

Site Name: **Kearsarge Metallurgical Corp.**

CERCLISID: NHD062002001

State: NH

Region: 1

Listing Date: 9/21/1984 PCC\_OM Dat 5/30/2004

Size: 9

Acreage Derived:

**Contamination**

**Impacted Media: Groundwater**

*Media Cost Drive* Contaminants of Concern: 1,1,1-TCA; 1,1-DCE; 1,2-DCA; TCE; 1,1-DCA; Chromium; Copper; Nickel

*COC Cost Driver* COC Cost Driver - O M: 1,1,1-TCA and 1,1-DCE

Estimated Quantity Media:  
Description Volume Estimate:

**Impacted Media: Soil**

*Media Cost Drive* Contaminants of Concern:

*COC Cost Driver* COC Cost Driver - O M:

Estimated Quantity Media:  
Description Volume Estimate:

**Remedy**

*Remedy Components:* Facility abandoned in 1982. 1990 ROD required excavation of contaminated waste pile with off-site disposal (completed in 1992). Groundwater pump and treat (metals removal and air stripping VOCs) began operation in 1993. In 2002, a concentrated mass of cVOCs subsurface soil lead to an Explanation of Significant Differences in September 2003 to remove 5,670 tons CVOC impacted soil. Concentrations of contaminants in groundwater dropped significantly after the 2003 soil removal action and in December 2005 the treatment plant was temporarily shut down to monitor and evaluate contaminant trends.

*Institutional Controls?*  Yes  No

No. (ICs not stipulated by ROD)

*Are there primary components of the remedy planned but not yet constructed or implemented?*  Yes  No

*Description of primary components not constructed/implemented:*

**Estimated Costs**

*Estimated Cost Source:* Not available.

*Estimated Cost Description:*

**Actual Costs**

*What is the source of the actual costs?* NHDES Accounting

*Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)*  
Site transferred to State O&M May 30, 2004. Costs are currently associated with maintaining treatment plant in a ready-state condition, sampling and analyses of groundwater and ongoing evaluation of remedy effectiveness.

*If actual costs have significantly changed over time, what events can be attributed to this?*  
Treatment plant temporarily shut down in December 2005 to monitor effectiveness of 2003 source removal action and monitored natural attenuation of residual contaminants in groundwater.

*Has there been an optimization review? If so, what year was it conducted?*  
 Yes  No Evaluation of effectiveness of 2003 source removal and monitored natural attenuation of residual contamination in groundwater is ongoing.

*Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:*  
No federal funds. Source of State funds are General Funds.

*Are there other concerns related to Long-Term Stewardship at the site?* Yes. Although ICs not required by ROD, the State will seek to ensure controls are in place to restrict groundwater use. Costs for potential treatment plant operation, monitoring and closure ware of concern.

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
2004	\$10,617.38	0.00%	0.00%	\$0.00	\$64.38	\$152.12	\$0.00	\$23,894.46	\$0.00	\$34,728.34	
2005	\$30,820.65	0.00%	0.00%	\$0.00	\$95.41	\$42.39	\$6,944.00	\$74,556.48	\$0.00	\$112,458.93	
2006	\$34,228.46	0.00%	0.00%	\$0.00	\$925.20	\$951.44	\$20,094.00	\$27,124.29	\$0.00	\$83,323.39	

**Total Actual Costs (all years): \$230,510.66**

Site Name: **Kearsarge Metallurgical Corp.**

Respondent				
Contact:	Richard Pease	Title:	Supervisor	
Address:	29 Hazen Drive			
	Concord	State:	NH	Zipcode: 3302
Phone:	(603) 271-3649			
Email:	rpease@des.state.nh.us	Date:	4/20/2007	

Site Name: **Keefe Environmental Services**

CERCLISID: NHD092059112

State: NH

Region: 1

Listing Date: 9/8/1983 PCC\_OM Dat 6/30/2005

Size: 7

Acreage Derived: March 26, 2003 Third Five-Year Review

Contamination	
<b>Impacted Media:</b>	<b>Groundwater</b>
<input checked="" type="checkbox"/> <i>Media Cost Drive</i>	<i>Contaminants of Concern:</i> TCE; PCE; 1,1-DCE; 1,2-DCA; benzene; THF; 1,1,1-TCA; 1,4-dioxane
<input checked="" type="checkbox"/> <i>COC Cost Driver</i>	<i>COC Cost Driver - O M:</i> 1,4-dioxane
<i>Estimated Quantity Media:</i>	~140,000,000 gallons since June 30, 2005
<i>Description Volume Estimate:</i>	Volume based on estimated average influent rate to treatment plant of 20 gallons per minute for 16 months
<b>Impacted Media:</b>	<b>Soil</b>
<input type="checkbox"/> <i>Media Cost Drive</i>	<i>Contaminants of Concern:</i> TCE; PCE; 1,1-DCE; 1,2-DCA; benzene; THF; 1,1,1-TCA; 1,4-dioxane
<input type="checkbox"/> <i>COC Cost Driver</i>	<i>COC Cost Driver - O M:</i>
<i>Estimated Quantity Media:</i>	
<i>Description Volume Estimate:</i>	

Remedy	
<i>Remedy Components:</i>	The 1993 groundwater treatment system included metals removal, pressure filtration, air stripping, vapor treatment, sludge dewatering and effluent disposal via an on-site leach field and an off-site infiltrations trench. Discovery of 1,4-dioxane in 2003 required "freezing" the LTRA clock in order to modify the treatment train. An ESD was signed documenting a change in treatment technology. A high pressure oxidation system was installed and deemed operational at the Site. The chemical feed service has been discontinued and . The influent flows a high pressure oxidation system (HiPOx) feed tank. Currently, the air stripper and carbon adsorption units are being bypassed because the HiPOx unit is adequately removing all of the contaminants of concern. Groundwater is pumped from the HiPOx unit feed tank through the reactor where it is treated with hydrogen peroxide and ozone and discharged on-site. The Site's O&M was transferred to the State on June 30, 2005.
<i>Institutional Controls?</i>	<input checked="" type="radio"/> Yes <input type="radio"/> No
A Groundwater Management Zone was created and Groundwater Management Permit has been issued to property owner (i.e., the Town of Epping acquired property through a tax lien). Notice of the permit is recorded in the Registry of Deeds on the property title. The State monitors groundwater quality. No institutional control is necessary to control exposure to site soils.	
<i>Are there primary components of the remedy planned but not yet constructed or implemented?</i>	<input type="radio"/> Yes <input checked="" type="radio"/> No
<i>Description of primary components not constructed/implemented:</i>	

Estimated Costs	
<i>Estimated Cost Source:</i>	The 1988 ROD had projected groundwater restoration would be achieved in 10 years and therefore the only O&M costs would essentially be those associated the monitoring and closure.
<i>Estimated Cost Description:</i>	\$145,000/year - December 2004 Alternative Evaluation Report.

Actual Costs	

Site Name: **Keefe Environmental Services**

**Actual Costs**

What is the source of the actual costs? **NHDES Accounting**

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

Site transferred to O&M on June 30, 2005 and costs for 2005 are post-June 30, 2005. Costs are associated with operation of treatment system, sampling and analysis of groundwater and monitoring and maintaining ICs

If actual costs have significantly changed over time, what events can be attributed to this?

Higher costs for the six month period in 2005 (as opposed to the 12 month period in 2006) was due to unanticipated efforts to debug and optimize the modified treatment train which started in January 2005.

Has there been an optimization review? If so, what year was it conducted?

Yes  No

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

No federal funding. Source of State funds are General Funds.

Are there other concerns related to Long-Term Stewardship at the site? **Remedy is protective. Concerns are primarily associated with long-term costs of monitoring and closure.**

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
2005	\$6,490.95	0.00%	0.00%	\$0.00	\$0.00	\$187.67	\$960.00	\$148,308.96	\$0.00	\$155,947.58	
2006	\$17,093.71	0.00%	0.00%	\$0.00	\$33.21	\$175.29	\$7,200.00	\$108,236.18	\$0.00	\$132,738.39	

**Total Actual Costs (all years): \$288,685.97**

**Respondent**

Contact:	Richard Pease	Title:	Supervisor
Address:	29 Hazen Drive		
	Concord	State:	NH
		Zipcode:	3302
Phone:	(603) 271-3649		
Email:	rpease @des,state,nh,us	Date:	4/20/2007

Site Name: **Sylvester**

CERCLISID: NHD099363541

State: NH

Region: 1

Listing Date: 9/8/1983 PCC\_OM Dat 4/8/2002

Size: 28

Acreage Derived: September 23, 2002 Explanation of Significant Differences

### Contamination

#### Impacted Media: **Groundwater**

**Media Cost Drive** **Contaminants of Concern:** Vinyl Chloride, Benzene, Chlorobenzene, Chloroform, PCE, TCE, MEK, 1,1,2-TCA, 1,1-DCA, DCA,1,1-TCA, Toluene, Methylene Chloride, Trans-1,2-DCA

**COC Cost Driver** **COC Cost Driver - O.M:** Arsenic

**Estimated Quantity Media:** Unknown

**Description Volume Estimate:** Not available

#### Impacted Media: **Sediment**

**Media Cost Drive** **Contaminants of Concern:** Vinyl Chloride, Benzene, Chlorobenzene, Chloroform, PCE, TCE, MEK, 1,1,2-TCA, 1,1-DCA, DCA,1,1-TCA, Toluene, Methylene Chloride, Trans-1,2-DCA

**COC Cost Driver** **COC Cost Driver - O.M:** Arsenic

**Estimated Quantity Media:** Unknown

**Description Volume Estimate:** Not available

#### Impacted Media: **Soil**

**Media Cost Drive** **Contaminants of Concern:** Vinyl Chloride, Benzene, Chlorobenzene, Chloroform, PCE, TCE, MEK, 1,1,2-TCA, 1,1-DCA, DCA,1,1-TCA, Toluene, Methylene Chloride, Trans-1,2-DCA

**COC Cost Driver** **COC Cost Driver - O.M:**

**Estimated Quantity Media:** Unknown

**Description Volume Estimate:** Not available

#### Impacted Media: **Surface water**

**Media Cost Drive** **Contaminants of Concern:** Vinyl Chloride, Benzene, Chlorobenzene, Chloroform, PCE, TCE, MEK, 1,1,2-TCA, 1,1-DCA, DCA,1,1-TCA, Toluene, Methylene Chloride, Trans-1,2-DCA

**COC Cost Driver** **COC Cost Driver - O.M:**

**Estimated Quantity Media:** Unknown

**Description Volume Estimate:** Not available

### Remedy

**Remedy Components:** 1982 ROD called for Slurry wall and cap to contain source. 1983 Supplemental ROD called for groundwater pump and treat. Treatment of 300 gpm starts in 1985. Attainment of ROD cleanup goals in 1996 and State O&M begins April 8, 2002. Currently, Arsenic is an issue. No cleanup goal for Arsenic was in the ROD but concentrations exceed the State standard both inside and outside the slurry wall. Monitoring and evaluations ongoing.

**Institutional Controls?**  Yes  No

Access restrictions via chain link fence and signs. Groundwater use restricted via a groundwater management permit.

**Are there primary components of the remedy planned but not yet constructed or implemented?**  Yes  No

**Description of primary components not constructed/implemented:**

### Estimated Costs

**Estimated Cost Source:**

**Estimated Cost Description:** Estimated costs were prepared while preparing bid documents for O&M contract.

Site Name: **Sylvester**

**Actual Costs**

What is the source of the actual costs?

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

Site was transferred to State O&M on April 8, 2002. Costs are related to maintaining site (i.e., maintaining empty treatment plant structure, maintaining integrity site cap and fence, sampling and analyze of site media, and monitoring and maintaining ICs.

If actual costs have significantly changed over time, what events can be attributed to this?

Costs increased significantly in 2005 (see Actual Table) due to the closure of an unused on-site landfill cell.

Has there been an optimization review? If so, what year was it conducted?

Yes  No Last Optimization Review was during LTRA.

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

No federal funds. Source of State funds are General Funds.

Are there other concerns related to Long-Term Stewardship at the site?

Elevated concentrations of arsenic outside the slurry wall need to be addresses and Institutional Controls may need to be expanded.

