

FOURTH FIVE-YEAR REVIEW REPORT

FOR

**SHARON STEEL SUPERFUND SITE
CERCLIS ID: UTD980951388**

**CITY OF MIDVALE
SALT LAKE COUNTY, UTAH**

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For:

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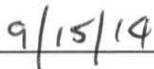




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LIST OF ACRONYMS

ACL	Alternate Concentration Limit
ARARs	Applicable or Relevant and Appropriate Requirements
BHHRA	Baseline Human Health Risk Assessment
CDC	Centers for Disease Control and Prevention
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CFSFM	Citizens for a Safe Future for Midvale
CFR	Code of Federal Regulations
cy	Cubic Yards
DERR	Division of Environmental Response and Remediation
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FCOR	Final Close Out Report
FML	Flexible Membrane Liner
GCL	Geo-synthetic Clay Lined
ICs	Institutional Controls
ICPP	Institutional Control Process Plan
JVWCD	Jordan Valley Water Conservation District
MCL	Maximum Contaminant Level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU1	Operable Unit 1
OU2	Operable Unit 2
PCD	Partial Consent Decree
PCOR	Preliminary Close Out Report
ppb	Parts Per Billion
ppm	Parts Per Million
PRP	Potentially Responsible Party
RAO	Remedial Action Objectives
ROD	Record of Decision
SMP	Site Management Plan
TAG	Technical Assistance Group
UDEQ	Utah Department of Environmental Quality
UDOH	Utah Department of Health
UDWR	Utah Division of Water Rights
US&G	Upper Sand and Gravel
USBR	United States Bureau of Reclamation

Executive Summary

The Utah Department of Environmental Quality (UDEQ), Division of Environmental Response and Remediation (DERR), in cooperation with the United States Environmental Protection Agency Region 8 (EPA) has conducted the Fourth Five-Year Review of the remedial actions implemented at the Sharon Steel Superfund Site (Site) located in Midvale, Utah. The review was conducted from November 2013 through September 2014.

The Sharon Steel Superfund Site is comprised of two operable units. The remedy implemented at OU1 consisted of capping an existing tailings pile, groundwater monitoring, and institutional controls. The remedy implemented at OU2 removed contaminated soils from most residential and commercial properties and implemented institutional controls. The Site achieved construction completion in May 1999 and response actions at the Site were determined to be complete in July 2004 as documented in the Final Close Out Report (FCOR). The Site was deleted from the National Priorities List (NPL) in September 2004.

The remedy at OU1 currently protects human health and the environment because tailings have been capped, groundwater monitoring is conducted and institutional controls prohibiting groundwater use and maintaining the integrity of the cap during development are in place. However, in order for the remedy to be protective in the long-term, holes observed in the chain-link fence need to be repaired, trees and brush growing on the cap's surface need to be removed and groundwater monitoring needs to continue in order to evaluate potential impacts from future groundwater wells that will be installed west of the Jordan River.

The remedy at OU2 is protective of human health and the environment. Contaminated soils were excavated and replaced with clean soils and institutional controls are in place for properties where excavation of contaminated soils was not possible. Institutional controls for select city properties, transportation right-of-ways and one privately owned property that were not remediated remain in place and are enforced by Midvale City. Future Five-Year Reviews for OU2 will only review the select city properties, transportation right-of-ways and one privately owned property where institutional controls remain in place.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Sharon Steel Corp. (Midvale Tailings)		
EPA ID: UTD980951388		
Region: 8	State: UT	City/County: Midvale/Salt Lake County
SITE STATUS		
NPL Status: Deleted		
Multiple OUs? Yes	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: State		
Author name (Federal or State Project Manager): Tony Howes		
Author affiliation: Utah Department of Environmental Quality (UDEQ)		
Review period: 11/14/2013 – 9/21/2014		
Date of site inspection: 4/16/14		
Type of review: Statutory		
Review number: 4		
Triggering action date: 9/21/2009		
Due date (five years after triggering action date): 9/21/2014		

Five-Year Review Summary Form (continued)

Issues/Recommendations

Issues and Recommendations Identified in the Five-Year Review:

OU(s): 1	Issue Category: Remedy Performance			
	Issue: <i>Installation and operation of additional Jordan Valley Water Conservancy District (JVWCD) wells west of the Jordan River could potentially impact groundwater conditions at Sharon Steel. It is anticipated that additional wells will be operational in November 2015.</i>			
	Recommendation: <i>The UDEQ will monitor groundwater annually at OU1 in order to evaluate any potential impacts to groundwater conditions.</i>			
Affect Current Protectiveness	Affect Future Protectiveness	Implementing Party	Oversight Party	Milestone Date
No	Yes	UDEQ	EPA	11/1/2016

OU(s): 1	Issue Category: Operations and Maintenance			
	Issue: <i>Holes were observed in the chain-link fence near the end of Lennox Street and along the Jordan River Parkway Trail.</i>			
	Recommendation: <i>Repair fence at these locations.</i>			
Affect Current Protectiveness	Affect Future Protectiveness	Implementing Party	Oversight Party	Milestone Date
No	Yes	Property Owner	Midvale City	11/19/2014

