3	ND	1.8 B
MW-21	1.5	ND	3.3 B
MW-22	ND	ND	6.8 B
MW-23	0.28 J	ND	2.0 B
MW-24	0.86 J	ND	11
MW-25	ND	ND	6.4 B
MW-26	NS	NS	NS
EPA revised cleanup goals	5.0	15	100
ROD Action Level	2.5	50	50

Notes: ND = not detected

J flag = estimated value below the laboratory reporting limit

B flag = analyte was also detected in the blank sample

#### 3<sup>rd</sup> Quarter 2004 Data Summary

Sample	VOCs (ug/L)	Metals (ug/L)	
	1,2-Dichloroethane	Lead	Chromium
MW-2R	ND	ND	4.5 B
MW-7R	0.56 J	120	410
MW-20	2.1	2.9 B	1.6 B
MW-21	1.6	2.6 B	2.5 B
MW-22	0.24 J	ND	1.6 B
MW-23	2.7	3.4 B	3.3 B
MW-24	1.9	ND	1.3 B
MW-25	ND	ND	8.5 B
MW-26	NS	NS	NS
EPA revised cleanup goals	5.0	15	100
ROD Action Level	2.5	50	50

Notes: ND = not detected

J flag = estimated value below the laboratory reporting limit

B flag = analyte was also detected in the blank sample

### 2<sup>nd</sup> Quarter 2004 Data Summary

Sample	VOCs (ug/L)		Pesticides (ug/L)		Metals (ug/L)	
	1,2-Dichlorethane	Vinyl Chloride	Gamma-BHC	Toxaphene	Lead	Chromium
MW-2	ND	ND	ND	ND	26	ND
MW-7	0.87 J	0.35 J	ND	ND	25	1.7 B
MW-20	2.7	ND	0.16	ND	ND	ND
MW-21	1.5	ND	0.023 J	ND	3.0 B	12
MW-22	ND	ND	0.014 J	ND	ND	1.2 B
MW-23	0.58 J	ND	0.019 J	ND	ND	1.8 B
MW-24	1.9	ND	0.0058 J	ND	4.3 B	4.2 B
MW-25	ND	ND	ND	ND	3.3 B	5.0 B
MW-26	ND	ND	ND	ND	4.3 B	ND
Revised cleanup goals	5.0	2.0	4.0	3.0	15	100
ROD Level	5.0	1.0	4.0	N/A	50	50

Notes: ND = not detected

J flag = estimated value below the laboratory reporting limit

B flag = analyte was also detected in the blank sample

### 1<sup>st</sup> Quarter 2004 Data Summary

Sample	VOCs (ug/L)		Pesticides (ug/L)		Metals (ug/L)	
	1,2-Dichlorethane	Vinyl Chloride	Gamma-BHC	Toxaphene	Lead	Chromium
MW-2	ND	ND	ND	ND	12.4	ND
MW-7	0.9 J	ND	ND	ND	6.4 B	ND
MW-20	4 J	ND	0.23 J	ND	ND	ND
MW-21	2 J	ND	0.034 J	ND	ND	6.0
MW-22	ND	ND	ND	ND	1.6 B	3.9 B
MW-23	2 J	ND	0.075 J	ND	2.8 B	2.2 B
MW-24	5	ND	ND	ND	1.6 B	ND
MW-25	ND	ND	ND	ND	ND	3.2 B
MW-26	ND	ND	ND	ND	ND	5.1
Revised cleanup goals	5.0	2.0	4.0	3.0	15	100
ROD Level	5.0	1.0	4.0	N/A	50	50