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
2002	\$18,475.79	0.00%	0.00%	\$0.00	\$258.87	\$1,188.79	\$8,244.00	\$38,345.88	\$0.00	\$66,513.33	
2003	\$26,151.05	0.00%	0.00%	\$0.00	\$582.56	\$3,328.17	\$10,426.00	\$51,879.29	\$0.00	\$92,367.07	
2004	\$18,294.09	0.00%	0.00%	\$0.00	\$496.40	\$2,140.40	\$7,500.00	\$39,962.81	\$0.00	\$68,393.70	
2005	\$8,294.31	0.00%	0.00%	\$0.00	\$447.09	\$1,519.49	\$11,793.00	\$112,562.97	\$0.00	\$134,616.86	
2006	\$10,399.94	0.00%	0.00%	\$1,790.00	\$354.05	\$3,361.99	\$9,700.00	\$61,433.48	\$0.00	\$87,039.46	

**Total Actual Costs (all years): \$448,930.42**

**Respondent**

Contact:	Richard Pease	Title:	Supervisor
Address:	29 Hazen Drive		
	Concord	State:	NH
		Zipcode:	3302
Phone:	(603) 271-3649		
Email:	rpease@des.state.nh.us	Date:	4/20/2007

Site Name: **Lang Property**

CERCLISID: **NJD980505382**

State: **NJ**

Region: **2**

Listing Date: **9/8/1983** PCC\_OM Dat **9/13/1995**

Size: **40**

Acreage Derived: **ROD, Funding authorizations**

Contamination	
<b>Impacted Media:</b> <i>Groundwater</i>	
<input type="checkbox"/> Media Cost Drive	Contaminants of Concern:
<input type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M:
Estimated Quantity Media:	
Description Volume Estimate:	
<b>Impacted Media:</b> <i>Sediment</i>	
<input type="checkbox"/> Media Cost Drive	Contaminants of Concern:
<input type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M:
Estimated Quantity Media:	
Description Volume Estimate:	
<b>Impacted Media:</b> <i>Soil</i>	
<input checked="" type="checkbox"/> Media Cost Drive	Contaminants of Concern: <b>Primarily VOCs including TCE, PCE, toluene, ethylbenzene, xylene, others.</b>
<input checked="" type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M: <b>TCE, PCE</b>
Estimated Quantity Media: <b>Originally ~6,500 cu yds. A total of 13,200 cu yds were removed.</b>	
Description Volume Estimate: <b>Soil, ground water, and, minimally surface water and sediments. Soil (2 acres) drove ground water (time to achieve standards) such that additional soil contamination was excavated to accelerate. Currently, the gw treatment plant may operate briefly, if at all, to achieve gw quality standards.</b>	
<b>Impacted Media:</b> <i>Surface water</i>	
<input type="checkbox"/> Media Cost Drive	Contaminants of Concern:
<input type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M:
Estimated Quantity Media:	
Description Volume Estimate:	

Remedy	
<b>Remedy Components:</b>	<b>Enclosure of the disposal area by a perimeter fence; Excavation of contaminated soils to a depth of 2 feet and off-site disposal; Extraction of ~30 million gallons of ground water, with treatment and reinjection on-site. Treatment consists of air stripping, coagulation, flocculation, sedimentation, and carbon absorption; Removal of on-site debris; Post construction operation and maintenance to revify the effectiveness of the remedy.</b>
<b>Institutional Controls?</b>	<input checked="" type="radio"/> Yes <input type="radio"/> No
<b>Establishment of a Classification Exception Area December, 1993. No deed notice required.</b>	
<b>Are there primary components of the remedy planned but not yet constructed or implemented?</b>	<input type="radio"/> Yes <input checked="" type="radio"/> No
<b>Description of primary components not constructed/implemented:</b>	<b>Remedy is complete.</b>

Estimated Costs	
<b>Estimated Cost Source:</b>	<b>ROD</b>
<b>Estimated Cost Description:</b>	<b>Original ROD estimated cost of \$3,409,000 total for landfilling soils and operating the ground water treatment system and ground water monitoring for 3 years.</b>

Actual Costs	

Site Name: **Lang Property**

### Actual Costs

What is the source of the actual costs? EPA info; state 10% match funding authorizations

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

The excavation of additional soils, while increasing the soil remediation costs, contributed to not having to pump and treat ground water for a longer period of time past the 10 year LTRA timeframe.

If actual costs have significantly changed over time, what events can be attributed to this?

Has there been an optimization review? If so, what year was it conducted?

- Yes  No 5 Year review were performed 9/29/2005 and 9/25/2000. A formal optimization review was not conducted; however, 3 additional wells were installed to more effectively capture the ground water plume; and the additional soil removal was essentially part of an effort to expedite ground water remediation and reduce the State O&M time and cost to achieve ground water quality standards.

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

The LTRA was completed by EPA between Oct '06 and Jan 07, the latter date being the date responsibility for the site passed from EPA to the State. The State is funding any additional remediation costs. NJ funding projections currently estimate \$50K/yr to contact monitoring (only). Estimated treatment plant O&M costs, including monitoring, would be \$612/yr. Actual O&M costs incurred by USACOE were approximately \$660K/yr (source 5 year review).

Are there other concerns related to Long-Term Stewardship at the site? A ground water Classification Exception Area was established in December 1993. No biennial certification were submitted (came into effect c!1998). Though 5 year reviews were adequate.

### Respondent

Contact:	Bob Soboleski	Title:	Bureau Chief		
Address:	401 E. State St, PO Box 413				
	Trenton	State:	NJ	Zipcode:	8625
Phone:	(609) 292-3215				
Email:	bob.soboleski@dep.state.nj.us			Date:	3/8/2007



Site Name: **Strasburg Landfill**

CERCLISID: PAD000441337

State: PA

Region: 3

Listing Date: 3/31/1989 PCC\_OM Dat 9/27/1999

Size: 302

Acreage Derived:

Contamination		
<b>Impacted Media: Groundwater</b>		
<input checked="" type="checkbox"/> Media Cost Drive	Contaminants of Concern:	Base neutral acids, metals, volatile organic compounds (VOCs)
<input checked="" type="checkbox"/> COC Cost Driver	COC Cost Driver - O .M:	VOCs in groundwater and leachate were the drivers of the cleanup action.
Estimated Quantity Media:	67,980,300 gallons	
Description Volume Estimate:	67,980,300 gallons of water or other liquid based media treated, stabilized or removed as of 12/8/06.	
<b>Impacted Media: Leachate</b>		
<input checked="" type="checkbox"/> Media Cost Drive	Contaminants of Concern:	Base neutral acids, metals, volatile organic compounds (VOCs)
<input checked="" type="checkbox"/> COC Cost Driver	COC Cost Driver - O .M:	VOCs in groundwater and leachate were the drivers of the cleanup action.
Estimated Quantity Media:	67,980,300 gallons	
Description Volume Estimate:	67,980,300 gallons of water or other liquid based media treated, stabilized or removed as of 12/8/06.	
<b>Impacted Media: Sediment</b>		
<input type="checkbox"/> Media Cost Drive	Contaminants of Concern:	Base neutral acids, metals, volatile organic compounds (VOCs)
<input type="checkbox"/> COC Cost Driver	COC Cost Driver - O .M:	
Estimated Quantity Media:		
Description Volume Estimate:		
<b>Impacted Media: Soil</b>		
<input type="checkbox"/> Media Cost Drive	Contaminants of Concern:	Base neutral acids, metals, volatile organic compounds (VOCs)
<input type="checkbox"/> COC Cost Driver	COC Cost Driver - O .M:	
Estimated Quantity Media:	3,000,000 cubic yards	
Description Volume Estimate:	3,000,000 cubic yards of soil and other solid media treated, stabilized or removed as of 12/8/06.	
<b>Impacted Media: Solid waste</b>		
<input type="checkbox"/> Media Cost Drive	Contaminants of Concern:	Base neutral acids, metals, volatile organic compounds (VOCs)
<input type="checkbox"/> COC Cost Driver	COC Cost Driver - O .M:	
Estimated Quantity Media:	3,000,000 cubic yards	
Description Volume Estimate:	3,000,000 cubic yards of soil and other solid media treated, stabilized or removed as of 12/8/06.	

Remedy	
Remedy Components:	The remedy specified in the first Record of Decision (ROD) for Operable Unit 2 (OU2) issued on 6/29/89 included; -Collection and offsite treatment of leachate. -Point of entry treatment systems (POETS) for domestic well users.  An Explanation of Significant Differences (ESD) was issued on 1/3/90 modifying the remedy specified in the ROD from offsite treatment to onsite treatment of leachate.  A second ROD (OU3) was issued on 6/28/91 for the construction of a security fence to limit access to the site.  A third ROD (OU1) was issued on 3/31/92 dealing with the installation of a landfill cap at the site. The components of this ROD included: - Removal of the existing damaged landfill cover - Installation of a landfill cap over the existing 22 acre landfill - Installation of a landfill gas venting system - Revegetation of the landfill cap - Installation of a subsurface leachate collection system - Construction of a leachate treatment system  A fourth, and final ROD (OU4), dealing with groundwater at the site, specified no further action other than periodic monitoring.
Institutional Controls?	<input type="radio"/> Yes <input type="radio"/> No
Are there primary components of the remedy planned but not yet constructed or implemented?	<input type="radio"/> Yes <input type="radio"/> No
Description of primary components not constructed/implemented:	

Site Name: **Strasburg Landfill**

### Estimated Costs

*Estimated Cost Source:*

*Estimated Cost Description:* 10% Construction Match  
Security fence around landfill (OU3)  
Est. state cost= \$15,000  
Leachate collection and disposal, installation of POETS (OU2)  
Estimated state cost = \$20,000.  
Operation and Maintenance (O & M) Costs  
Initial Est. Leachate Collection & Treatment, POETS (1989 ROD) = \$4,500/yr  
Initial Est. Security Fence = \$8,250/year x 20 yr

### Actual Costs

*What is the source of the actual costs?*

*Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)*

10% Construction Match  
Actual state cost = \$19,027

Leachate collection and disposal, installation of POETS (OU2)  
Actual state cost = \$41,213

Operation and Maintenance (O & M) Costs  
Actual Total State O & M costs = \$270,000 per year.

*If actual costs have significantly changed over time, what events can be attributed to this?*

Initial costs for construction of the leachate collection system and offsite treatment and disposal of contaminated leachate were estimated at \$200,000 in 1989 following signing of the first ROD. Final construction costs were \$412,132, increasing the state's 10% match from \$20,000 to \$41,213. The increase in construction costs resulted from the failure of the Potentially Responsible Parties (PRPs) to continue offsite treatment and disposal of the collected leachate. EPA was, therefore, required to assume these costs. An Explanation of Significant Differences (ESD) was issued on 1/3/90 that modified the remedy from offsite treatment of leachate to onsite treatment. EPA continued to transport and dispose of the leachate while the onsite treatment system was designed and constructed resulting in increased construction costs. These increased construction costs produced a corresponding increase in the state's 10% match. The failure of the PRPs to implement the remedy also increased state O & M costs since the state had to bear the cost of O & M of the onsite leachate collection and treatment

*Has there been an optimization review? If so, what year was it conducted?*

Yes  No

*Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:*

10% construction match from the PA Hazardous Sites Cleanup Fund.  
State share of O & M costs from PA Hazardous Sites Cleanup Fund.

*Are there other concerns related to Long-Term Stewardship at the site?* Long-term maintenance of institutional controls to ensure that the landfill cap remains intact and functional over the long term.

### Respondent

Contact:	Craig Olewiler, EGM	Title:	
Address:	POB 8471		
	Harrisburg	State:	PA
		Zipcode:	17105
Phone:	(717) 783-9284		
Email:	colewiler@state.pa.us	Date:	2/5/2007

Site Name: **Moyers Landfill**

CERCLISID: PAD980508766

State: PA

Region: 3

Listing Date: 9/8/1983 PCC\_OM Dat 9/17/2002

Size: 65

Acreage Derived: 9/17/2002 (CC)  
Landfill Cap (OU1) – 3/1/98, 100% State funded  
Leachate treatment (OU2) – 9/17/02 (EPA funded, 1 year)  
Leachate treatment (OU2) – 9/17/03 100% State funded

Contamination	
<b>Impacted Media: Groundwater</b>	
<input type="checkbox"/> Media Cost Drive	Contaminants of Concern:
<input type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M:
Estimated Quantity Media:	
Description Volume Estimate:	
<b>Impacted Media: Leachate</b>	
<input checked="" type="checkbox"/> Media Cost Drive	Contaminants of Concern: Contaminants (metals and organics) in surface water and leachate were the drivers of the cleanup action.
<input checked="" type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M: Heavy metals, VOCs
Estimated Quantity Media:	
Description Volume Estimate: 629,070 cubic yards of soil or other solid based media have been treated, stabilized or removed as of 12/8/06. 19,000,000 gallons of water or other liquid based media have been treated, stabilized or removed as of 12/8/06.	
<b>Impacted Media: Sediment</b>	
<input type="checkbox"/> Media Cost Drive	Contaminants of Concern:
<input type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M:
Estimated Quantity Media:	
Description Volume Estimate:	
<b>Impacted Media: Soil</b>	
<input type="checkbox"/> Media Cost Drive	Contaminants of Concern:
<input type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M:
Estimated Quantity Media:	
Description Volume Estimate:	
<b>Impacted Media: Surface water</b>	
<input checked="" type="checkbox"/> Media Cost Drive	Contaminants of Concern: Contaminants (metals and organics) in surface water and leachate were the drivers of the cleanup action.
<input checked="" type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M: Heavy metals, VOCs
Estimated Quantity Media:	
Description Volume Estimate: 629,070 cubic yards of soil or other solid based media have been treated, stabilized or removed as of 12/8/06. 19,000,000 gallons of water or other liquid based media have been treated, stabilized or removed as of 12/8/06.	

Remedy	
<b>Remedy Components:</b>	The remedy selected in the Record of Decision included: <ul style="list-style-type: none"><li>- Grading and leveling the site</li><li>- Construction of retaining walls at highly erodible areas</li><li>- Capping the site with a low permeability soil</li><li>- Installation of a gas venting system for the landfill</li><li>- Collection of surface runoff and discharge directly to creek</li><li>- Installation of a leachate collection and onsite treatment system</li><li>- Monitoring of groundwater and surface waters.</li></ul>
In 1999, DEP petitioned EPA to modify the remedy to treat the leachate at a Publicly Owned Treatment Works (POTW) rather than treatment onsite. An Explanation of Significant Differences (ESD) for this change was issued on 1/3/00.	
<b>Institutional Controls?</b>	<input type="radio"/> Yes <input type="radio"/> No
<b>Are there primary components of the remedy planned but not yet constructed or implemented?</b>	<input type="radio"/> Yes <input type="radio"/> No
<b>Description of primary components not constructed/implemented:</b>	

Site Name: **Moyers Landfill**

### Estimated Costs

*Estimated Cost Source:*

*Estimated Cost Description:* 10% Construction Match  
Estimated state cost = \$2,474,284  
O & M  
Estimated state cost = \$145,810 per year.

### Actual Costs

*What is the source of the actual costs?*

*Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)*

10% Construction Match  
Actual state costs = \$2,957,387

O & M  
Actual state cost = \$217,000 per year.

Additional State Costs  
= \$1,114,875 for construction of the sewer line to carry leachate to the POTW and to purchase treatment capacity at the POTW.