OU(s): 1	Issue Category: Operations and Maintenance			
	Issue: <i>Trees and brush are growing on the cap's surface.</i>			
	Recommendation: <i>Remove trees and brush growing on cap's surface.</i>			
Affect Current Protectiveness	Affect Future Protectiveness	Implementing Party	Oversight Party	Milestone Date
No	Yes	Property Owner	Midvale City	11/19/2014

Five-Year Review Summary Form (continued)

Protectiveness Statement(s)

<i>Operable Unit:</i> OU1	<i>Protectiveness Determination:</i> Protective	<i>Addendum Due Date (if applicable):</i> N/A
<p><i>Protectiveness Statement:</i> The remedy at OU1 currently protects human health and the environment because tailings have been capped, groundwater monitoring is conducted and institutional controls prohibiting groundwater use and maintaining the integrity of the cap during development are in place. However, in order for the remedy to be protective in the long-term, holes observed in the chain-link fence need to be repaired, trees and brush growing on the cap's surface need to be removed and groundwater monitoring needs to continue in order to evaluate potential impacts from future groundwater wells that will be installed west of the Jordan River.</p>		

<i>Operable Unit:</i> OU2	<i>Protectiveness Determination:</i> Protective	<i>Addendum Due Date (if applicable):</i> N/A
<p><i>Protectiveness Statement:</i> The remedy at OU2 is protective of human health and the environment. Contaminated soils were excavated and replaced with clean soils and institutional controls are in place for properties where excavation of contaminated soils was not possible. Institutional controls for select city properties, transportation right-of-ways and one privately owned property that were not remediated remain in place and are enforced by Midvale City. Future Five-Year Reviews for OU2 will only review the select city properties, transportation right-of-ways and one privately owned property where institutional controls remain in place.</p>		

Site Wide Protectiveness Statement (if applicable)

<i>Protectiveness Determination:</i> Protective	<i>Addendum Due Date (if applicable):</i> N/A
<p><i>Protectiveness Statement:</i> The remedial action at OU2 is protective. However, because the remedial action at OU1 is currently protective, the site is currently protective of human health and the environment. In order for the site to be protective in the long-term, holes observed in the chain-link fence need to be repaired (at OU1), trees and brush growing on the cap's surface need to be removed (at OU1), and groundwater monitoring (at OU1) needs to continue in order to evaluate potential impacts from future groundwater wells that will be installed west of the Jordan River.</p>	

1.0 Introduction

The purpose of the Five-Year Review is to determine whether the remedial actions at a site are protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review Reports. In addition, Five-Year Review Reports identify issues found during the review, if any and makes recommendations to address them.

The Utah Department of Environmental Quality (UDEQ) in cooperation with the U.S. Environmental Protection Agency Region 8 (EPA) prepared this Fourth Five-Year Review Report pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) §121 and the National Contingency Plan (NCP). CERCLA §121 states:

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

The EPA interpreted this requirement further in the NCP; 40 Code of Federal Regulations (CFR) §300.430(f)(4)(ii) states:

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

This is the Fourth Five-Year Review for the Sharon Steel Superfund Site. This Five-Year Review is required by statute. The triggering action for this statutory review is the previous third Five-Year Review, which was signed and dated September 21, 2009. This review was conducted for the entire Site from November 14, 2013 through September 2014.

2.0 Site Chronology

Table 1 - Chronology of Events

Event	Date
Ore processing and milling conducted at the Site.	1906 -1971
The Sharon Steel Company purchases the Site.	1981
The use of tailings by local residents for fill in sand boxes and gardens is investigated by the Salt Lake County Health Dept. and Utah Dept. of Health (UDOH).	1982
UDOH and EPA conduct a preliminary assessment.	March 1983
The EPA proposed listing the Site on the Superfund's National Priorities List.	1984
State of Utah Bureau of Solid and Hazardous Waste conduct a site inspection.	April 1984
The EPA conducted a field investigation.	June 1985
A technical assistance team Contractor (i.e., Ecology and Environment) conducted a surface water and sediment investigation of the Jordan River.	August 1985
General Notice Letters were sent to Potentially Responsible Parties (PRP's).	August 1985
A Settlement Account to be funded by PRPs is established by EPA for the Site.	1987
Requests for information (CERCLA 104e) letters were sent out.	May 1988
A State Administrative Order directs the PRPs to stabilize the banks along the Jordan River and to suppress dust at the Site by spraying the tailings with a polymer coating.	June 1988
A Preliminary Endangerment Assessment (PEA) is performed by the Agency for Toxic Substances & Disease Registry (ATSDR).	July 21, 1988
The Site is divided into two Operable Units, OU1 and OU2.	Fall 1989
The EPA conducted blood lead testing of 128 children.	1989
Removal Action for the construction of a fence restricting Site access.	February 1989
The Site was added to the NPL.	August 28, 1990
The OU2 Record of Decision (ROD) was signed. The selected remedy addressed contaminated soils in residential and commercial properties east and northeast of the Site and called for the excavation of contaminated soil and placement of these soils at the mill site (i.e., OU1).	September 24, 1990
Partial Consent Decree entered by the United States District Court, District of Utah.	November 13, 1990
Removal Action for the removal and disposal of chemicals and bottled gases from the mill buildings.	May to June 1991
Remedial Action at OU2 begins and is addressed in five phases over a period of 8 years.	October 1991
Removal action for the demolition and onsite disposal of mill buildings and related facilities.	September 1992 – December 1993
The OU1 ROD was signed addressing the mill site, tailings pile and groundwater.	December 1993
OU2 ESD issued by EPA.	June 1994
OU1 Remedial Action begins.	May 1995