Notes: ND = not detected

J flag = estimated value below the laboratory reporting limit

### Methane Sampling Results

Methane Station #	26-Jun-06		9-Jan-07		25-Jun-07		9-Dec-07	
	% Methane	% LEL						
1	2	40	0	0	0	0	0	0
2	6	120	0	0	0	0	14	280
3	32	640	0	0	0	0	6	120
4	35	700	0.75	15	0	0	11	220
5	35	700	0	0	0	0	2.5	50
6	18	360	1.25	25	0	0	13	260
7	33	660	0.45	9	0	0	18	360
8	12	240	0	0	0	0	10	200
9	11	220	5	100	0.25	5	7	140
10	5	100	0	0	0.1	2	5	100
11	0	0	0	0	0	0	0	0
12	15	300	1.75	35	0	0	2.5	50
13	16	320	0.6	12	0.35	7	6	120
14	0	0	5	100	0	0	5	100
15	0	0	1.25	25	0	0	0.5	10
16	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0
church	0	0	0	0	0	0	0	0

% Methane = % methane by volume

% LEL = % of the Lower Explosive Limit



Powersville Landfill Superfund Site

Looking southwest at the Lizzie Chapel Baptist Church property



Powersville Landfill Superfund Site

Looking northwest across the Site



Powersville Landfill Superfund Site  
Monitoring Well MW-21 (typical of Site monitoring wells)



Powersville Landfill Superfund Site  
Looking east over sedimentation basin #1 with concrete channel



Powersville Landfill Superfund Site  
Sedimentation basin #2



Powersville Landfill Superfund Site  
Settlement monitoring station with subsurface drainage piping



Powersville Landfill Superfund Site  
Typical methane vent



Powersville Landfill Superfund Site  
Looking east across the Site



Powersville Landfill Superfund Site

Vents and settlement stations from the northwest corner of the Site



Powersville Landfill Superfund Site

Vents and settlement monitoring stations across the center of the Site



Powersville Landfill Superfund Site

Looking northeast at the hazardous waste landfill cell at the Site



Powersville Landfill Superfund Site

Looking northwest at the hazardous waste cell

**Attachment F**  
**Five-Year Review Site Inspection Checklist**

## Five-Year Review Site Inspection Checklist

√

(Working document for site inspection. Information may be completed by hand and attached to the Five-Year Review report as supporting documentation of site status. "N/A" refers to "not applicable.")

I. SITE INFORMATION													
Site name: Powersville Landfill Site	Date of inspection: 03/18/08												
Location and Region: Peach County, GA	EPA ID: GAD980496954												
Agency, office, or company leading the five-year review: USEPA	Weather/temperature: partly cloudy, warm												
<b>Remedy Includes:</b> (Check all that apply) <table style="width: 100%; border: none;"> <tr> <td><input checked="" type="checkbox"/> Landfill cover/containment</td> <td><input type="checkbox"/> Monitored natural attenuation</td> </tr> <tr> <td><input checked="" type="checkbox"/> Access controls</td> <td><input type="checkbox"/> Groundwater containment</td> </tr> <tr> <td><input checked="" type="checkbox"/> Institutional controls</td> <td><input type="checkbox"/> Vertical barrier walls</td> </tr> <tr> <td><input type="checkbox"/> Groundwater pump and treatment</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Surface water collection and treatment</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other</td> <td></td> </tr> </table>		<input checked="" type="checkbox"/> Landfill cover/containment	<input type="checkbox"/> Monitored natural attenuation	<input checked="" type="checkbox"/> Access controls	<input type="checkbox"/> Groundwater containment	<input checked="" type="checkbox"/> Institutional controls	<input type="checkbox"/> Vertical barrier walls	<input type="checkbox"/> Groundwater pump and treatment		<input type="checkbox"/> Surface water collection and treatment		<input type="checkbox"/> Other	
<input checked="" type="checkbox"/> Landfill cover/containment	<input type="checkbox"/> Monitored natural attenuation												
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<input checked="" type="checkbox"/> Institutional controls	<input type="checkbox"/> Vertical barrier walls												
<input type="checkbox"/> Groundwater pump and treatment													
<input type="checkbox"/> Surface water collection and treatment													
<input type="checkbox"/> Other													
<b>Attachments:</b> <input type="checkbox"/> Inspection team roster attached <input checked="" type="checkbox"/> Site map attached													
II. INTERVIEWS (Check all that apply)													
1. <b>O&amp;M site manager</b> <u>Billie Segars, Public Works Director, Peach County.</u> Interviewed <input checked="" type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone <input type="checkbox"/> by e-mail Problems, suggestions <u>The County has not had any problems with the Site.</u>													
2. <b>O&amp;M staff</b> <u>Tony Rodrigez Project Manager Hulsey, McCormick and Wallace, Inc. (HMW) 03/24/08</u> <table style="width: 100%; border: none; margin-top: 5px;"> <tr> <td style="text-align: center;">Name</td> <td style="text-align: center;">Title</td> <td style="text-align: center;">Date</td> </tr> </table> Interviewed <input type="checkbox"/> at site <input checked="" type="checkbox"/> by phone Phone no. <u>478 737-2072</u> Problems, suggestions; <u>Methane at the Site is monitored twice yearly by HMW for Peach County. The engineered methane vents appear to be working as designed.</u>		Name	Title	Date									
Name	Title	Date											