*If actual costs have significantly changed over time, what events can be attributed to this?*

While the remedy modification in the ESD to treat the leachate offsite at a POTW has resulted in additional up front costs incurred by the State, it is expected that treatment at a POTW will be more cost effective over the long term and more protective of human health and the environment than the original onsite leachate treatment remedy.

*Has there been an optimization review? If so, what year was it conducted?*

Yes  No

*Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:*

10% construction match from the PA Hazardous Sites Cleanup Fund.  
State share of O & M costs from PA Hazardous Sites Cleanup Fund.

*Are there other concerns related to Long-Term Stewardship at the site?* Long-term maintenance of institutional controls to ensure that the landfill cap is not disturbed.

### Respondent

Contact:	Craig Olewiler, EGM	Title:	
Address:	POB 8471		
	Harrisburg	State:	PA
		Zipcode:	17105
Phone:	(717) 783-9284		
Email:	colewiler@state.pa.us	Date:	2/5/2007

Site Name: **Berks Sand Pit**

CERCLISID: PAD980691794

State: PA

Region: 3

Listing Date: 9/21/1984 PCC\_OM Dat 6/28/1994

Size: 4

Acreage Derived: The site is 4 acres in size with a groundwater plume that at one time impacted 30 residences in Longswamp Township, PA.

### Contamination

#### Impacted Media: **Groundwater**

**Media Cost Drive** Contaminants of Concern: VOCs in groundwater were the drivers of the cleanup action.

**COC Cost Driver** COC Cost Driver - O.M:

Estimated Quantity Media: 422,000,000 gallons groundwater

Description Volume Estimate: 422,000,000 gallons of contaminated groundwater have been extracted and treated as of July 20, 2006

#### Impacted Media: **Sediment**

**Media Cost Drive** Contaminants of Concern:

**COC Cost Driver** COC Cost Driver - O.M:

Estimated Quantity Media:

Description Volume Estimate:

#### Impacted Media: **Surface water**

**Media Cost Drive** Contaminants of Concern:

**COC Cost Driver** COC Cost Driver - O.M:

Estimated Quantity Media:

Description Volume Estimate:

### Remedy

**Remedy Components:** The remedy selected in the original Record of Decision included:  
- Excavation of contaminated sediments and offsite treatment and disposal by incineration.  
- Installation and operation of a groundwater extraction system  
- Construction and operation of an air stripper with vapor phase carbon adsorption and discharge of the treated groundwater to the aquifer via injection wells.  
- Construction of an alternate water supply system.  
- Chemical and biological monitoring of surface and groundwater quality.  
- Restrictions to prevent further drinking water wells in the contaminated aquifer.

The remedy was later modified to eliminate construction of the alternate water supply, the excavation, treatment and disposal of sediments, and the re-injection of treated groundwater. These modifications were detailed in the first Explanation of Significant Differences (ESD #1). As groundwater cleanup progressed, the need for restrictions to prevent use of the contaminated aquifer for drinking purposes and the need for vapor phase carbon adsorption were also eliminated as detailed in ESD #2 and ESD #3, respectively. ESD #4 further modified the groundwater extraction system by adding in-situ chemical oxidation to the remedial strategy. ESD #4 also eliminated the requirement for chemical and biological monitoring of surface water.

**Institutional Controls?**  Yes  No

**Are there primary components of the remedy planned but not yet constructed or implemented?**  Yes  No

**Description of primary components not constructed/implemented:**

### Estimated Costs

Estimated Cost Source:

Estimated Cost Description: 10% Construction Costs  
Original Estimate = \$586,496

O & M  
Original Estimate = \$145,000 per year

### Actual Costs

Site Name: **Berks Sand Pit**

**Actual Costs**

What is the source of the actual costs? 10% Construction Match  
Actual Cost = \$660,746  
  
O & M  
Actual Cost = \$176,000 per year

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)  
Original O & M cost estimates were made at the time the ROD was issued in 1983. The state assumed O & M twenty-two years later following construction, remedy modification, and ten years of O & M by EPA. This resulted in inflation linked cost increases. O & M costs also increased because the groundwater pump and treat system was in poor condition when turned over to the state after 10 years of operation by EPA. Many components of the system failed and had to be repaired or replaced.

If actual costs have significantly changed over time, what events can be attributed to this?

Has there been an optimization review? If so, what year was it conducted?

Yes  No

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:  
"10% construction match from the PA Hazardous Sites Cleanup Fund. State share of O & M costs from PA Hazardous Sites Cleanup Fund."

Are there other concerns related to Long-Term Stewardship at the site? None at this time.

**Respondent**

Contact:	Craig Olewiler, EGM	Title:	
Address:	POB 8471		
	Harrisburg	State:	PA
		Zipcode:	17105
Phone:	(717) 783-9284		
Email:	colewiler@state.pa.us	Date:	2/5/2007

Site Name: **Byron Salvage**

CERCLISID: ILD010236230

State: IL

Region: 5

Listing Date: 9/8/1983 PCC\_OM Dat 9/16/2003

Size: 140

Acreage Derived: Legal description

### Contamination

**Impacted Media:** *Groundwater*

*Media Cost Drive* Contaminants of Concern: TCE, cyanide

*COC Cost Driver* COC Cost Driver - O.M: TCE

*Estimated Quantity Media:*

*Description Volume Estimate:*

**Impacted Media:** *Soil*

*Media Cost Drive* Contaminants of Concern:

*COC Cost Driver* COC Cost Driver - O.M:

*Estimated Quantity Media:*

*Description Volume Estimate:*

**Impacted Media:** *Surface water*

*Media Cost Drive* Contaminants of Concern:

*COC Cost Driver* COC Cost Driver - O.M:

*Estimated Quantity Media:*

*Description Volume Estimate:*

### Remedy

*Remedy* Excavation and removal of contaminated soils, public water supplied to all residents,

*Components:* monitor groundwater only

*Institutional Controls?*  Yes  No

Yes, no use of groundwater permitted within the plume.

*Are there primary components of the remedy planned but not yet constructed or implemented?*  Yes  No

*Description of primary components not constructed/implemented:*

### Estimated Costs

*Estimated Cost Source:* Actual expenditures

*Estimated Cost Description:* \$20,000 per year in groundwater monitoring costs

### Actual Costs

*What is the source of the actual costs?* Agency expenditures

*Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)*

Labor for collecting and analyzing groundwater samples.

*If actual costs have significantly changed over time, what events can be attributed to this?*

*Has there been an optimization review? If so, what year was it conducted?*

Yes  No

*Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:*

State hazardous waste fund

*Are there other concerns related to Long-Term Stewardship at the site?*

### Respondent

Site Name: **Byron Salvage**

Contact:	Terry Ayers	Title:	National Priorities List		
Address:	1021 North Grand Ave. East				
	Springfield	State:	IL	Zipcode:	62794
Phone:	(217) 782-9875				
Email:	Terry.Ayers@Illinois.gov	Date:	3/8/2007		



Site Name: **LaSalle Electric Utilities**

CERCLISID: ILD980794333

State: IL

Region: 5

Listing Date: 9/8/1983 PCC\_OM Dat 2/28/1994

Size: 160

Acreage Derived: Surveyed

### Contamination

**Impacted Media:** Groundwater

Media Cost Drive Contaminants of Concern: PCBs, TCE

COC Cost Driver COC Cost Driver - O.M: TCE

Estimated Quantity Media: NA

Description Volume Estimate:

**Impacted Media:** Sediment

Media Cost Drive Contaminants of Concern:

COC Cost Driver COC Cost Driver - O.M:

Estimated Quantity Media:

Description Volume Estimate:

**Impacted Media:** Soil

Media Cost Drive Contaminants of Concern:

COC Cost Driver COC Cost Driver - O.M:

Estimated Quantity Media:

Description Volume Estimate:

### Remedy

Remedy Components: Incineration of PCB contaminated soils, groundwater pump and treat, SVE, phytoremediation

Institutional Controls?  Yes  No

Are there primary components of the remedy planned but not yet constructed or implemented?  Yes  No

Description of primary components not constructed/implemented: Prohibition on groundwater use

### Estimated Costs

Estimated Cost Source: Actual costs

Estimated Cost Description: \$60,000/year

### Actual Costs

What is the source of the actual costs? Personnel costs and utility bills

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

Annual costs

If actual costs have significantly changed over time, what events can be attributed to this?

Not much variation in costs

Has there been an optimization review? If so, what year was it conducted?

Yes  No

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

State Hazardous Waste Fund

Are there other concerns related to Long-Term Stewardship at the site? No

### Respondent

Site Name: **LaSalle Electric Utilities**

Contact:	Terry Ayers	Title:	National Priorities List		
Address:	1021 North Grand Ave.				
	East Springfield	State:	IL	Zipcode:	62794
Phone:	(217) 782-9875				
Email:	Terry.Ayers@Illinois.gov	Date:	3/8/2007		

Site Name: **Lake Sandy Jo (Superfund Site)**

CERCLISID: IND980500524

State: IN

Region: 5

Listing Date: 9/8/1983 PCC\_OM Dat 2/1/1994

Size: 40

Acreage Derived: Per NPL site description

Contamination		
<b>Impacted Media:</b>	<b>Groundwater</b>	
<input checked="" type="checkbox"/> Media Cost Drive	Contaminants of Concern:	Benzene
<input checked="" type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M.:	Benzene
Estimated Quantity Media:	N/A	
Description Volume Estimate:	Groundwater	

Remedy	
<b>Remedy Components:</b>	The remedy is comprised of an on-site disposal of excavated sediments, construction of soil cover, installation of groundwater monitoring system, alternative water supply system, and implementation of institutional controls.
<b>Institutional Controls?</b>	<input checked="" type="radio"/> Yes <input type="radio"/> No
Remedy construction completed in September 1994. ICs implementation is pending.	
<b>Are there primary components of the remedy planned but not yet constructed or implemented?</b>	<input type="radio"/> Yes <input type="radio"/> No
<i>Description of primary components not constructed/implemented:</i>	

Estimated Costs	
<b>Estimated Cost Source:</b>	ROD
<b>Estimated Cost Description:</b>	ROD estimated/projected O&M costs were \$63,000 per year. No detailed cost analysis for estimated costs was available.

Actual Costs	
<b>What is the source of the actual costs?</b>	State (IDEM) accounting system.
<i>Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)</i>	
For figures please see the "Actual-Table." The actual costs included typical yearly/annual costs of personnel, lab, contractual. The actual costs are provided from 2001 through 2006 for which itemized costs are available at this time.	
<i>If actual costs have significantly changed over time, what events can be attributed to this?</i>	
The actual costs have been gradually changed based on contractual and analytical costs.	
<i>Has there been an optimization review? If so, what year was it conducted?</i>	
<input type="radio"/> Yes <input checked="" type="radio"/> No	
<i>Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:</i>	
No EPA funding was available since the beginning of O&M in 1994. The O&M funding (100%) is from State's Hazardous Substances Trust Fund.	
<i>Are there other concerns related to Long-Term Stewardship at the site?</i>	
Not at this time.	

Actual Cost Table											
	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
2001	\$27,469.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$10,000.00	\$0.00	\$37,469.00	
2002	\$23,959.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$6,271.00	\$3,320.00	\$0.00	\$33,550.00	
2003	\$18,402.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$5,295.00	\$54,104.00	\$0.00	\$77,801.00	
2004	\$25,279.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$4,950.00	\$13,240.00	\$0.00	\$43,469.00	
2005	\$26,252.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$3,750.00	\$17,235.00	\$0.00	\$47,237.00	
2006	\$27,596.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$5,550.00	\$17,475.00	\$0.00	\$50,621.00	

**Total Actual Costs (all years): \$290,147.00**

Respondent

Site Name: **Lake Sandy Jo (Superfund Site)**

Contact:	Prabhakar Kasarabada	Title:	Project Manager/Environmental Manager		
Address:	IDEM, 100 North Senate Avenue Rm# 1101				
	Indianapolis	State:	IN	Zipcode:	46204
Phone:	(317) 234-0352				
Email:	pkasarab@idem.IN.gov	Date:	2/8/2007		

Site Name: **Douglas Road Landfill**

CERCLISID: **IND980607881**

State: **IN**

Region: **5**

Listing Date: **3/31/1989** PCC\_OM Dat **9/19/2000**

Size: **36**

Acreage Derived: **Survey**

Contamination	
<b>Impacted Media:</b>	<b>Groundwater</b>
<input type="checkbox"/> Media Cost Drive	Contaminants of Concern:
<input type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M.:
Estimated Quantity Media:	
Description Volume Estimate:	
<b>Impacted Media:</b>	<b>Soil</b>
<input checked="" type="checkbox"/> Media Cost Drive	Contaminants of Concern: <b>Dioxins/Dibenzofurans, Metals, PAH, PCBs, VOCs</b>
<input checked="" type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M.: <b>Dioxins/Dibenzofurans, Metals, PAH, PCBs, VOCs</b>
Estimated Quantity Media:	
<b>302400 gallons</b>	
Description Volume Estimate: <b>302,400 gallons of RCRA hazardous waste were disposed at the landfill.</b>	

Remedy	
<b>Remedy Components:</b>	The first component is to install a Composite Barrier Cap with a GCL Soil Barrier Layer. The second component is to collect and dispose of landfill gas. The third component is to dig perimeter ditches to collect surface water drainage. The fourth component is to establish groundwater and source monitoring to ensure that the goals of this action are met.
<b>Institutional Controls?</b>	<input checked="" type="radio"/> Yes <input type="radio"/> No
<b>Land use restrictions</b>	
<b>Are there primary components of the remedy planned but not yet constructed or implemented?</b>	<input type="radio"/> Yes <input checked="" type="radio"/> No
<b>Description of primary components not constructed/implemented:</b>	