Table 1 - Chronology of Events (continued)

Event	Date
Groundwater monitoring and sampling begins.	May 1997
The EPA conducts follow-up blood lead testing of 341 residents.	Fall 1998
OU2 ESD documenting EPA's decision to (1) limit the scope and cost of the RA by not remediating selected city properties and transportation rights-of-ways and (2) removing institutional controls associated with future residential construction was issued.	December 1998
Final Inspection of the OU1 and OU2 remedies completed.	January 6, 1999
First Five-Year Review completed.	February 26, 1999
Final Remedial Action Reports for OU1 and OU2 are completed.	March 1999
EPA issues Preliminary Close Out Report.	May 12, 1999
Quarterly Site Inspections begin.	October 18, 2001
Final O&M Manual is completed for OU1.	October 19, 2001
Jordan Bluffs, Inc. purchases OU1.	January 26, 2004
Midvale City adopts as ordinance the OU1 Institutional Control Process Plan.	May 4, 2004
OU1 ESD issued by EPA.	July 1, 2004
EPA and UDEQ accept final Site Modification Plan for Redevelopment of OU1.	July 9, 2004
EPA issues Final Close Out Report.	July 28, 2004
Stipulation and Joint Motion for Modification and Termination of Partial Consent Decree is entered with the United States District Court, District of Utah.	September 15, 2004
Site deleted from the NPL.	September 24, 2004
Second Five-Year Review completed.	September 24, 2004
EPA determines that the Site is ready for residential and mixed reuse.	September 30, 2004
The United States District Court, District of Utah issues order confirming stipulation and granting joint motion for modification and termination of Partial Consent Decree.	November 29, 2004
The property owner performs a Geotechnical Consultation Slope Stability Analysis	September 25, 2006
Midvale City adopts institutional control ordinance (Ordinance No. 6/26/2007 O-8), which amends and replaces the previous institutional control process plan adopted as ordinance in May 2004.	June 26, 2007
Third Five-Year Review completed.	September 21, 2009
Geotechnical Review of Sharon Steel Site OU1.	May 2, 2011
Final Citizens for a Safe Future for Midvale (CSFM) Technical Assistance Group (TAG) meeting.	June 12, 2013
EPA issues a Technical Memorandum decision document removing the requirements of the Site Modification Plan and Institutional Control Process Plan (ICPP).	September 27, 2012

3.0 Background

3.1 Physical Characteristics

The Site encompasses approximately 470 acres and includes two operable units, OU1 and OU2 (Attachment A). Operable Unit 1 is approximately 270 acres in size and comprises a former milling facility, capped tailings pile and groundwater. Operable Unit 2 comprises 200 acres north and east of OU1 and consists of residential and commercial properties. The Midvale Slag Superfund Site (UTD081834277) is located adjacent to and north of the Sharon Steel OU1 Site. The Jordan River and associated riparian corridor are located along the western and southern margins of OU1.

Surface water and shallow groundwater are drained by the Jordan River, which provides cold water habitat for fish, but is primarily used for agricultural irrigation. The riparian corridor adjacent to the Jordan River provides vegetative structure for a variety of wildlife. A wetland pond is located at the southeast corner of OU1. Water level in the wetland pond is a function of the static groundwater table during low flows of the Jordan River. Water level in the wetland pond during peak flows of the Jordan River is controlled by two box culverts, constructed in 2009 that allow the river to flow into and out of the wetland pond.

3.2 Land and Resource Use

The Site is surrounded by commercial and residential areas to the north and east and open space and agricultural land to the south and west. In September 2004 the EPA determined that the OU1 portion of the Site was ready for residential and mixed use; however, the OU1 portion of the Site is currently vacant.

The Jordan River parkway trail is located within the western and southern boundaries of the OU1 site between the Jordan River and chain link fence constructed around the capped tailings pile. The parkway trail is a non-motorized paved biking and walking trail that parallels the Jordan River through Salt Lake and Utah Counties.