**III. ON-SITE DOCUMENTS & RECORDS VERIFIED** (Check all that apply)

1.	<b>O&amp;M Documents</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> O&M manual	<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
	Remarks <u>There are no facilities on the Site for storage of Site information.</u>			
2.	<b>Site-Specific Health and Safety Plan</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<b>Contingency/Emergency Response Plan</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks <u>There are no facilities on the Site for storage of Site information</u>			
3.	<b>O&amp;M and OSHA Training Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks <u>There are no facilities on the Site for storage of Site information</u>			
4.	<b>Permits and Service Agreements</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<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
	Remarks <u>There are no facilities on the Site for storage of Site information</u>			
5.	<b>Gas Generation Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks <u>There are no facilities on the Site for storage of Site information</u>			
6.	<b>Settlement Monument Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks <u>There are no facilities on the Site for storage of Site information</u>			
7.	<b>Groundwater Monitoring Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks <u>There are no facilities on the Site for storage of Site information</u>			
8.	<b>Leachate Extraction Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks _____			
9.	<b>Discharge Compliance Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Air	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Water (effluent)	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks _____			
10.	<b>Daily Access/Security Logs</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks _____			



<b>C. Institutional Controls (ICs)</b>			
1.	<b>Implementation and enforcement</b>		
	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)	<input type="checkbox"/> None	
	Frequency	_____	
	Responsible party/agency	_____	
	Contact	_____	
	Name	Title	Date Phone no.
	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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
	Violations have been reported	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Other problems or suggestions:	_____	
2.	<b>Adequacy</b>	<input checked="" type="checkbox"/> ICs are adequate	<input type="checkbox"/> ICs are inadequate <input type="checkbox"/> N/A
	Remarks: <u>ICs were reviewed by USEPA and determined to be adequate.</u> <u>ICs are being revised by the GAEPD and the USEPA in order to delist the Site.</u>		
<b>D. General</b>			
1.	<b>Vandalism/trespassing</b>	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No vandalism evident
	Remarks: <u>It was apparent that trespassers had hit golf balls on the Site. There was no damage to the site</u>		
2.	<b>Land use changes on site</b>	<input checked="" type="checkbox"/> N/A	
	Remarks: _____		
3.	<b>Land use changes off site</b>	<input checked="" type="checkbox"/> N/A	
	Remarks: _____		
<b>VI. GENERAL SITE CONDITIONS</b>			
<b>A. Roads</b>			
	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A	
1.	<b>Roads damaged</b>	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Roads adequate <input type="checkbox"/> N/A
	Remarks: _____		