Estimated Costs	
<b>Estimated Cost Source:</b>	<b>ROD <a href="http://cfpub.epa.gov/superrods/index.cfm?fuseaction=data.rodinfo&amp;id=0501696&amp;mRod=05016961995ROD288">http://cfpub.epa.gov/superrods/index.cfm?fuseaction=data.rodinfo&amp;id=0501696&amp;mRod=05016961995ROD288</a></b>
<b>Estimated Cost Description:</b>	

Actual Costs	
<b>What is the source of the actual costs?</b>	<b>Invoices and time &amp; effort report</b>
<b>Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)</b>	
<b>Initial year = \$42,010 Year Two = \$35,247 Year Three = \$47,649</b>	
<b>If actual costs have significantly changed over time, what events can be attributed to this?</b>	
<b>Year Three required landfill cap rutting and settling repairs (\$5,250)</b>	
<b>Has there been an optimization review? If so, what year was it conducted?</b>	
<input checked="" type="radio"/> Yes <input type="radio"/> No <b>2003</b>	
<b>Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:</b>	
<b>No. State Hazardous Response Trust Fund.</b>	
<b>Are there other concerns related to Long-Term Stewardship at the site?</b>	

Respondent	
<b>Contact:</b>	<b>Kevin D. Herron</b> Title: <b>Environmental Manager II</b>
<b>Address:</b>	<b>100 North Senate Avenue, IGC-N, Rm. 1101</b>
	<b>Indianapolis</b> State: <b>IN</b> Zipcode: <b>46204</b>
<b>Phone:</b>	<b>(317) 234-0354</b>
<b>Email:</b>	<b>kherron@idem.IN.gov</b> Date: <b>2/7/2007</b>

Site Name: **Grand Traverse Overall Supply**

CERCLISID: MID017418559

State: MI

Region: 5

Listing Date: 9/8/1983 PCC\_OM Dat 9/17/1992

Size: 2

Acreage Derived: Information taken from site file

**Contamination**

**Impacted Media: Groundwater**

Media Cost Drive Contaminants of Concern: Trichloroethylene, tetrachloroethylene, cis 1,2 dichloroethylene, trans 1,2 dichloroethylene vinyl chloride

COC Cost Driver COC Cost Driver - O.M.: Trichloroethylene, tetrachloroethylene, cis 1,2 dichloroethylene, trans 1,2 dichloroethylene vinyl chloride

Estimated Quantity Media: Unknown

Description Volume Estimate: Unknown

**Impacted Media: Indoor air**

Media Cost Drive Contaminants of Concern: Trichloroethylene, tetrachloroethylene, cis 1,2 dichloroethylene, trans 1,2 dichloroethylene vinyl chloride

COC Cost Driver COC Cost Driver - O.M.: Trichloroethylene, tetrachloroethylene, cis 1,2 dichloroethylene, trans 1,2 dichloroethylene vinyl chloride

Estimated Quantity Media: Unknown

Description Volume Estimate: Unknown

**Impacted Media: Soil**

Media Cost Drive Contaminants of Concern:

COC Cost Driver COC Cost Driver - O.M.: Trichloroethylene, tetrachloroethylene, cis 1,2 dichloroethylene, trans 1,2 dichloroethylene vinyl chloride

Estimated Quantity Media: Unknown

Description Volume Estimate: Unknown

**Impacted Media: Surface water**

Media Cost Drive Contaminants of Concern:

COC Cost Driver COC Cost Driver - O.M.: Trichloroethylene, tetrachloroethylene, cis 1,2 dichloroethylene, trans 1,2 dichloroethylene vinyl chloride

Estimated Quantity Media: Unknown

Description Volume Estimate: Unknown

**Remedy**

Remedy Components: SVE is currently operating (since end of 2005) to remediate air vapor migrating into adjacent Norris Elementary school; groundwater monitored with sampling every 6 months; source area soils are anticipated to be excavated and removed from under the GTOS facility (no depressurization units; indoor air contamination at trace levels) - implemented as a removal

Institutional Controls?  Yes  No

Currently no institutional contrails have been developed

Are there primary components of the remedy planned but not yet constructed or implemented?  Yes  No

Description of primary components not constructed/implemented: SVE system may be expanded to treat groundwater plume; source area soils are proposed to be excavated

**Estimated Costs**

Estimated Cost Source: Legal documentation not yet established; new ROD is expected to be developed for the site; currently O&M funding costs for SVE and groundwater sampling being paid by State of Michigan funding

Estimated Cost Description: \$200,000 O&M costs for FY07 and FY08 total for biennium; depending on State of Michigan Budget status, funding will continue into FY09; if no State funds available, funding will be transferred to EPA. USEPA would have actual costs for FY06; state contract not yet in lace for the current biennium so detailed costs for table not yet available.

Site Name: **Grand Traverse Overall Supply**

**Actual Costs**

What is the source of the actual costs? O&M of current SVE system; groundwater monitoring

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

Monthly tasks include the following: four weekly trips to check and pump out the moisture knock out pumps; two alarm call outs responses for system check and restart; monthly utilities, one SVE influent/effluent air sample collection, sample handling and shipping to MDEQ laboratory, system operations log summarizing flow and vacuum/pressure readings, volumes of water transferred and air sample dates. Monthly average cost is \$3100.00 (based on contractor's information working for USEPA over the past year and for use in upcoming contract).

If actual costs have significantly changed over time, what events can be attributed to this?

No actual costs have changed during the one year plus O&M of the SVE system

Has there been an optimization review? If so, what year was it conducted?

Yes  No

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

As of February 2007, all costs are covered by MDEQ. EPA funding ended at the end of January 2007.

Are there other concerns related to Long-Term Stewardship at the site? MDEQ funding beyond FY08 dependent on resolution of State's Budget crisis.

Respondent			
Contact:	Cindy Fairbanks	Title:	Environmental Quality Analyst 12
Address:	Consitution Hall 3rd Floor South PO Box 30426		
	Lansing	State:	MI
		Zipcode:	48909
Phone:	(517) 335-4111		
Email:	fairbanc@michigan.gov	Date:	3/5/2007

Site Name: **Thomas Solvent Raymond Road Source Area of VWF**

CERCLISID: MID039993902

State: MI

Region: 5

Listing Date: 9/8/1983 PCC\_OM Dat

5/6/2002

Size: 1

Acreage Derived: 1 for the TSRR source area; approx 1 sq. mi for "site"

Contamination	
<b>Impacted Media: Air</b>	
<input type="checkbox"/> Media Cost Drive	Contaminants of Concern:
<input type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M:
Estimated Quantity Media:	
Description Volume Estimate:	
<b>Impacted Media: Groundwater</b>	
<input checked="" type="checkbox"/> Media Cost Drive	Contaminants of Concern: Trichloroethylene, tetrachloroethylene, cis 1,2 dichloroethylene, vinyl chloride
<input checked="" type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M: Trichloroethylene, tetrachloroethylene, cis 1,2 dichloroethylene, vinyl chloride
Estimated Quantity Media: Unknown	
Description Volume Estimate: Unknown	
<b>Impacted Media: Soil</b>	
<input checked="" type="checkbox"/> Media Cost Drive	Contaminants of Concern: Trichloroethylene, tetrachloroethylene, cis 1,2 dichloroethylene, vinyl chloride
<input checked="" type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M: Trichloroethylene, tetrachloroethylene, cis 1,2 dichloroethylene, vinyl chloride
Estimated Quantity Media: Unknown	
Description Volume Estimate: Unknown	

Remedy	
Remedy Components:	SOILS: SVE operated 1988-1992 w/ ~ 9 mo down time; EPA collected soil samples in 1992 that indicated soils seemed mostly clean w/ exception of a few locations. 2005: MDEQ collected additional soil samples using CH3OH preservation. Results indicated a few hot spots in the vados zone and contamination still present in smear zone. Currently evaluating how to proceed (possible air sparge pilot). GROUNDWATER: Ongoing pump and treat (air stripper) since 1987 with off-gas being treated with carbon. Need for continued carbon and/or air stripper use currently being evaluated.
Institutional Controls?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Are there primary components of the remedy planned but not yet constructed or implemented?	<input type="radio"/> Yes <input type="radio"/> No
Description of primary components not constructed/implemented:	Evaluating possible supplemental treatment to address remaining vadose and smear zone contamination. Possible remedies include limited SVE and/or sparging.

Estimated Costs	
Estimated Cost Source:	1985 ROD
Estimated Cost Description:	Per 1985 ROD for the TSRR source area, capital costs were estimated at \$1,248,000, Annual O&M at \$90,000/year with anticipated remediation complete within three years

Actual Costs	



Site Name: **Thomas Solvent Raymond Road Source Area of VWF**

**Actual Costs**

What is the source of the actual costs? O&M of current groundwater extraction and treatment system; groundwater monitoring

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

Monthly tasks include the following: three times per week site visits to check out groundwater extraction and treatment equipment; bimonthly sampling of one extraction well; monthly sampling of air stripper influent/effluent; annual sampling of monitoring wells and one extraction well; analytical costs; general maintenance of groundwater extraction wells and air stripper system; monthly utilities; annual monitoring report. Monthly average cost (over the past year) is \$10,000.00 (this does not include some of the periodic high priced maintenance costs such as extraction well testing and rehabilitation, air stripper packing replacement, or carbon replacement).

If actual costs have significantly changed over time, what events can be attributed to this?

System is twenty years old-extraction wells not operating optimally anymore and need additional testing and maintenance; discharge line had to be replaced (poor EPA design); duration of remedy much longer than anticipated; residual soil contamination left by EPA unexpected and resulting in much longer pump and treat even though on-site groundwater contaminant concentrations are low (but still above cleanup criteria); due to impact from another source area, need to move one extraction well and install product recovery system; due to residual vadose and saturated soil (smear zone) contamination, need to conduct feasibility study and hopefully implement treatment.

Has there been an optimization review? If so, what year was it conducted?

Yes  No

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

As of May 6, 2002, all costs are covered by MDEQ.

Are there other concerns related to Long-Term Stewardship at the site? MDEQ funding beyond FY08 dependent on resolution of State's Budget crisis.

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
2002	\$1,905.00	19.08%	0.00%	\$0.00	\$449.00	\$0.00	\$0.00	\$222.00	\$2,495.00	\$5,071.00	5/7/02 started 100% State funding (not including some transitional work still charged to the EPA grant. Costs provided constitute state costs paid for balance of FY02. (Not representative of overall state costs)
2003	\$10,770.00	18.59%	0.00%	\$0.00	\$581.00	\$2,824.00	\$0.00	\$49,689.00	\$36,080.00	\$99,944.00	FY03-check with Esther how much of Other is Lab costs
2004	\$27,668.00	19.56%	0.00%	\$0.00	\$1,548.00	\$2,984.00	\$0.00	\$73,070.00	\$30,450.00	\$135,720.00	FY04-check with Esther how much of Other is Lab costs
2005	\$20,371.00	19.13%	0.00%	\$0.00	\$677.00	\$31.00	\$19,998.00	\$155,307.00	\$37,443.00	\$233,827.00	FY05
2006	\$19,131.00	13.74%	0.00%	\$0.00	\$0.00	\$0.00	\$10,602.00	\$233,365.00	\$47,134.00	\$310,232.00	FY06

**Total Actual Costs (all years): \$784,794.00**

**Respondent**

Contact:	Beth Mead-O'Brien	Title:	Environmental Quality Analyst 12		
Address:	Consituion Hall 3rd Floor South PO Box 30426				
	Lansing	State:	MI	Zipcode:	48909
Phone:	(517) 335-3098				
Email:	obrienea@michigan.gov		Date:		

Site Name: **Lincoln Fields**

CERCLISID: OHD00000020487

State: OH

Region: 5

Listing Date:

PCC\_OM Dat 3/31/1999

Size: 0

Acreage Derived:

Contamination		
Impacted Media: <b>Groundwater</b>		
<input checked="" type="checkbox"/> Media Cost Drive	Contaminants of Concern:	PCE
<input checked="" type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M.:	PCE
Estimated Quantity Media:		Information not available
Description Volume Estimate:		NA

Remedy	
Remedy Components:	The remedy alternative for this project involved implementation of a ground water pump and treatment system and development of a municipal water supply for a community.
Institutional Controls?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Are there primary components of the remedy planned but not yet constructed or implemented?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Description of primary components not constructed/implemented:	The primary elements of the remedial alternative were implemented as planned.

Estimated Costs	
Estimated Cost Source:	Engineering Evaluation/Cost Analysis (EE/CA)
Estimated Cost Description:	The estimated cost for development and implementation of the remedial alternative (i.e., a ground water pump and treatment system and a municipal water supply for the community) was \$8.3 million. This estimate relates to the capital expenses associated with the remedy and therefore represents an aggregate dollar figure. The estimation was not developed as a series of annual costs. As per the agreement between U.S. EPA and Ohio EPA, operations and maintenance (O&M) costs would be the responsibility of the State of Ohio. As a result, U.S. EPA did not include O&M costs in the EE/CA.