Groundwater beneath the Site is comprised of three distinct units: the unconfined upper sand and gravel (US&G) aquifer which is also referred to as the shallow unconfined aquifer, the confined deep principal aquifer and a local perched unit. Groundwater flow direction in the US&G aquifer and deep principal aquifer is towards the northwest and Jordan River.

The deep principal aquifer serves as a primary drinking water resource for the surrounding area and greater Salt Lake Valley. However, the use of groundwater beneath the Sharon Steel OU1 Site is restricted by institutional controls administered by Midvale City and the Utah Division of Water Rights.

The US&G aquifer is considered a drinking water source by the Jordan Valley Water Conservation District (JVWCD). The JVWCD is planning to develop additional extraction wells west of the Sharon Steel OU1 Site and Jordan River. These wells will be developed in the US&G aquifer and are tentatively scheduled to be operational by November 2015.

3.3 History of Contamination

The Sharon Steel Site was an ore milling facility that operated from 1906 to 1971. During the milling operation, sulfide concentrates of lead, copper, and zinc were extracted from the ore by froth flotation. The facility also operated as a custom mill that concentrated and extracted a variety of metals from ores obtained from numerous sources. Tailings from the milling facility were disposed of in ponds adjacent to and below the milling facility. Over time, these ponds were expanded to the west by rerouting the Jordan River and covering associated wetlands and riparian habitat with tailings. An estimated 10 million cubic yards (cy) of tailings up to 58 feet deep with average lead and arsenic concentrations of 5,470 parts per million (ppm) and 320 ppm, respectively were disposed of at the mill site and contaminated the underlying US&G aquifer. Investigations found that arsenic concentrations in the US&G aquifer beneath the Site ranged from 2.5 parts per billion (ppb) to 246 ppb, with an average of 28.14 ppb.

Residential and commercial properties north and east of the tailings pile were contaminated primarily by windblown tailings. Additional transport mechanisms thought to account for soil contamination in the residential and commercial areas included:

- Unsuspecting residents using the tailings in sandboxes and gardens.
- Surface water transport of tailings onto OU2 from the OU1 tailings pile.
- Fallout of smelter emissions from former stacks at the adjacent Midvale Slag OU2 site and/or the former south stack at the Sharon Steel OU1 Site.
- Deliberate placement of tailings and possibly other ore processing wastes onto OU2 for sanding snow packed or icy roads.

Health concerns related to contaminants were first identified when the Salt Lake County Health Department and UDOH were notified that citizens were gathering and using tailings in sandboxes and gardens.

3.4 Initial Response

The Site was proposed for the NPL in 1984 and finalized on the NPL on August 28, 1990. Initial Response actions addressed the immediate risks to human health and included:

- June 1988-State Administrative Order directing the PRPs to stabilize the banks along the Jordan River and to suppress dust at the Site by spraying the tailings with a polymer coating.
- February 1989-Removal Action for the construction of a fence restricting Site access.
- May to June 1991-EPA conducted a Removal Action for the removal and disposal of chemicals and bottled gases from the mill buildings.

- September 1992 to December 1993-EPA conducted a Removal Action for the demolition and onsite disposal of mill buildings and related facilities.

3.5 Basis for Taking Action

Investigations conducted by local, State and Federal agencies determined that lead and arsenic concentrations in tailings and residential soils posed unacceptable risks to residents. Several metal contaminants were detected in the US&G aquifer beneath the tailings; however, arsenic was the primary contaminant of concern for groundwater since it was the most mobile.

During 1989 the EPA conducted a blood lead screening of 128 children living within OU2. This study found 23 children had blood lead levels greater than the Centers for Disease Control (CDC) reference level of 10 µg/dL. The average blood lead level among the children at OU2 was 5 µg/dL, while the national average was 2.7 µg/dL.

Risk assessments conducted for both soils/tailings and groundwater concluded that remedial action was necessary since contaminants posed unacceptable carcinogenic and toxic risks to human health. Ecological risks were only evaluated for the OU1 portion of the Site in the OU1 ROD since no critical or non-critical wildlife habitats existed at OU2. The OU1 ROD concluded that the potential existed for contaminants to adversely impact wildlife in the wetlands habitat, including vegetation growing in contaminated soils and receptors consuming the vegetation.

4.0 Remedial Actions

4.1 Remedy Selection

The Sharon Steel Superfund Site is comprised of two operable units, OU1 and OU2. The selected remedy for OU1 addressed the mill site, tailings pile and groundwater. The selected remedy for OU2 addressed contaminated soils in residential and commercial areas of Midvale. In order to address immediate threats to public health, the OU2 remedy was selected and implemented before the OU1 remedy. The OU1 ROD was signed by the EPA on December 9, 1993 and the OU2 ROD was signed by the EPA and UDEQ on September 24, 1990.

4.1.1 Operable Unit One (OU1)

The remedial action objectives summarized in the ROD for OU1 are:

- Prevent exposure to contaminated soil/tailings on the Site by either isolating (selected remedy) or removing (contingency alternative) tailings and soil exhibiting contaminant concentrations exceeding health-based remediation levels (action levels) shown in Table 2.