<b>B. Other Site Conditions</b>		
Remarks _____		
<b>VII. LANDFILL COVERS</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A		
<b>A. Landfill Surface</b>		
1.	<b>Settlement</b> (Low spots) Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Settlement not evident Depth _____
2.	<b>Cracks</b> Lengths _____    Widths _____    Depths _____ Remarks <u>None.</u>	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Cracking not evident
3.	<b>Erosion</b> Areal extent _____ Remarks <u>None.</u>	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Erosion not evident Depth _____
4.	<b>Holes</b> Areal extent _____ Remarks <u>None.</u>	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Holes not evident Depth _____
5.	<b>Vegetative Cover</b> <input type="checkbox"/> Grass <input checked="" type="checkbox"/> Cover properly established <input type="checkbox"/> No signs of stress <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram) Remarks _____	
6.	<b>Alternative Cover (armored rock, concrete, etc.)</b> <input checked="" type="checkbox"/> N/A Remarks _____	
7.	<b>Bulges</b> Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Bulges not evident Height _____
8.	<b>Wet Areas/Water Damage</b> <input checked="" type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Wet areas <input type="checkbox"/> Location shown on site map    Areal extent _____ <input type="checkbox"/> Ponding <input type="checkbox"/> Location shown on site map    Areal extent _____ <input type="checkbox"/> Seeps <input type="checkbox"/> Location shown on site map    Areal extent _____ <input type="checkbox"/> Soft subgrade <input type="checkbox"/> Location shown on site map    Areal extent _____ Remarks _____	
9.	<b>Slope Instability</b> <input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> No evidence of slope instability Areal extent _____ Remarks _____	

**B. Benches**       Applicable     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**                       Location shown on site map                       N/A or okay  
 Remarks \_\_\_\_\_

2.    **Bench Breached**                               Location shown on site map                       N/A or okay  
 Remarks \_\_\_\_\_

3.    **Bench Overtopped**                               Location shown on site map                       N/A or okay  
 Remarks \_\_\_\_\_

**C. Letdown Channels**     Applicable     N/A

1.    **Settlement**                               Location shown on site map                       No evidence of settlement  
 Areal extent \_\_\_\_\_                      Depth \_\_\_\_\_  
 Remarks \_\_\_\_\_

2.    **Material Degradation**                               Location shown on site map                       No evidence of degradation  
 Material type \_\_\_\_\_                      Areal extent \_\_\_\_\_  
 Remarks \_\_\_\_\_

3.    **Erosion**                                       Location shown on site map                       No evidence of erosion  
 Areal extent \_\_\_\_\_                      Depth \_\_\_\_\_  
 Remarks \_\_\_\_\_

4.	<b>Undercutting</b>	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of undercutting
	Areal extent _____	Depth _____	
	Remarks _____		
5.	<b>Obstructions</b>	Type _____	<input type="checkbox"/> No obstructions
	<input type="checkbox"/> Location shown on site map	Areal extent _____	
	Size _____		
	Remarks _____		
6.	<b>Excessive Vegetative Growth</b>	Type <u>grasses and bushes</u>	
	<input type="checkbox"/> No evidence of excessive growth		
	<input type="checkbox"/> Vegetation in channels does not obstruct flow		
	<input type="checkbox"/> Location shown on site map	Areal extent _____	
	Remarks _____		
<b>D. Cover Penetrations</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	<b>Gas Vents</b>	<input type="checkbox"/> Active	<input checked="" type="checkbox"/> Passive
	<input type="checkbox"/> Properly secured/locked	<input checked="" type="checkbox"/> Functioning	<input checked="" type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A
	Remarks _____		
2.	<b>Gas Monitoring Probes</b>	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
		<input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> N/A
	Remarks _____		
3.	<b>Monitoring Wells (within surface area of landfill)</b>	<input checked="" type="checkbox"/> Properly secured/locked	<input checked="" type="checkbox"/> Functioning
	<input checked="" type="checkbox"/> Evidence of leakage at penetration	<input checked="" type="checkbox"/> Routinely sampled	<input checked="" type="checkbox"/> Good condition
		<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A
	Remarks <u>Groundwater Monitoring wells are sampled and reported.</u>		
4.	<b>Leachate Extraction Wells</b>	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
		<input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> N/A
	Remarks _____		
5.	<b>Settlement Monuments</b>	<input checked="" type="checkbox"/> Located	<input type="checkbox"/> Routinely surveyed <input type="checkbox"/> N/A
	Remarks _____		