Actual Costs	
What is the source of the actual costs?	Ohio EPA time accounting and fiscal accounting systems (Contact: Teri McClosky, Division of Emergency and Remedial Response, central office)
Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)	
Fringe and indirect are already included in the Personnel Cost. Calculation for indirect not based upon a rate or percentage, calculation is as follows: (rte of pay*hrs worked)+(rte of pay*hrs worked*27.18%)+(hrs worked*4.14) +(hrs worked*3.95)+(hrs worked*0.24*3.95)+(hrs worked*0.71)+(hrs worked*0.24*0.71). Calculation for indirect not based upon a rate or percentage, calculation is as follows: (rte of pay*hrs worked)+(rte of pay*hrs worked*27.18%)+(19.45*1.48*hrs worked)+(hrs worked*5.63) +(hrs worked*1.48*5.63)+(hrs worked*1.01)+(hrs worked*1.48*1.01). Calculation for indirect not based upon a rate or percentage, calculation is as follows: (rte of pay*hrs worked)+(rte of pay*hrs worked*24.71%)+(hrs worked*1.51*19.59) +(hrs worked*10.33)+(hrs worked*1.51*10.33)+(hrs worked*1.47)+(hrs worked*1.51*1.47). The components of the above calculations consist of a formula for the direct salary and fringe costs, a formula for indirect salary and fringe costs, a formula for operating expenses and lastly a formula for equipment costs. FEDERAL COSTS HAVE BEEN INCURRED FOR LINCOLN FIELDS BUT ARE NOT INCLUDED IN THE ABOVE DATA. THE FEDERAL COSTS ARE THOSE THAT THE STATE EXPENDED UNDER A GRANT FROM USEPA.	
If actual costs have significantly changed over time, what events can be attributed to this?	
Has there been an optimization review? If so, what year was it conducted?	
<input type="radio"/> Yes <input checked="" type="radio"/> No	
Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:	
Ohio funds operation and maintenance at this site from the State of Ohio Removal Action Allocation of state fund 505.	
Are there other concerns related to Long-Term Stewardship at the site? Ohio is in the process of developing a construction contract to ensure that the operation and maintenance costs can be more effectively managed (i.e., implementation of a scheduled equipment replacement timetable).	

Actual Cost Table											
	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
1987	\$0.00	24.00%	57.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1989	\$0.00	24.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1990	\$0.00	27.18%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	

Site Name: **Lincoln Fields**

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
1991	\$0.00	27.18%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1992	\$0.00	24.71%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1993	\$3,547.36	20.92%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,547.36	
1994	\$14,280.84	20.40%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14,280.84	
1995	\$20,301.06	20.33%	0.00%	\$0.00	\$0.00	\$0.00	\$12,180.78	\$61,403.00	\$0.00	\$93,884.84	
1996	\$7,100.71	24.37%	0.00%	\$0.00	\$0.00	\$0.00	\$6,378.25	\$206.48	\$0.00	\$13,685.44	
1997	\$914.91	24.64%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$914.91	
1998	\$39,335.28	24.94%	0.00%	\$0.00	\$0.00	\$0.00	\$5,090.00	\$0.00	\$0.00	\$44,425.28	
1999	\$54,564.10	27.79%	0.00%	\$0.00	\$0.00	\$0.00	\$27,495.00	\$47,190.66	\$9,195.12	\$138,444.88	
2000	\$61,126.04	27.79%	0.00%	\$0.00	\$0.00	\$0.00	\$13,530.00	\$38,757.09	\$16,617.73	\$130,030.86	
2001	\$59,549.51	30.25%	0.00%	\$0.00	\$0.00	\$0.00	\$7,118.00	\$70,836.74	\$13,703.28	\$151,207.53	
2002	\$55,123.16	30.25%	0.00%	\$0.00	\$0.00	\$0.00	\$9,900.00	\$36,152.52	\$14,218.49	\$115,394.17	
2003	\$94,634.20	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$17,730.00	\$41,019.11	\$16,549.86	\$169,933.17	
2004	\$92,646.97	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$14,869.80	\$74,585.62	\$11,616.24	\$193,718.63	
2005	\$127,676.08	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$12,398.63	\$304,303.87	\$11,693.21	\$456,071.79	
2006	\$105,626.77	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$13,996.11	\$92,910.34	\$22,499.57	\$235,032.79	

**Total Actual Costs (all years): \$1,760,572.49**

**Respondent**

Contact:	Edward Onyia	Title:	Site Coordinator
Address:	347 North Dunbridge Road		
	Bowling Green	State:	OH
		Zipcode:	43402
Phone:	(419) 373-3037		
Email:	edward.onyia@epa.state.oh.us	Date:	2/1/2007

Site Name: **Old Mill**

CERCLISID: **OHD980510200**

State: **OH**

Region: **5**

Listing Date: **9/8/1983** PCC\_OM Dat **8/18/1989**

Size: **13**

Acreeage Derived: **taken from 3rd 5-year review**

**Contamination**

**Impacted Media: Groundwater**

**Media Cost Drive** Contaminants of Concern: Trichloroethene, dichloroethene (DCE), 1,1-DCE, vinyl chloride, 1,1,1-trichloroethane, ethylbenzene, zylene, TCE

**COC Cost Driver** COC Cost Driver - O .M: TCE

Estimated Quantity Media:

Description Volume Estimate:

**Impacted Media: Soil**

**Media Cost Drive** Contaminants of Concern: Trichloroethene, dichloroethene (DCE), 1,1-DCE, vinyl chloride, 1,1,1-trichloroethane, ethylbenzene, zylene, TCE

**COC Cost Driver** COC Cost Driver - O M:

Estimated Quantity Media: **4,300 cubic yards**

Description Volume Estimate: **From ROD**

**Remedy**

**Remedy Components:** From the 1985 ROD: Removal and off-site disposal of 95% of the contaminants in soil; demolition of buildings and silos located on the site and disposal of debris; ground water extraction and treatment for an estimated period of 30 years, until a target ground water risk level of 10E-5 is achieved; and placement of use restrictions on the ground water for as long as concentrations in the plume remain above a 1-E-6 carcinogenic risk level.

**Institutional Controls?**  Yes  No

**Are there primary components of the remedy planned but not yet constructed or implemented?**  Yes  No

**Description of primary components not constructed/implemented:**

**Estimated Costs**

Estimated Cost Source: **1985 ROD**

Estimated Cost Description: About \$4,440,000 for the overall remedy and \$45,000 annually for Operation and Maintenance (i.e., to operate the ground water extraction and treatment system).

**Estimated Cost Table**

Year	Personnel	Fringe Rate (\$)	Indirect Rate (\$)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Other
1	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
2	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
3	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
4	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
5	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
6	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
7	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
8	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
9	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
10	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
11	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
12	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
13	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
14	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
15	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
16	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
17	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
18	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	
19	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00	

Site Name: **Old Mill**

20	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00
21	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00
22	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00
23	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00
24	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00
25	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00
26	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00
27	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00
28	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00
29	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00
30	\$0.00	\$0.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$37,000.00	\$0.00

**Total Estimated Costs (all years): \$1,350,000.00**

**Actual Costs**

What is the source of the actual costs? Ohio EPA time accounting and fiscal accounting systems (Contact: Teri McClosky, Division of Emergency and Remedial Response, central office)

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

See actual cost table.

If actual costs have significantly changed over time, what events can be attributed to this?

On November 30, 2006, the ground water extraction and treatment system was shut down and the 4-year enhanced MNA trial period began.

Has there been an optimization review? If so, what year was it conducted?

Yes  No No formal Optimization Review was conducted; however, the MNA will increase costs initially with the hope for significantly reduced costs after the 4-year pilot study.

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

All state future response costs are to be reimbursed by the settling performing parties in accordance with the consent decree signed on March 28th, 2002.

Are there other concerns related to Long-Term Stewardship at the site?

During the trial period, the plume will be monitored so that contamination does not travel off-site. Contingency measures will be conducted which may include installation of additional monitoring wells or re-activating the pump/treatment system.

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
1987	\$2,489.52	24.00%	57.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$780,000.00	\$0.00	\$782,489.52	
1988	\$2,489.52	24.00%	57.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,489.52	
1989	\$2,489.52	24.00%	57.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,489.52	
1990	\$3,683.45	27.18%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,683.45	Calculation for indirect not based upon a rate or percentage, calculation is as follows: (rte of pay*hrs worked)+(rte of pay*hrs worked*27.18%)+(hrs worked*4.14) +(hrs worked*3.95)+(hrs worked*0.24*3.95)+(hrs worked*0.71)+(hrs worked*0.24*0.71)
1991	\$1,439.86	27.18%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,439.86	Calculation for indirect not based upon a rate or percentage, calculation is as follows: (rte of pay*hrs worked)+(rte of pay*hrs worked*27.18%)+(19.45*1.48*hrs worked) +(hrs worked*5.63) +(hrs worked*1.48*5.63)+(hrs worked*1.01)+(hrs worked*1.48*1.01)

Site Name: **Old Mill**

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
1992	\$2,274.22	24.71%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,274.22	Calculation for indirect not based upon a rate or percentage, calculation is as follows: (rte of pay*hrs worked)+(rte of pay*hrs worked*24.71%)+(hrs worked*1.51*19.59) +(hrs worked*10.33)+(hrs worked*1.51*10.33)+(hrs worked*1.47)+(hrs worked*1.51*1.47)
1993	\$19,911.93	20.92%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$19,911.93	
1994	\$12,697.79	20.40%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12,697.79	
1995	\$48,457.23	20.33%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48,457.23	
1996	\$20,522.60	24.37%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$20,522.60	
1997	\$7,783.57	24.64%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7,783.57	
1998	\$14,495.32	24.94%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14,495.32	
1999	\$16,922.60	27.79%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$16,922.60	
2000	\$24,435.39	30.25%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$3,205.75	\$98.43	\$27,739.57	
2001	\$17,548.26	30.25%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$138,736.44	\$8,971.19	\$165,255.89	
2002	\$7,872.82	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$65,193.67	\$5,451.72	\$78,518.21	
2003	\$7,786.93	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7,786.93	
2004	\$5,643.57	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,643.57	
2005	\$5,804.55	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,804.55	
2006	\$11,653.66	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$11,653.66	

**Total Actual Costs (all years): \$1,238,059.51**

<b>Respondent</b>			
Contact:	Andrew Kocher	Title:	Site Coordinator
Address:	21110 East Aurora Road		
	Twinsburg	State:	OH Zipcode: 44087
Phone:	(330) 963-1249		
Email:	andrew.kocher@epa.state.oh.us	Date:	2/5/2007

Site Name: **New Lyme Landfill**

CERCLISID: **OHD980794614**

State: **OH**

Region: **5**

Listing Date: **9/8/1983** PCC\_OM Dat **12/29/1992**

Size: **40**

Acreage Derived: **Taken from 2nd 5-year review**

### Contamination

#### Impacted Media: **Groundwater**

**Media Cost Drive** **Contaminants of Concern:** Base neutral acids, dioxins/diobenzeofurans, inorganics, metals, PAHs, PCBs, pesticides; asbestos and heavy metals were found in leachate samples.

**COC Cost Driver** **COC Cost Driver - O.M:** tetrachloroethane, methylene chloride, and chloroform for ground water

**Estimated Quantity Media:** Not sure

**Description Volume Estimate:** See above

#### Impacted Media: **Sediment**

**Media Cost Drive** **Contaminants of Concern:** Base neutral acids, dioxins/diobenzeofurans, inorganics, metals, PAHs, PCBs, pesticides; asbestos and heavy metals were found in leachate samples.

**COC Cost Driver** **COC Cost Driver - O.M:**

**Estimated Quantity Media:** Not sure

**Description Volume Estimate:** See above

#### Impacted Media: **Soil**

**Media Cost Drive** **Contaminants of Concern:** Base neutral acids, dioxins/diobenzeofurans, inorganics, metals, PAHs, PCBs, pesticides; asbestos and heavy metals were found in leachate samples.

**COC Cost Driver** **COC Cost Driver - O.M:** VOCs for soil

**Estimated Quantity Media:** Not sure

**Description Volume Estimate:** The landfill was about 40 acres and about 6 feet deep (approx. 10,460,000 ft3). The contaminated media (soil and sediment) was not removed, but capped in place, along with waste.)

#### Impacted Media: **Surface water**

**Media Cost Drive** **Contaminants of Concern:** Base neutral acids, dioxins/diobenzeofurans, inorganics, metals, PAHs, PCBs, pesticides; asbestos and heavy metals were found in leachate samples.

**COC Cost Driver** **COC Cost Driver - O.M:**

**Estimated Quantity Media:** Not sure

**Description Volume Estimate:** See above

### Estimated Costs

### Remedy

**Remedy Components:** \* Installation of RCRA cap over the landfill with gas vents; \* Installation of extraction/containment wells around the site perimeter to dewater landfill and eliminate leachate production; \* Onsite consolidation of contaminated sediment under the cap; \* Treatment of extracted ground water using pH adjustment, biodisc, metals removal by NaOH precipitation, and granular activated carbon finishing until the treatment system becomes unnecessary (after about 15 years); \* Installation of a ground water monitoring system around the site perimeter; \* Erection of a perimeter fence.

**Institutional Controls?**  Yes  No

**Are there primary components of the remedy planned but not yet constructed or implemented?**  Yes  No

**Description of primary components not constructed/implemented:**

Site Name: **New Lyme Landfill**

**Estimated Costs**

Estimated Cost Source: ROD Amendment

Estimated Cost Description: Exceeded \$10,798,000 for overall remedy; original O&M costs were \$252,000 annually; O&M costs for the amendment plan (after the 1999 ROD Amendment) are estimated to be \$90,000 to \$120,000 annually.

**Estimated Cost Table**

Year	Personnel	Fringe Rate (\$)	Indirect Rate (\$)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Other
1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	Annual O&M Costs from Table 4 - Cost Estimate Summary (from ROD?)
2	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
3	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
5	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
6	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
7	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
8	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
9	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
11	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
12	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
13	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
14	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
16	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
17	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
18	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
19	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
21	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
22	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
23	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
28	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
29	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	
30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$252,000.00	

**Total Estimated Costs (all years): \$7,560,000.00**

**Actual Costs**



**Actual Costs**

What is the source of the actual costs? Ohio EPA time accounting and fiscal accounting systems (Contact: Teri McClosky, Division of Emergency and Remedial Response, central office)

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

See Table

If actual costs have significantly changed over time, what events can be attributed to this?