Table 2 - OU1 Action Levels

Parameter	Action Level
Soil	
Lead	500 mg/kg ¹
Arsenic	70 mg/kg ¹
Groundwater	
Arsenic	50 µg/L (in wells on the north side of the Site)
	190 µg/L (in wells on the west side of the Site)

1. Based on risk assessment

- Prevent migration of and exposure to contaminated groundwater exhibiting arsenic concentrations greater than the action levels identified in Table 2 beyond the boundaries of the OU1 site. This will be accomplished by monitoring and containing groundwater in the unconfined upper sand and gravel aquifer beneath OU1.
- Prevent exposure to contaminated soil/tailings, reduce inflow of water to the tailings, and reduce further contamination of the shallow groundwater by construction of a cap and interceptor trench (selected remedy) or removal of contaminated soil/tailings for offsite disposal (contingency alternative).

The EPA provided in the OU1 ROD a contingency alternative to allow the State of Utah to enhance the remedy for the contaminated tailings and soils. The contingency process allowed for an alternative remedy which included excavation, transport and offsite containment of the contaminated tailings and soils. However, this alternative proved cost prohibitive and was never implemented.

The major components of the remedy selected in the OU1 ROD included:

- Excavation and relocation of the tailings within 150 feet of the center line of the Jordan River and distribution of these tailings on top of the existing tailings pile.
- Removal of the top two feet of soil in the mill building area and placement of this soil on the existing tailings pile. Clean fill was brought in to replace the contaminated soil which was excavated and the area was re-vegetated.
- Dredging the wetlands to remove contaminated sediments and placement of the dredged material on top of the existing tailings pile. Return of the wetlands to their natural state.
- Excavation of tailings on the west bank of the Jordan River and placement of these tailings on the existing tailings pile.
- Construction of a five-foot vegetated soil cap (or design-based equivalent) over the entire tailings and soil pile.
- Installation of an interceptor trench along the eastern edge of the tailings pile to control subsurface lateral groundwater flow.
- Rehabilitation of the Galena Canal in order to control storm water run-on.
- Installation of monitoring wells to sample and test the groundwater.
- Monitoring of shallow groundwater to ensure that Applicable or Relevant and Appropriate Requirements (ARARs) are not exceeded at the points of compliance.
- Treatment of groundwater if ARARs are exceeded in compliance point monitoring wells. The goal of treatment will be to contain contaminated groundwater and prevent offsite migration.
- On site use restrictions of groundwater and other institutional controls.

The Galena Canal was discontinued and decommissioned prior to this information making it into the final version of the OU1 ROD. The canal was therefore removed and not rehabilitated. This was the only remedy component change to the OU1 ROD.

An Explanation of Significant Differences (ESD) was issued by the EPA for OU1 in July 2004. The ESD explains the differences between the remedy selected in the OU1 ROD and the remedy subsequent to redevelopment of the Site. As described in the July 2004 ESD, the OU1 Remedial Design did not designate the type or number of structures that were allowed on the cap. In order to address the remedy differences, Jordan Bluffs Inc. developed a Site Management Plan (SMP) that established technical requirements for redevelopment at OU1.

A Technical Memorandum decision document was issued by EPA in September 2012 that clarified and modified the OU1 remedy. The memorandum removes the requirements of the SMP and ICPP and clarifies the use of the IC Ordinance adopted by Midvale City in 2007.

Institutional controls were established as an ordinance and are administered and enforced by Midvale City to ensure protection of the OU1 remedy. The ordinance sets forth requirements and procedures for maintaining the integrity of the cap through redevelopment and reuse of the property and prohibits new groundwater wells. The construction of new groundwater wells is also prohibited by the Salt Lake Valley Groundwater Management Plan implemented by the Utah Division of Water Rights (UDWR). The groundwater management plan defines the Sharon Steel restricted area and does not allow the transfer of water rights into the restricted area.

4.1.2 Operable Unit Two (OU2)

The overall goal of the OU2 remedy was to remove the principal threat, which was the exposure of residents to unacceptable levels of lead and arsenic in soils. The major components of the OU2 remedy included the following:

- Removal of contaminated soils and associated vegetation, to the action level. The level of contamination which would trigger removal was 500 ppm lead and 70 ppm arsenic concentrations in soil. Existing soils being used for gardening would be remediated to the action level of 200 ppm lead and/or 70 ppm arsenic.
- Soils excavated from the residential properties were transported to the Sharon Steel OU1 Site and placed on top of the existing tailings pile.
- Clean soil was used to restore the excavated area back to the original ground surface.
- Clean soils were graded to the original contour and re-vegetated.
- If monitoring of the test site suggested it was necessary, residents were offered the opportunity to be temporarily relocated.
- Following outdoor cleanup, home interiors were tested and cleaned to remove household dust if the dust was found to exceed the action levels for lead and arsenic.
- Trees and shrubs were removed and replaced as necessary if soil removal affected their viability.
- The OU2 ROD called for the implementation of institutional controls in order to provide special provisions for future construction when removing or replacing existing sidewalks, driveways, foundations, etc., which may have contaminated soils beneath them, and for initiation of new gardens.