<b>E. Gas Collection and Treatment</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	<b>Gas Treatment Facilities</b> <input type="checkbox"/> Flaring <input type="checkbox"/> Thermal destruction <input type="checkbox"/> Collection for reuse <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____	
2.	<b>Gas Collection Wells, Manifolds and Piping</b> <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____	
3.	<b>Gas Monitoring Facilities</b> (e.g., gas monitoring of adjacent homes or buildings) <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____	
<b>F. Cover Drainage Layer</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A		
1.	<b>Outlet Pipes Inspected</b> <input checked="" type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____	
2.	<b>Outlet Rock Inspected</b> <input checked="" type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____	
<b>G. Detention/Sedimentation Ponds</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A		
1.	<b>Siltation</b> Areal extent _____      Depth _____ <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Siltation not evident Remarks _____	
2.	<b>Erosion</b> Areal extent _____      Depth _____ <input checked="" type="checkbox"/> Erosion not evident Remarks _____	
3.	<b>Outlet Works</b> <input checked="" type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____	
4.	<b>Dam</b> <input checked="" type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____	

<b>H. Retaining Walls</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	<b>Deformations</b> <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Deformation not evident Horizontal displacement _____    Vertical displacement _____ Rotational displacement _____ Remarks _____
2.	<b>Degradation</b> <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Degradation not evident Remarks _____
<b>I. Perimeter Ditches/Off-Site Discharge</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	<b>Siltation</b> <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Siltation not evident Areal extent _____    Depth _____ Remarks _____
2.	<b>Vegetative Growth</b> <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Vegetation does not impede flow Areal extent _____    Type _____ Remarks _____
3.	<b>Erosion</b> <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Erosion not evident Areal extent _____    Depth _____ Remarks _____
4.	<b>Discharge Structure</b> <input type="checkbox"/> Functioning <input checked="" type="checkbox"/> N/A Remarks _____
<b>VIII. VERTICAL BARRIER WALLS</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	<b>Settlement</b> <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Areal extent _____    Depth _____ Remarks _____
2.	<b>Performance Monitoring</b> Type of monitoring _____ _____ Frequency _____    Evidence of breaching _____ Head differential _____ Remarks _____

<b>IX. GROUNDWATER/SURFACE WATER REMEDIES</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
<b>A. Groundwater Extraction Wells, Pumps, and Pipelines</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	<b>Pumps, Wellhead Plumbing, and Electrical</b> <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____
2.	<b>Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances</b> <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____
3.	<b>Spare Parts and Equipment</b> <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks _____
<b>B. Surface Water Collection Structures, Pumps, and Pipelines</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	<b>Collection Structures, Pumps, and Electrical</b> <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____
2.	<b>Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances</b> <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____
3.	<b>Spare Parts and Equipment</b> <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks _____

<b>C. Treatment System</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	<b>Treatment Train</b> (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 _____	
	<input type="checkbox"/> Additive (e.g., chelation agent, flocculent) _____	
	<input type="checkbox"/> Others _____	
	<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance
	<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 _____	
	<input type="checkbox"/> Quantity of surface water treated annually _____	
	Remarks _____	
2.	<b>Electrical Enclosures and Panels</b> (properly rated and functional)	
	<input type="checkbox"/> N/A	<input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance
	Remarks _____	
3.	<b>Tanks, Vaults, Storage Vessels</b>	
	<input type="checkbox"/> N/A	<input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs Maintenance
	Remarks _____	
4.	<b>Discharge Structure and Appurtenances</b>	
	<input type="checkbox"/> N/A	<input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance
	Remarks _____	
5.	<b>Treatment Building(s)</b>	
	<input type="checkbox"/> N/A	<input type="checkbox"/> Good condition (esp. roof and doorways) <input type="checkbox"/> Needs repair
	Remarks _____	
6.	<b>Monitoring Wells</b> (pump and treatment remedy)	
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition
	<input type="checkbox"/> All required wells located	<input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A
	Remarks _____	
<b>D. Monitoring Data</b>		
1.	Monitoring Data	
	<input checked="" type="checkbox"/> Is routinely submitted on time	<input checked="" type="checkbox"/> Is of acceptable quality
2.	Monitoring data suggests:	
	<input type="checkbox"/> Groundwater plume is effectively contained	<input checked="" type="checkbox"/> Contaminant concentrations are declining