\* On November 6, 1999, the ROD Amendment was signed which shut down the ground water extraction and treatment system and began the long-term ground water monitoring program. This decreased annual O&M costs. \* In 2003, the 2nd 5-year review identified low areas in the landfill cap. In 2006/2007, the cap was repaired, which increased the O&M for these years. Additional cap repairs may be needed in the future

Has there been an optimization review? If so, what year was it conducted?

Yes  No Don't know if a formal optimization review was conducted, but the ROD Amendment changed the long-term remedy, decreasing O&M costs.

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

All state future response costs are to be reimbursed by the settling parties from the consent decree signed on November 9th, 2000.

Are there other concerns related to Long-Term Stewardship at the site?

\* The 1985 ROD selected a cap remedy that acknowledged that subsidence of the cap was expected to occur. The 2nd 5-year review identified many areas where this has developed. The PRP group has implemented repairs; however, it is likely that much more subsidence will occur on the near future, and repairs will be often and costly. \* These low areas on the cap sometimes contain ponded water. If the cap liner breaks and releases water into the landfill, then leachate may be released to surface or ground water.

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
1987	\$15,566.52	24.00%	57.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$15,566.52	Fringe = 24%; Indirect = 57%; equipment, supplies, travel included in indirect rate.
1988	\$15,566.52	24.00%	57.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$15,566.52	Fringe = 24%; Indirect = 57%; equipment, supplies, travel included in indirect rate.
1989	\$15,566.52	24.00%	57.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$15,566.52	Fringe = 24%; Indirect = 57%; equipment, supplies, travel included in indirect rate.
1990	\$2,903.65	27.18%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,903.65	
1991	\$5,381.09	27.18%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,381.09	
1992	\$11,862.30	24.71%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$11,862.30	
1993	\$10,836.74	20.92%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$16,971.39	\$5,220.67	\$33,028.80	
1994	\$65,000.69	20.40%	0.00%	\$0.00	\$0.00	\$0.00	\$1,412.73	\$189,572.26	\$31,396.39	\$287,382.07	
1995	\$62,994.83	20.33%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$681,651.83	\$26,668.29	\$771,314.95	
1996	\$57,544.93	24.37%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$365,666.89	\$7,214.32	\$430,426.14	
1997	\$24,060.34	24.64%	0.00%	\$0.00	\$0.00	\$0.00	\$5,863.50	\$338,241.12	\$17,606.42	\$385,771.38	
1998	\$30,775.09	24.94%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$390,045.36	\$24,639.76	\$445,460.21	
1999	\$5,411.41	27.79%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$331,346.12	\$34,819.46	\$371,576.99	
2000	\$3,582.22	27.79%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$188,196.11	\$29,381.49	\$221,159.82	
2001	\$154.03	30.25%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$334.64	\$488.67	
2002	\$912.35	30.25%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$912.35	
2003	\$82.56	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$82.56	
2004	\$44.33	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.33	
2005	\$477.77	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$477.77	

Site Name: **New Lyme Landfill**

<b>Actual Cost Table</b>											
	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
2006	\$4,874.37	31.85%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,874.37	
<b>Total Actual Costs (all years): \$3,019,847.01</b>											

<b>Respondent</b>										
Contact:	Andrew Kocher			Title:	Site Coordinator					
Address:	2110 East Aurora Road									
	Twinsburg			State:	OH	Zipcode:	44087			
Phone:	(330) 963-1249									
Email:	andrew.kocher@epa.state.oh.us				Date:	2/2/2007				

Site Name: **Gurley Pit**

CERCLISID: ARD035662469

State: AR

Region: 6

Listing Date: 12/30/1982 PCC\_OM Dat 8/12/1994

Size: 3

Acreage Derived: Information from 1st 5-Year Review Report

**Contamination**

**Impacted Media: Groundwater**

*Media Cost Drive* *Contaminants of Concern:* The principal pollutants at the Gurley Pit Superfund site include PCB (sludge and oil), barium, lead and zinc (surface water, soil and sludge).

*COC Cost Driver* *COC Cost Driver - O.M:* The impacted media have been treated, stabilized and place in a RCRA type vault. Any of the COC can be a cost driver if it leaks from the vault to the groundwater.  
*Estimated Quantity Media:*

*Description Volume Estimate:*

**Impacted Media: Sediment**

*Media Cost Drive* *Contaminants of Concern:* The principal pollutants at the Gurley Pit Superfund site include PCB (sludge and oil), barium, lead and zinc (surface water, soil and sludge).

*COC Cost Driver* *COC Cost Driver - O.M:* The impacted media have been treated, stabilized and place in a RCRA type vault. Any of the COC can be a cost driver if it leaks from the vault to the groundwater.  
*Estimated Quantity Media:*

*Description Volume Estimate:*

**Impacted Media: Sludge**

*Media Cost Drive* *Contaminants of Concern:* The principal pollutants at the Gurley Pit Superfund site include PCB (sludge and oil), barium, lead and zinc (surface water, soil and sludge).

*COC Cost Driver* *COC Cost Driver - O.M:* The impacted media have been treated, stabilized and place in a RCRA type vault. Any of the COC can be a cost driver if it leaks from the vault to the groundwater.  
*Estimated Quantity Media:*

20,000 cu. Yd.

*Description Volume Estimate:* A volume of pollutants include 20,000 yd3 of sludge, was treated, stabilized and place in a RCRA type vault. The vault is intact and no impacted media need to be addressed during O&M

**Impacted Media: Soil**

**Remedy**

*Remedy* A volume of pollutants include 20,000 yd3 of sludge was treated, stabilized and  
*Components:* place in a RCRA type vault.

*Institutional Controls?*  Yes  No

*Are there primary components of the remedy planned but not yet constructed or implemented?*  Yes  No

*Description of primary components not constructed/implemented:*

Site Name: **Gurley Pit**

<input checked="" type="checkbox"/> <i>Media Cost Drive</i>	<i>Contaminants of Concern:</i>	The principal pollutants at the Gurley Pit Superfund site include PCB (sludge and oil), barium, lead and zinc (surface water, soil and sludge).
<input checked="" type="checkbox"/> <i>COC Cost Driver</i>	<i>COC Cost Driver - O.M:</i>	The impacted media have been treated, stabilized and place in a RCRA type vault. Any of the COC can be a cost driver if it leaks from the vault to the groundwater.
<i>Estimated Quantity Media:</i>		
<i>Description Volume Estimate:</i>		
<b>Impacted Media: Surface water</b>		
<input checked="" type="checkbox"/> <i>Media Cost Drive</i>	<i>Contaminants of Concern:</i>	The principal pollutants at the Gurley Pit Superfund site include PCB (sludge and oil), barium, lead and zinc (surface water, soil and sludge).
<input checked="" type="checkbox"/> <i>COC Cost Driver</i>	<i>COC Cost Driver - O.M:</i>	The impacted media have been treated, stabilized and place in a RCRA type vault. Any of the COC can be a cost driver if it leaks from the vault to the groundwater.
<i>Estimated Quantity Media:</i>		
<i>Description Volume Estimate:</i>		

<b>Estimated Costs</b>
<i>Estimated Cost Source:</i> Final Feasibility Study, April 1986.
<i>Estimated Cost Description:</i> \$21,000 Annual O&M Estimated Cost

<b>Estimated Cost Table</b>										
Year	Personnel	Fringe Rate (\$)	Indirect Rate (\$)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Other
1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	On annual basis for 30 yrs: RCRA Vault O&M = \$10,000; Monitoring/Network Fencing = \$6,000; O&M Bid Contingencies = \$2,000; Scope Contingencies = \$3,000
2	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	
3	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	
4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	
5	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	
6	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	
7	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	
8	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	
9	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	
10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	
11	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	
12	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	
13	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	
14	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00	

Site Name: **Gurley Pit**

15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
16	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
17	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
18	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
19	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
21	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
22	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
23	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
28	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
29	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00
30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,000.00

**Total Estimated Costs (all years): \$630,000.00**

**Actual Costs**

What is the source of the actual costs? The actual cost is cost associated with a contract to carry out groundwater sampling and analysis and minor repairs at the site.

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

The annual O&M costs are costs associated with an annual inspection. It costed approximately \$1500 of staff time for the trip. One sampling event every 5 years during the O&M period. Based on the 2005 O&M Sampling Event which was subcontracted out, it costed approximately \$5000. Total cost including contract procurement, staff travel expenses and document review time costed approximately \$8500.

If actual costs have significantly changed over time, what events can be attributed to this?

The frequency of sampling and analysis events had changed. The actual expenses incurred are for the once ever 5-year groundwater sampling and analysis (S&) event subcontracted out to a local contractor by the State.

Has there been an optimization review? If so, what year was it conducted?

Yes  No

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

The State paid for the O&M expenses. No EPA funding. The State pays for the O&M from the Remedial Action Trust Fund. It probably would cost substantially more if EPA Region 6 were to use their on-call contractors to carry out a S&A event due to higher shipping costs for equipment and travel expenses for the contractor crew.

Are there other concerns related to Long-Term Stewardship at the site? No

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
2006	\$0.00	26.84%	55.17%	\$0.00	\$2,977.55	\$0.00	\$5,000.00	\$2,000.00	\$0.00	\$9,977.55	All equipment, supplies, lab/analytical and shipping cost were included in the S&A contract (\$5000).

**Total Actual Costs (all years): \$9,977.55**

**Respondent**

Site Name: **Gurley Pit**

Contact:	Kin Siew	Title:	Engineer Supervisor
Address:	8100 National Drive		
	Little Rock	State:	AR Zipcode: 72205
Phone:	(501) 682-0855		
Email:	siew@adeq.state.ar.us	Date:	3/12/2007

Site Name: **Madisonville Wood Preserving Company**

CERCLISID: LAD981522998

State: LA

Region: 6

Listing Date: 12/31/1996 PCC\_OM Dat 9/1/2001

Size: 29

Acreage Derived: From conveyance notice

**Contamination**

**Impacted Media: Groundwater**

Media Cost Drive Contaminants of Concern: Creosote

COC Cost Driver COC Cost Driver - O.M.: Creosote

Estimated Quantity Media: 410,224 gallons water treated & discharged

Description Volume Estimate: 7,774 gallons Creosote removed

**Impacted Media: Soil**

Media Cost Drive Contaminants of Concern: Creosote

COC Cost Driver COC Cost Driver - O.M.:

Estimated Quantity Media:

Description Volume Estimate:

**Remedy**

Remedy Components: 1) Dig & Treat on-site; 2) DNAPL Recovery System; 3) Waste Water Treatment Plant

Institutional Controls?  Yes  No

Conveyance notice.

Are there primary components of the remedy planned but not yet constructed or implemented?  Yes  No

Description of primary components not constructed/implemented: None.

**Estimated Costs**

Estimated Cost Source: ROD

Estimated Cost Description: Total = \$2,526,031. Includes contractual cost estimates for: annual water well sampling (\$293,875), recovery system O & M (\$866,497), cap maintenance (\$115,659) and local road reconstruction (\$1,250,000).

**Actual Costs**

What is the source of the actual costs? Louisiana Dept of Environmental Quality, Financial Services Division

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

Actual costs provided are all accrued direct costs on an annual basis beginning in January 2002, and include start-up costs, typical yearly costs, and incidental repairs during this period.

If actual costs have significantly changed over time, what events can be attributed to this?

New recovery pumps purchased in December 2006

Has there been an optimization review? If so, what year was it conducted?

Yes  No 5 Year Review - January 2004

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

No. Louisiana dedicated state funding, the Hazardous Waste Site Cleanup Fund.

Are there other concerns related to Long-Term Stewardship at the site? None

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
2002	\$4,207.03	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$76,496.13	\$627.08	\$81,330.24	Indirect not included; Lab/analytical included in contract.
2003	\$2,056.29	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$182,175.25	\$0.00	\$184,231.54	Indirect not included; Lab/analytical included in contract.
2004	\$6,123.56	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$110,946.18	\$0.00	\$117,069.74	Indirect not included; Lab/analytical included in contract.

Site Name: **Madisonville Wood Preserving Company**

Actual Cost Table												
	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments	
2005	\$1,248.69	0.00%	0.00%	\$0.00	\$0.00	\$13.90	\$0.00	\$159,014.34	\$3.91	\$160,280.84	Indirect not included; Lab/analytical included in contract.	
2006	\$1,800.22	0.00%	0.00%	\$0.00	\$0.00	\$15.37	\$0.00	\$75,727.78	\$16.67	\$77,560.04	Indirect not included; Lab/analytical included in contract.	
2007	\$75.82	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$57,267.73	\$0.00	\$57,343.55	Indirect not included; Lab/analytical included in contract.	
<b>Total Actual Costs (all years): \$677,815.95</b>												

Respondent										
Contact:	Alan Karr, Sandra Greenwich		Title:	Environmental Scientist 3/Env. Scientist Senior						
Address:	P.O. Box 4314									
	Baton Rouge			State:	LA	Zipcode:	70802			
Phone:	(225) 219-3189									
Email:	alan.karr@la.gov; sandra.greenwich@la.gov				Date:	2/28/2007				



Site Name: **Odessa Chromium - OU1**

CERCLISID: TXD980867279

State: TX

Region: 6

Listing Date: 5/20/1986 PCC\_OM Dat 12/20/2003

Size: 20

Acreege Derived: Estimated surface projection of the groundwater plume

**Contamination**

**Impacted Media:** Groundwater

- Media Cost Drive Contaminants of Concern: Hexavalent Chromium
- COC Cost Driver COC Cost Driver - O.M: Hexavalent Chromium
- Estimated Quantity Media: 246,000,000 gallons treated
- Description Volume Estimate: Volume of Groundwater Treated in the Groundwater Treatment Plant (from EPA website dated January 2007)

**Impacted Media:** Soil

- Media Cost Drive Contaminants of Concern:
- COC Cost Driver COC Cost Driver - O.M:
- Estimated Quantity Media:
- Description Volume Estimate:

**Remedy**

Remedy: Electro-chemical Groundwater Treatment Plant, Ferrous Sulfate in-situ treatment, Components: Metals Remediation Compound in-situ treatment

Institutional Controls?  Yes  No

Are there primary components of the remedy planned but not yet constructed or implemented?  Yes  No

Description of primary components not constructed/implemented:

**Estimated Costs**

Estimated Cost Source: Feasibility Study

Estimated Cost Description:

**Estimated Cost Table**

Year	Personnel	Fringe Rate (\$)	Indirect Rate (\$)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Other
1	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
2	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
3	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
4	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
5	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
6	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
7	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
8	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
9	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
10	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
11	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
12	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
13	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
14	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
15	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
16	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
17	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
18	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
19	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
20	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	
21	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00	

Site Name: **Odessa Chromium - OU1**

22	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00
23	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00
24	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00
25	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00
26	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00
27	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00
28	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00
29	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00
30	\$0.00	\$0.00	\$0.00	\$0.00	\$1,150.00	\$0.00	\$4,600.00	\$0.00	\$2,550.00

**Total Estimated Costs (all years): \$249,000.00**

**Actual Costs**

What is the source of the actual costs? TCEQ - Remediation Division, Contract Support Section

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

See attached spreadsheet

If actual costs have significantly changed over time, what events can be attributed to this?