The EPA issued two ESDs for OU2. The first ESD, dated June 23, 1994, stated that garden soils below the 500 ppm lead level would not be remediated to 200 ppm lead and were not subject to

institutional controls. A second ESD was issued in December 1998. This ESD cited the EPA's decision to (1) limit the scope of the remedial action by not remediating selected city properties and transportation right-of-ways and (2) removing institutional controls associated with future residential construction.

As described in the December 1998 ESD, institutional controls established for future excavations beneath hard surfaces were removed after the remedy was reevaluated and deemed protective without institutional controls. The model used to predict exposure risks due to soil contamination was based on an integrated exposure for each exposure unit (residential area). Thus, the OU2 remedy was determined to be protective of human health when the exposure unit is considered as a whole. Institutional controls for select city properties, transportation right-of-ways and one privately owned property that were not remediated remain in place and are enforced by Midvale City.

4.2 Remedy Implementation

4.2.1 Operable Unit One (OU1)

Remedial design and remedial action activities at OU1 began in May 1994 and were completed in the fall of 1997 and met the major components of the OU1 ROD as follows:

- Approximately 1.5 million cy of tailings were excavated and moved back 150 feet from the Jordan River and northern 7800 South boundary and placed on top of the existing tailings pile.
- The top two feet of contaminated soil in the mill building area was excavated and placed on top of the existing tailings pile. The excavated areas were replaced with clean fill and re-vegetated.
- Approximately 100,000 cy of contaminated material was removed from the wetlands and placed on top of the existing tailings pile. The wetlands area was revegetated and control structures were constructed along the Jordan River to sustain a manageable water source to the wetlands.
- Approximately 3,700 cy of tailings on the west bank of the Jordan River were excavated and placed on the existing tailings pile.
- The tailings pile was covered with a geo-synthetic clay lined (GCL) cap that included a flexible membrane liner (FML) that further reduced the potential infiltration of water through the tailings pile. The engineered cap was covered with two feet of soil and the entire area was re-vegetated.
- A 4,000 foot long interceptor trench was installed along the eastern edge of the tailings pile to control subsurface lateral groundwater.
- Monitoring wells were installed to monitor and sample groundwater.

- Monitoring of shallow groundwater is ongoing to ensure compliance with Applicable or Relevant and Appropriate Requirements ARARs.
- Institutional controls prohibiting the use of groundwater were established.

The OU1 site achieved construction completion status when the Preliminary Close Out Report (PCOR) was signed on May 12, 1999. Response actions at the OU1 site were completed on July 28, 2004 as documented in the FCOR. The Site was deleted from the NPL on September 24, 2004.

4.2.2 Operable Unit Two (OU2)

Remedial work at OU2 was completed in five phases over a period of 8 years from 1991 to 1998. Phase one of this work involved the removal of contaminated soils from certain Midvale City streets in order to assist Midvale City in a road improvement project. Remedial action work completed during Phases two through five removed approximately 188,800 cy of contaminated soil from 595 residential and commercial properties.

Confirmatory sampling was completed after the removal of the contaminated soils. Using a grid system and random selection, a composite sample was collected and analyzed to determine if the zone was clean. If the result of the confirmatory sampling exceeded the action level (500 ppm lead or 70 ppm arsenic), 6 more inches of soil was removed and the process repeated. Once confirmatory sampling results were below the action level, the zone was considered clean and the area was backfilled with clean soil.

The OU2 site achieved construction completion status when the PCOR was signed on May 12, 1999. Response actions at the OU2 site were completed on July 28, 2004 as documented in the FCOR. The Site was deleted from the NPL on September 24, 2004.

4.3 Operation and Maintenance

All Operations and Maintenance (O&M) activities pertain to OU1 and are required to maintain and monitor the performance and protectiveness of the remedy implemented for OU1. The O&M objectives for OU1 are to: (1) maintain the engineered cover and vegetation; (2) maintain the drainage system and erosion protection features; (3) monitor the groundwater on an annual basis; (4) prevent the Jordan River from invading the Site and eroding the cap and/or tailings; (5) control future development and groundwater use at the Site; and (6) provide reports to document conditions at the Site including problems, repairs and development activities.

The O&M activities are currently being conducted by the UDEQ pursuant to a cooperative agreement with the EPA and in accordance with the *Operation, Maintenance, and Monitoring Manual for Sharon Steel Superfund Site, Operable Unit 1*. The UDEQ monitors and samples groundwater annually and performs quarterly site inspections to ensure the remedy is functioning as intended and remains protective of human health and the environment. Annual groundwater and quarterly site inspection reports are prepared and provided to the EPA and other stakeholders.