<b>D. Monitored Natural Attenuation</b>		
1.	<b>Monitoring Wells</b> (natural attenuation remedy)	
	<input checked="" type="checkbox"/> Properly secured/locked	<input checked="" type="checkbox"/> Functioning <input checked="" type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition
	<input checked="" type="checkbox"/> All required wells located	<input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A
Remarks __		
<b>X. OTHER REMEDIES</b>		
If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.		
<b>XI. OVERALL OBSERVATIONS</b>		
<b>A.</b>	<b>Implementation of the Remedy</b>	
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.).		
<u>The selected remedial action for this site included surface cover systems for the hazardous waste and municipal landfill areas, installation of groundwater monitoring wells, provision of an alternative water source, deed restrictions, and O&amp;M plan. The function of this remedy is to ensure that there is no exposure to or migration of contaminants. Based on the inspection of the site, the landfill covers continues to operate as designed and nothing was observed to indicate problems with the remedy.</u>		
<b>B.</b>	<b>Adequacy of O&amp;M</b>	
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.		
<u>The O&amp;M appeared to be appropriate for the site as no O&amp;M issues were noted during the site inspection. The Site is mowed and maintained three times a year by Peach County.</u>		
<b>C.</b>	<b>Early Indicators of Potential Remedy Problems</b>	
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.		
<u>No indicators of potential remedy failure were observed during the site visit.</u>		
<b>D.</b>	<b>Opportunities for Optimization</b>	
Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.		
<u>No opportunities for optimization were noted.</u>		