Groundwater treatment plant was in operation until May 2004. Several rounds of Metals Remediation Compound (MRC) in-situ treatment were conducted.

Has there been an optimization review? If so, what year was it conducted?

Yes  No 5 year reviews were conducted in July 2001 and in September 2006

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

O&M costs are 100% funded by the State of Texas

Are there other concerns related to Long-Term Stewardship at the site? No

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
1992	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	O&F
1993	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	O&F
1994	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	LTRA
1995	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	LTRA
1996	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	LTRA
1997	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	LTRA
1998	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	LTRA
1999	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	LTRA
2000	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	LTRA
2001	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	LTRA
2002	\$9,109.00	21.30%	34.22%	\$0.00	\$516.00	\$0.00	\$0.00	\$223,019.00	\$2,350.00	\$234,994.00	LTRA
2003	\$9,315.00	22.82%	28.91%	\$0.00	\$0.00	\$0.00	\$0.00	\$246,421.00	\$1,450.00	\$257,186.00	LTRA
2004	\$8,378.00	25.30%	33.50%	\$0.00	\$287.00	\$0.00	\$0.00	\$783,459.00	\$1,450.00	\$793,574.00	O&M
2005	\$12,974.00	25.21%	33.00%	\$0.00	\$657.00	\$0.00	\$0.00	\$131,992.00	\$600.00	\$146,223.00	O&M
2006	\$16,590.00	25.88%	33.23%	\$0.00	\$378.00	\$0.00	\$0.00	\$75,235.00	\$100.00	\$92,303.00	O&M
2007	\$635.00	26.25%	35.26%	\$0.00	\$0.00	\$0.00	\$0.00	\$35,911.00	\$0.00	\$36,546.00	O&M

**Total Actual Costs (all years): \$1,560,826.00**

**Respondent**

Site Name: **Odessa Chromium - OU1**

Contact:	Alvie L. Nichols	Title:	Project Manager		
Address:	MC -136, PO Box 13087				
	Austin	State:	TX	Zipcode:	78711
Phone:	(512) 239-2439				
Email:	anichols@tceq.state.tx.us		Date:		

Site Name: **Mid-America Tanning**

CERCLISID: IAD085824688

State: IA

Region: 7

Listing Date: 3/31/1989 PCC\_OM Dat 9/12/2000

Size: 99

Acreage Derived:

Contamination	
<b>Impacted Media:</b>	<b>Exposed waste</b>
<input checked="" type="checkbox"/> Media Cost Drive	Contaminants of Concern: chromium, hexavalent and trivalent
<input checked="" type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M.: chromium, hexavalent and trivalent
Estimated Quantity Media:	
Description Volume Estimate:	
<b>Impacted Media:</b>	<b>Soil</b>
<input checked="" type="checkbox"/> Media Cost Drive	Contaminants of Concern: chromium, hexavalent and trivalent
<input checked="" type="checkbox"/> COC Cost Driver	COC Cost Driver - O.M.: chromium, hexavalent and trivalent
Estimated Quantity Media:	
Description Volume Estimate:	

Remedy	
<b>Remedy Components:</b>	-Excavation and relocation of on-site contaminated soil, sediment and sludge materials; -Coverage of those materials with multi-media landfill cap structures; -Treatment of free wastewaters located in several site impoundments; -Installation of floating geosynthetic covers on existing site lagoons; -Decontamination by steam cleaning of selected site facilities; and -Decontamination of selected buildings; -Transfer of wastewaters from and to selected surface impoundments; -Installation of chain link fencing;
<b>Institutional Controls?</b>	<input checked="" type="radio"/> Yes <input type="radio"/> No
-Institutional controls, including a deed notice and state registry restrictions, to control future land use at the site	
<b>Are there primary components of the remedy planned but not yet constructed or implemented?</b>	<input type="radio"/> Yes <input type="radio"/> No
<b>Description of primary components not constructed/implemented:</b>	

Estimated Costs	
<b>Estimated Cost Source:</b>	Amended ROD estimated O&M costs would be about \$25,000 per year.
<b>Estimated Cost Description:</b>	

Actual Costs	
<b>What is the source of the actual costs?</b>	Cost estimates received from the state
<b>Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)</b>	
If actual costs have significantly changed over time, what events can be attributed to this?	
Based on cost estimates received from the state, the ROD estimate appears to be high; about \$7,000 was spent on maintenance and monitoring last year.	
<b>Has there been an optimization review? If so, what year was it conducted?</b>	
<input type="radio"/> Yes <input type="radio"/> No	
<b>Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:</b>	
<b>Are there other concerns related to Long-Term Stewardship at the site?</b>	

Respondent	
<b>Contact:</b>	Iowa DNR, Contaminated Sites Section
<b>Title:</b>	Environmental Engineer
<b>Address:</b>	502 E. 9th Street
	Des Moines
	State: IA
	Zipcode: 50319
<b>Phone:</b>	(515) 281-8900
<b>Email:</b>	Bob.Drustrup@dnr.state.ia.us
	Date:

Site Name: **Des Moines TCE site OU 3**

CERCLISID: IAD980687933

State: IA

Region: 7

Listing Date: 9/8/1983 PCC\_OM Dat 9/21/1998

Size: 200

Acreage Derived:

**Contamination**

**Impacted Media:** *Groundwater*

*Media Cost Drive* Contaminants of Concern: DCE, PCE

*COC Cost Driver* COC Cost Driver - O.M.: DCE, PCE

*Estimated Quantity Media:*

*Description Volume Estimate:*

**Remedy**

*Remedy Components:* The remedy at this OU is dependent on the installation and operation of a groundwater extraction and treatment system consisting of groundwater extraction wells and an air stripper. OU3 's O&M involves groundwater monitoring of 7 wells in the north of the site biennially

*Institutional Controls?*  Yes  No

*Are there primary components of the remedy planned but not yet constructed or implemented?*  Yes  No

*Description of primary components not constructed/implemented:*

**Estimated Costs**

*Estimated Cost Source:* These costs were estimated in the ROD for OU3 (need date, amount, and basis)

*Estimated Cost Description:*

**Actual Costs**

*What is the source of the actual costs?*

*Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)*

*If actual costs have significantly changed over time, what events can be attributed to this?*

Costs have declined as a result of extending the periods between monitoring events

*Has there been an optimization review? If so, what year was it conducted?*

Yes  No

*Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:*

*Are there other concerns related to Long-Term Stewardship at the site?*

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
1998	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,500.00	\$2,500.00	\$2,500.00 every other year.
2000	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,500.00	\$2,500.00	
2002	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,500.00	\$2,500.00	
2004	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,500.00	\$2,500.00	
2006	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,500.00	\$2,500.00	

**Total Actual Costs (all years): \$12,500.00**

**Respondent**

Site Name: **Des Moines TCE site OU 3**

Contact:	Bob Drustrup	Title:	Environmental Engineer
Address:	502 E. 9th Street		
	Des Moines	State:	IA
		Zipcode:	50319
Phone:	(515) 281-8900		
Email:	Bob.Drustrup@dnr.state.ia.us	Date:	

Site Name: **Cleburn Street Site**

CERCLISID: NED981499312

State: NE

Region: 7

Listing Date: 10/14/1992 PCC\_OM Dat 2/8/2000

Size: 0

Acreage Derived:

**Contamination**

**Impacted Media: Groundwater**

Media Cost Drive Contaminants of Concern: VOCs, PCE

COC Cost Driver COC Cost Driver - O.M: PCE

Estimated Quantity Media: municipal well for Grand Island

Description Volume Estimate: 118,001,099 gallons of water, 99 cubic yards of soil or other solid-based media (see glossary) have been treated, stabilized, or removed

**Impacted Media: Soil**

Media Cost Drive Contaminants of Concern: PCE and associated degradation compounds

COC Cost Driver COC Cost Driver - O.M: PCE

Estimated Quantity Media:

Description Volume Estimate:

**Remedy**

Remedy Components: For the primary source area, the former One Hour Martinizing facility, the selected remedy includes the use of a soil vapor extraction technology to address source soils. The selected remedies for the other two dry cleaner source areas include groundwater monitoring and institutional controls to restrict uses of groundwater in the vicinity of the source areas.

Institutional Controls?  Yes  No

Yes, a city ordinance restricting uses of groundwater.

Are there primary components of the remedy planned but not yet constructed or implemented?  Yes  No

Description of primary components not constructed/implemented:

**Estimated Costs**

Estimated Cost Source: ROD and SSC

Estimated Cost Description: ROD: SVE Capital Costs 234K, SVE Annual O&M 70K; SSC: Capital Costs 200K, Annual O&M Costs 70K  
 ROD: Groundwater Monitoring Capital Costs 15K, Annual O&M 16K; SSC: Capital Costs 90K, Annual O&M 16K  
 Annual estimated for SVE 70K Capital Costs 234K Actual Costs 40K YR SSC listed costs at 200K  
 Annual estimated for GW OU 17K Capital Costs 159K Actuals range from 12K-20K YR  
 SSC listed costs at 427K and 12K YR  
 Annual estimated for Monitoring 16K Capital Costs 15K Actual Costs 4K YR  
 SSC listed costs at 45K each; annual costs 8K each

**Estimated Cost Table**

Year	Personnel	Fringe Rate (\$)	Indirect Rate (\$)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Other
1999	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$172,000.00	OU 3 & OU 4(?); SVE Annual O&M = \$70K; SSC Annual O&M = \$70K; GWM O&M = \$16K; GWM O&M = \$16K
2000	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$172,000.00	OU 3 & OU 4(?); SVE Annual O&M = \$70K; SSC Annual O&M = \$70K; GWM O&M = \$16K; GWM O&M = \$16K
2001	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$172,000.00	OU 3 & OU 4(?); SVE Annual O&M = \$70K; SSC Annual O&M = \$70K; GWM O&M = \$16K; GWM O&M = \$16K
2002	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$172,000.00	OU 3 & OU 4(?); SVE Annual O&M = \$70K; SSC Annual O&M = \$70K; GWM O&M = \$16K; GWM O&M = \$16K
2003	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$172,000.00	OU 3 & OU 4(?); SVE Annual O&M = \$70K; SSC Annual O&M = \$70K; GWM O&M = \$16K; GWM O&M = \$16K

Site Name: **Cleburn Street Site**

2004	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$172,000.00	OU 3 & OU 4(?); SVE Annual O&M = \$70K; SSC Annual O&M = \$70K; GWM O&M = \$16K; GWM O&M = \$16K
2005	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$172,000.00	OU 3 & OU 4(?); SVE Annual O&M = \$70K; SSC Annual O&M = \$70K; GWM O&M = \$16K; GWM O&M = \$16K
2006	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$172,000.00	OU 3 & OU 4(?); SVE Annual O&M = \$70K; SSC Annual O&M = \$70K; GWM O&M = \$16K; GWM O&M = \$16K
2007	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$172,000.00	OU 3 & OU 4(?); SVE Annual O&M = \$70K; SSC Annual O&M = \$70K; GWM O&M = \$16K; GWM O&M = \$16K

**Total Estimated Costs (all years): \$1,548,000.00**

**Actual Costs**

What is the source of the actual costs? Contractor invoices

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

Annual SVE Costs 41K pre-optimization, 34K post-optimization  
 Annual Groundwater Monitoring Costs 12K pre-optimization, 10K post-optimization  
 Annual SVE Costs 40K YR Capital Costs 234K  
 Annual GW OU Costs range from 12K-20K YR Capital Costs 159K  
 Annual Monitoring Costs for each of 2 wells 4K Capital Costs 15K each

If actual costs have significantly changed over time, what events can be attributed to this?

Use of cooperative agreement with the University of Nebraska-Kearney Chemistry Department and local environmental consulting firm resulted in cost savings. Optimization study also identified areas of reduced sampling activities

Has there been an optimization review? If so, what year was it conducted?

Yes  No

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

Nebraska Legislature General Budget Appropriations and Nebraska Environmental Trust Grant

Are there other concerns related to Long-Term Stewardship at the site?

The design of the SVE well screen intervals does not appear to be capturing shallow subsurface soil contamination. In addition, there appears to be an unknown source area under the former One Hour Martinizing building that also is not be addressed by the current design of the SVE system. Based on these issues, NDEQ has shut the system down and is currently working with EPA Region VII on further optimization studies.