5.0 Progress Since the Last Five-Year Review

This is the Fourth Five-Year Review for this Site. The UDEQ and EPA completed the Third Five-Year Review in September 2009. The Third Five-Year Review concluded with the following protectiveness statement:

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

The status of issues and recommendations identified in the last Five-Year Review are summarized in Table 3.

Table 3 - Follow-up Actions since the Last Five-Year Review

OU	Issue	Recommendations/Follow-up Actions	Status of Follow-up Actions
1	1) Installation of additional Jordan Valley Water Conservancy District (JVWCD) wells.	The UDEQ will monitor groundwater at OU1 in order to evaluate any impacts to groundwater conditions should additional wells be installed by JVWCD.	Complete Additional JVWCD wells were not installed and groundwater monitoring is performed by UDEQ.
1	2) Monitor well MW-1A has been dry for the last five years.	The UDEQ will continue to monitor conditions at MW-1A during the annual ground and surface water monitoring event. However, it is recommended that well MW-4A be monitored and sampled as an alternative.	Complete Annual groundwater reports dated 1/5/10, 4/18/11, 3/12/12, 4/23/13 and 1/17/14. With the exception of the 3/12/12 report, MW-1A remained dry and Arsenic concentrations reported in the 3/12/12 report for MW-1A were below action levels.
1	3) MCL for arsenic changed to 10 µg/L, effective January 2006.	Modify groundwater performance standards as appropriate. The UDEQ and EPA are currently evaluating the MCL change in order to determine if the new MCL for arsenic should be adopted or if an ACL similar to that established for groundwater at the adjacent Midvale Slag site should be adopted.	Complete. Groundwater monitoring network in place. MCL change does not affect protectiveness as ICs are in place to prevent the use of groundwater as a drinking water source.
1	4) The aquatic life criterion for arsenic is now 150 µg/L (four-day average).	With the exception of MW-7A, arsenic concentrations detected in ground and surface water since July 1997 have remained well below 150 µg/L. Annual monitoring and reporting should continue to be performed in order to evaluate arsenic concentrations in ground and surface water.	Complete. Groundwater monitoring network in place. This change does not affect protectiveness as a pump and treat system is not needed at this time.

Table 3 - Follow-up Actions since the Last Five-Year Review (continued)

OU	Issue	Recommendations/Follow-up Actions	Status of Follow-up Actions
1	5) Wetland control structures are no longer used.	This issue is currently being discussed by the UDEQ and EPA. The EPA plans to replace the existing control structures with box culverts placed at a specific elevation to allow flows into and out of the wetlands.	Complete. Box culverts constructed 12/14/2009.
1	6) Potential impacts from site redevelopment.	The property owner has prepared a site modification plan for redevelopment to ensure that such activities are protective of the remedy. Midvale City administers and enforces institutional controls, which set forth requirements and procedures for maintaining the remedy through redevelopment. The site modification plan and ICs should be followed in order to maintain the protectiveness of the remedy.	Complete. Technical Memo dated 9/27/2012 removes the requirements of the Site Modification Plan that were written specifically for one developer and type of development and clarifies the use of the IC Ordinance adopted in 2007.
1	7) Modification of the O&M manual.	The O&M manual will be modified as needed to reflect the changing roles and responsibilities of tasks when redevelopment of OU1 occurs.	Complete. No redevelopment is occurring at this time.

In May 2011 the EPA commissioned a geotechnical review of OU1 which recommended three approaches for Site development. The approaches recommended in the review are: (1) Extensive geotechnical investigation, (2) Zone-specific reuses that can be implemented without an extensive geotechnical investigation and (3) Reuses that can be implemented with cover system modification.

6.0 Five-Year Review Process

6.1 Administrative Components

The Fourth Five-Year Review for the Sharon Steel Superfund Site was led by Tony Howes, UDEQ Project Manager. The following team members participated in the review:

- Kerri Fiedler, EPA Project Manager for the Sharon Steel Site
- Scott Everett, UDEQ Toxicologist
- Dave Allison, UDEQ Public Information Officer
- Jennifer Chergo, EPA Community Involvement Coordinator

This Five-Year Review consisted of the following activities: review of relevant documents, meeting with EPA and Midvale City representatives, site inspection, public interviews and development of the Fourth Five-Year Review Report. The review team met on November 14, 2013 and established a review schedule. The schedule extended through September 2014.

6.2 Community Involvement

In accordance with the community involvement requirements of the Five-Year Review a public notice (Attachment B) was published in the *Salt Lake Tribune* and *Deseret News* newspapers on March 30, 2014 indicating the Fourth Sharon Steel Five-Year Review was being conducted and invited public input. A notice indicating completion of the Fourth Five-Year Review will also be placed in the two newspapers.