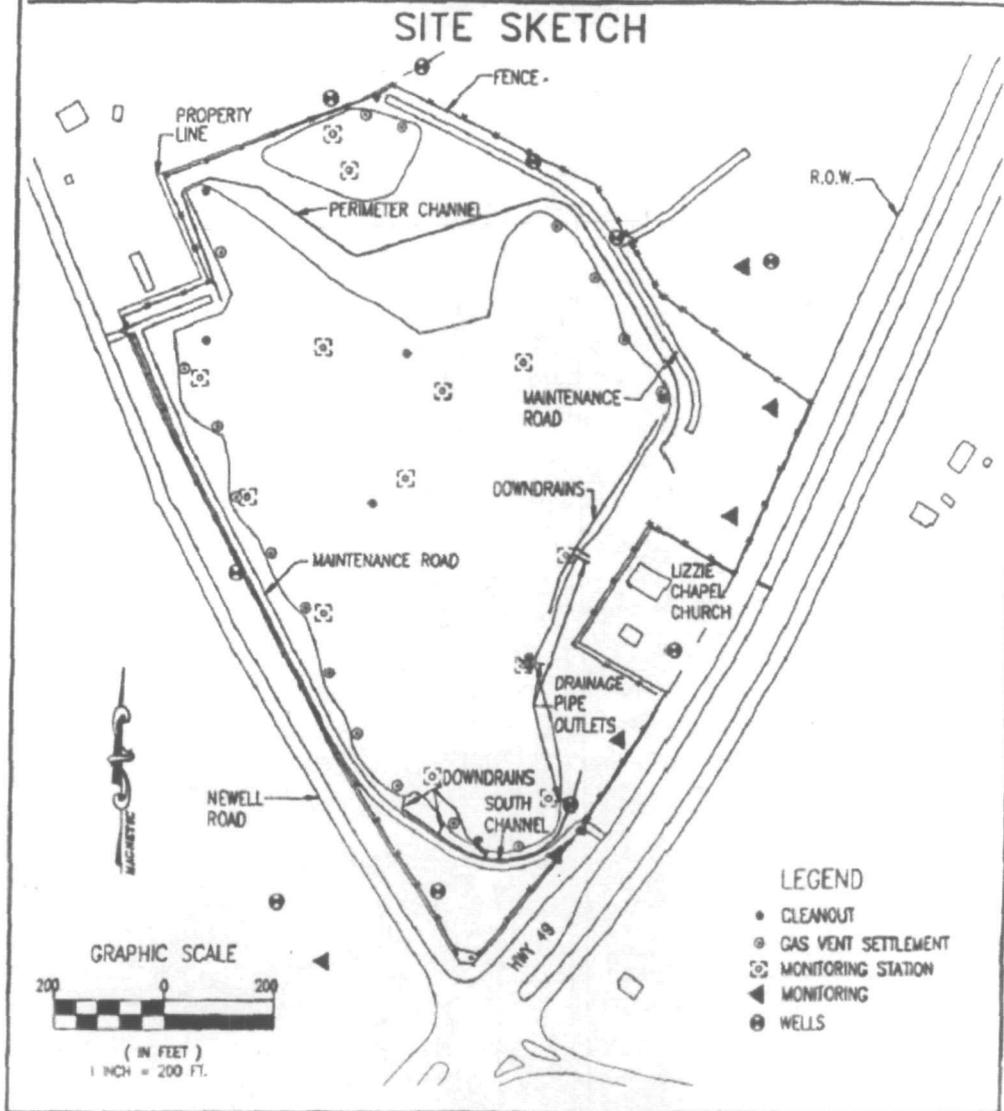
# POWERSVILLE LANDFILL

NPL SITE PEACH COUNTY, GEORGIA

## INSPECTION OF SITE STRUCTURES

PAGE 11 OF 11

### SITE SKETCH



**Attachment G**  
**Community Notification**

# U.S. Environmental Protection Agency – Region 4

## *Announces 5 Year Review for the Powersville Site in Peach County, Georgia*

**Purpose/Objective:** The US Environmental Protection Agency (EPA) is conducting a Five-Year Review of the remedy for the Powersville Superfund Site in Peach County, Georgia. The purpose of the Five-Year Review is to evaluate the implemented clean-up remedy and to ensure that this remedy continues to be effective and protective of human health and the environment.

**Site Background:** The Powersville Site (the Site) is located just north of the intersection of Georgia Highway 49 and Newell Road in Peach County, Georgia. The 15 acre Site originated as a borrow area. In 1969, Peach County began operating the Site as a sanitary landfill receiving both municipal and industrial wastes. The Site includes a 10-acre municipal landfill and a 0.5-acre hazardous waste landfill area. Wastes documented in the hazardous waste portion included pesticides; in addition, inorganic contaminants

were documented in the groundwater beneath the Site.

The selected clean-up actions for the Site included surface cover systems for the hazardous waste and municipal landfill areas, installation of groundwater monitoring wells, provision of an alternative water source, and deed restrictions for the Site. The function of this remedy is to ensure that there is no exposure to or migration of contaminants.

**Five-Year Review Schedule:** The National Contingency Plan requires that remedial actions which result in any hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure be reviewed every five years to ensure protection of human health and the environment. The report is being conducted for EPA by the U.S. Army Corps of Engineers and is expected to be completed by the end of September. A copy

of the report will be available to the public.

EPA invites community participation in the Five-Year Review process.

The EPA is conducting this Five-Year Review to evaluate the effectiveness of the remedy and ensure that the remedy remains protective of human health and the environment. As part of the Five-Year Review process, the EPA is available to answer any questions about the Site. Community members who have questions about the Site, the Five-Year Review process, or who would like to participate in a community interview, are asked to contact the following:

Mr. Brian Farrier, Remedial Project Manager

U.S. EPA – Region 4 Mailing Address

Superfund Division (4SD-SRB)

61 Forsyth Street  
Atlanta, Georgia 30303

or  
farrier.brian@epa.gov.