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
1999	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$53,000.00	\$53,000.00	SVE O&M (\$41K pre-optimization/\$34K post-optimization); GWM O&M (\$34K pre-optimization; \$10K post-optimization)
2000	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$53,000.00	\$53,000.00	SVE O&M (\$41K pre-optimization/\$34K post-optimization); GWM O&M (\$34K pre-optimization; \$10K post-optimization)
2001	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$53,000.00	\$53,000.00	SVE O&M (\$41K pre-optimization/\$34K post-optimization); GWM O&M (\$34K pre-optimization; \$10K post-optimization)



Site Name: **Cleburn Street Site**

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
2002	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$53,000.00	\$53,000.00	SVE O&M (\$41K pre-optimization/\$34K post-optimization); GWM O&M (\$34K pre-optimization; \$10K post-optimization)
2003	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$53,000.00	\$53,000.00	SVE O&M (\$41K pre-optimization/\$34K post-optimization); GWM O&M (\$34K pre-optimization; \$10K post-optimization)
2004	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44,000.00	\$44,000.00	SVE O&M (\$41K pre-optimization/\$34K post-optimization); GWM O&M (\$34K pre-optimization; \$10K post-optimization)
2005	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44,000.00	\$44,000.00	SVE O&M (\$41K pre-optimization/\$34K post-optimization); GWM O&M (\$34K pre-optimization; \$10K post-optimization)
2006	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44,000.00	\$44,000.00	SVE O&M (\$41K pre-optimization/\$34K post-optimization); GWM O&M (\$34K pre-optimization; \$10K post-optimization)
2007	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44,000.00	\$44,000.00	SVE O&M (\$41K pre-optimization/\$34K post-optimization); GWM O&M (\$34K pre-optimization; \$10K post-optimization)

**Total Actual Costs (all years): \$441,000.00**

<b>Respondent</b>			
Contact:	Mike Felix	Title:	Section Supervisor
Address:	1200 N Street, Suite 400, Atrium Building		
	Lincoln,	State:	NE Zipcode: 68509
Phone:	(402) 471-2938		
Email:	mike.felix@ndeq.state.ne.us	Date:	4/2/2007

Site Name: **Chemical Sales Co - OU 1**

CERCLISID: COD007431620

State: CO

Region: 8

Listing Date: 8/30/1990 PCC\_OM Dat 3/27/2000

Size: 5

Acreage Derived:

**Contamination**

**Impacted Media: Groundwater**

Media Cost Drive Contaminants of Concern: VOCs - PCE, TCE, and degradation products

COC Cost Driver COC Cost Driver - O.M: VOCs - PCE, TCE, and degradation products

Estimated Quantity Media: 150,000 gallons water

Description Volume Estimate: SVE system treats this amount of water per year

**Impacted Media: Soil**

Media Cost Drive Contaminants of Concern: VOCs - PCE, TCE, and degradation products

COC Cost Driver COC Cost Driver - O.M:

Estimated Quantity Media:

Description Volume Estimate:

**Remedy**

Remedy SVE in place, well ban in place, indoor air sampling done but area is commercial, Components: looking to ESD for closure of SVE plant and startup of "pocket" source areas focused remedy (Chem Ox, Fentons, etc.)

Institutional Controls?  Yes  No

Well ban

Are there primary components of the remedy planned but not yet constructed or implemented?  Yes  No

Description of primary components not constructed/implemented: Not until ESD changes the remedy

**Estimated Costs**

Estimated Cost Source: ROD

Estimated Cost Description: ROD estimated that the SVE plant design and build would be \$2.1 million. Actual costs were \$4.6 million.

**Actual Costs**

What is the source of the actual costs? Data compiled from records over the years

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

If actual costs have significantly changed over time, what events can be attributed to this?  
less cost to run the SVE plant based on management and efficiency over time, it was a new plant so there were some bugs to work out

Has there been an optimization review? If so, what year was it conducted?  
 Yes  No one five year review, another one coming, trend charts showing SVE no longer efficient, ESD to look at alternate pocket treatment of source area soils

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:  
EPA and state paid for the original design and build in typical 90/10 split. State will pay for O and M when we get to MNA. At that point our State's Hazardous Substance Relief Fund (HSRF) will fund the MNA. Our HSRF funds are derived from tipping fees at our landfills.

Are there other concerns related to Long-Term Stewardship at the site? None

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
2000	\$40,000.00	0.00%	0.00%	\$17,000.00	\$0.00	\$2,000.00	\$6,500.00	\$285,000.00	\$120,000.00	\$470,500.00	These figures are our actual costs rounded up to whole numbers#####
2001	\$50,000.00	0.00%	0.00%	\$12,000.00	\$0.00	\$1.50	\$6,500.00	\$285,000.00	\$120,000.00	\$473,501.50	
2002	\$45,000.00	0.00%	0.00%	\$7,000.00	\$0.00	\$1,500.00	\$6,500.00	\$265,000.00	\$120,000.00	\$445,000.00	
2003	\$45,000.00	0.00%	0.00%	\$7,000.00	\$0.00	\$1,000.00	\$6,500.00	\$255,000.00	\$100,000.00	\$414,500.00	
2004	\$40,000.00	0.00%	0.00%	\$4,000.00	\$0.00	\$1,000.00	\$6,500.00	\$240,000.00	\$90,000.00	\$381,500.00	
2005	\$35,000.00	0.00%	0.00%	\$5,000.00	\$0.00	\$1,000.00	\$6,500.00	\$88,000.00	\$80,000.00	\$215,500.00	

Site Name: **Chemical Sales Co - OU 1**

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
2006	\$35,000.00	0.00%	0.00%	\$1,000.00	\$0.00	\$1,000.00	\$6,500.00	\$85,000.00	\$80,000.00	\$208,500.00	

**Total Actual Costs (all years): \$2,609,001.50**

**Respondent**

Contact:	Fonda Apostolopoulos	Title:	On-Site Coordinator	
Address:	4300 Cherry Creek Drive South			
	Denver	State:	CO	Zipcode: 80246
Phone:	(303) 692-3411			
Email:	fonda.apostolo@state.co.us	Date:	2/14/2007	

Site Name: **Central City/Clear Creek Superfund Site**

CERCLISID: **COD980717557**

State: **CO**

Region: **8**

Listing Date: **9/8/1983** PCC\_OM Dat **3/31/1999**

Size: **0**

Acreage Derived: **OU 3 & OU 4 RODs**

**Contamination**

**Impacted Media: Soil**

Media Cost Drive Contaminants of Concern:

COC Cost Driver COC Cost Driver - O.M:

Estimated Quantity Media:

Description Volume Estimate:

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**Impacted Media: Surface water**

Media Cost Drive Contaminants of Concern: Zinc, Copper, Cadmium, Managanese, Lead, Arsenic, Iron

COC Cost Driver COC Cost Driver - O.M: Iron, Manganese, Zinc

Estimated Quantity Media: 300,000 gallons/day to 30,000,000 gal/day

Description Volume Estimate: The mine drainage itself is about 300,000 gallons / day. But once it drains to the stream it affects a much greater volume of water (about 30 million gallons/day); Based on knowledge of site. Stream water based on Clear Creek estimate of approximate typical low flow of 50 cubic feet per second (based on monitoring data).

**Remedy**

Remedy Active chemical precipitation treatment of mine drainage at the Argo Tunnel.

Components: Capping or other erosion control measures at a number of mine waste piles.

Institutional Controls?  Yes  No

Intent would be to implement Institutional Controls at mine waste piles to assure projection of the remedy. In practice they have not been implemented at many mine waste piles. Future mine waste pile remediations we will attempt to implement institutional controls through environmental covenants

Are there primary components of the remedy planned but not yet constructed or implemented?  Yes  No

Description of primary components not constructed/implemented: Planned work for the main stem of Clear Creek has been implemented. Remediation for the North Fork of Clear Creek (OU#4) has not been implemented yet (it calls for additional water treatment and erosion control protection for a number of mine waste piles).

**Estimated Costs**

Estimated Cost Source: OU3 ROD or FS. The O & M cost estimates will be for water treatment at the Argo Water treatment facility. (Only a part of the site, though currently the bulk of O & M costs)

Estimated Cost Description: OU 3 ROD estimated \$1,200,000 per year for Argo plus a passive system and mine waste piles. Argo was about \$1,000,000 of that.

**Estimated Cost Table**

Year	Personnel	Fringe Rate (\$)	Indirect Rate (\$)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Other
1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$175,384.00	\$0.00	\$926,000.00	OU 3 ROD Amendment, No Action Alt for 5 Yrs; OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B)
										Yearly Cost = \$926K
2	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$175,384.00	\$0.00	\$926,000.00	OU 3 ROD Amendment, No Action Alt for 5 Yrs; OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B)
										Yearly Cost = \$926K
3	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$175,384.00	\$0.00	\$926,000.00	OU 3 ROD Amendment, No Action Alt for 5 Yrs; OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B)
										Yearly Cost = \$926K

Site Name: **Central City/Clear Creek Superfund Site**

4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$175,384.00	\$0.00	\$926,000.00	OU 3 ROD Amendment, No Action Alt for 5 Yrs; OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B  Yearly Cost = \$926K )
5	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$175,384.00	\$0.00	\$926,000.00	OU 3 ROD Amendment, No Action Alt for 5 Yrs; OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B  Yearly Cost = \$926K )
6	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
7	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
8	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
9	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
11	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
12	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
13	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
14	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
16	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
17	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )

Site Name: **Central City/Clear Creek Superfund Site**

18	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
19	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
21	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
22	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
23	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
28	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
29	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )
30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$926,000.00	OU 4 ROD, Table 10.5 Cost Alternatives (Alt 4B Yearly Cost = \$926K )

**Total Estimated Costs (all years): \$28,656,920.00**

**Actual Costs**

Site Name: **Central City/Clear Creek Superfund Site**

**Actual Costs**

What is the source of the actual costs? Based on actual costs - but simplified and summarized by estimating and rounding

Description of Actual Costs. Figures, accuracy, time-frame costs reflect, categories (e.g., capital, typical year, 10-year replacement costs, etc...)

Costs presented in summary fashion within 10%. Decent overview of overall picture.

If actual costs have significantly changed over time, what events can be attributed to this?

Initially process was difficult to control and needed to rent equipment (additional filter presses). Have made improvements to facility over time to reduce the amount of labor, and to use more cost effective chemical reagent. Contracted part of O& M was about 1.1 to 1.2 Million a year in first two years. Now the contracted part is about .9 to .95 Million per year. Its been about 100,000 a year for CDPHE to implement project management, including utilities (which are part of the other category on the Actual cost table).

Has there been an optimization review? If so, what year was it conducted?

Yes  No Not formally, but State Project Manager, Mary Scott's focus has been to reduce annual costs as we can. Treatment chemical changed from sodium hydroxide to lime. Operations more automated now than when plant first started. We hope to complete a formal review within the next year.

Source of funding: Are some costs still coming from EPA? How does the state pay for the long-term obligations?:

90/10 for 10 years, thus EPA paying 90% through September 2009. Then will become 100 % state funded. State uses "Hazardous Substance Response Fund" that is funded by a tipping fee on solid waste disposal.

Are there other concerns related to Long-Term Stewardship at the site? For the plant, replacement of major systems or equipment over time. For the site assess management of properties. Long term nature of active water treatment (in perpetuity).

**Actual Cost Table**

	Personnel	Fringe Rate (%)	Indirect Rate (%)	Equipment	Travel	Supplies	Lab Analytical	Contractual	Other	Total	Comments
1	\$18,718.00	0.00%	0.00%	\$63.00	\$0.00	\$0.00	\$0.00	\$0.00	\$151.00	\$18,932.00	Contractual: Labor=\$400,000; Lime=\$150,000; Polymer=\$60,000; Sludge disposal=\$140,000; Sampling=\$50,000; Other= \$100000 to 150000
2	\$25,088.00	0.00%	0.00%	\$59.00	\$3.00	\$210,059.00	\$50,000.00	\$164,139.00	\$2,774.00	\$452,122.00	
3	\$85,817.00	0.00%	0.00%	\$229.00	\$233.00	\$210,467.00	\$50,000.00	\$771,200.00	\$4,997.00	\$1,122,943.00	
4	\$96,428.00	0.00%	0.00%	\$0.00	\$1,615.00	\$213,301.00	\$50,000.00	\$893,075.00	\$8,240.00	\$1,262,659.00	
5	\$96,056.00	0.00%	0.00%	\$0.00	\$0.00	\$210,000.00	\$50,000.00	\$548,255.00	\$34,989.00	\$939,300.00	
6	\$91,368.00	0.00%	0.00%	\$0.00	\$0.00	\$210,000.00	\$50,000.00	\$577,622.00	\$35,065.00	\$964,055.00	
7	\$97,691.00	0.00%	0.00%	\$0.00	\$0.00	\$210,000.00	\$50,000.00	\$513,799.00	\$39,242.00	\$910,732.00	
8	\$83,326.00	0.00%	0.00%	\$0.00	\$0.00	\$210,000.00	\$50,000.00	\$625,390.00	\$49,282.00	\$1,017,998.00	
9	\$69,258.00	0.00%	0.00%	\$0.00	\$0.00	\$210,000.00	\$50,000.00	\$625,217.00	\$42,811.00	\$997,286.00	
10	\$73,672.00	0.00%	0.00%	\$0.00	\$0.00	\$210,000.00	\$50,000.00	\$637,612.00	\$55,579.00	\$1,026,863.00	

**Total Actual Costs (all years): \$8,712,890.00**

**Respondent**

Site Name: **Central City/Clear Creek Superfund Site**

Contact:	Ronald Abel or Mary Scott	Title:	State Project Managers		
Address:	4300 Cherry Creek Drive South				
	Denver	State:	CO	Zipcode:	80246
Phone:	(303) 692-3381				
Email:	ron.abel@state.co.us or mary.scott@state.co.us		Date:	2/28/2007	