Members of the Community Technical Assistance Group (TAG), Citizens for a Safe Future for Midvale (CFSFM) met periodically throughout the last five years to discuss any concerns or issues they may have regarding the Sharon Steel Site. Project managers from both UDEQ and EPA attended these meetings in order to answer questions and provide members with information regarding groundwater monitoring and quarterly inspections. Members of the TAG and representatives from UDEQ and EPA attended the final TAG meeting on June 12, 2013. Opinions expressed by members during the final TAG meeting were positive when describing their experience and members felt that their opinions made a difference.

6.3 Document Review

This Five-Year Review included a review of relevant Site documents including Quarterly Inspection Reports and groundwater monitoring data. A list of documents reviewed for this Five-Year Review is provided in Attachment C.

6.4 Data Review

6.4.1 Groundwater Monitoring

Groundwater monitoring is conducted at OU1 on an annual basis by the UDEQ. The scope of this monitoring includes the collection of groundwater samples, analytical data interpretation and development of an annual report. The specific objectives of the groundwater monitoring are:

- Determine if arsenic concentrations in the groundwater are steady, increasing or decreasing.
- Determine if the arsenic in the US&G aquifer has migrated vertically into the deep principal aquifer.
- Determine if arsenic in the US&G aquifer has migrated horizontally off Site to the North/West in excess of established action levels.
- Determine if the Jordan River is being impacted by contaminated groundwater discharge.
- Determine if the integrity of the remedy is being maintained.

In conjunction with the statutory Fourth-Five Year Review and further evaluation of the remedy, a total of 23 samples were collected during the October 2013 monitoring and sampling event instead of 17 samples that are typically collected annually from the compliance wells. Two of these samples were collected from the Jordan River and the remaining 21 samples were collected from monitoring wells (Attachments D, E and F).

Concentrations of dissolved and total arsenic in groundwater samples collected at the Site are summarized in Attachments G and H, respectively. Based on data gathered during the groundwater monitoring and sampling events, the following observations can be made:

- Arsenic concentrations at the Sharon Steel OU1 Site have remained relatively steady since 1997.
- Groundwater contamination appears to be confined to the US&G aquifer and does not appear to be migrating into the deep principal aquifer.
- Arsenic concentrations in the US&G aquifer have not migrated to the north or beyond the boundaries of the Site in excess of the established action level of 50 µg/L.
- The groundwater remedy continues to be effective and remains protective of human health and the environment.

With the exception of monitor well MW-7A, dissolved arsenic concentrations over the course of the last five years were below established action levels. Dissolved arsenic concentrations in MW-7A are likely the result of tailings transported from Kennecott Bingham Canyon Copper Mine by Bingham Creek. The EPA and DERR evaluated monitor well MW-7A in the spring of 2001 and determined that the well was completed in the historic Bingham Creek channel. A statistical trend analysis (Attachment I) of dissolved arsenic concentration values for monitor well MW-7A from December 1997 to October 2013 shows dissolved arsenic levels are decreasing.

6.4.2 Surface water Monitoring

Surface water monitoring of the Jordan River is performed in conjunction with the annual groundwater monitoring and sampling event. Surface water samples are obtained from specific locations upgradient and downgradient of the Site (Attachment F) in order to evaluate any impacts to the Jordan River from contaminated groundwater. Concentrations of dissolved and total arsenic in surface water samples collected over time from the Jordan River are summarized in Attachments G and H, respectively. Dissolved arsenic concentrations detected in surface water have remained below the established action level of 190 µg/L.

6.5 Site Inspection

The Sharon Steel Fourth Five-Year Review site inspection was completed on April 16, 2014 and was attended by the following individuals:

- Tony Howes, UDEQ Project Manager for the Sharon Steel Site
- Kerri Fiedler, EPA Project Manager for the Sharon Steel Site
- John Jacobsen, Midvale City, Development Site Coordinator

A Site Inspection Check List was completed and is provided in Attachment J. The purpose of the site inspection was to assess the protectiveness of the remedy, and integrity of the cap and fence. Quarterly Site inspections are also conducted at the Sharon Steel Site by the UDEQ and reports summarizing the inspection are provided to the EPA.

There were no significant issues identified regarding the cap and photos taken during the site inspection are provided in Attachment K. Holes cut in the chain-link fence were observed during the site inspection near the end of Lennox Street and along the Jordan River Parkway Trail. Trees and brush growing on the cap's surface were also observed during the site inspection.

6.6 Interviews

The UDEQ conducted community interviews with individuals knowledgeable about the Site. Individuals that were interviewed included Midvale City officials, a representative for the property ownership group, former members of the Citizens for a Safe Midvale Technical Advisory Group, Jordan Valley Water Conservation District officials and the UDEQ Project Manager. Reports summarizing the interviews can be found in Attachment L.

None of the interviewees expressed any health or environmental concerns and said the remedy remains protective. A common concern expressed by those that were interviewed was the lack of development and reuse of OU1. Several interviewees mentioned the cutting of fences and occasional trespassing at OU1 and noted that these issues were usually resolved quickly. Interviewees felt well informed about the Site and positive opinions were expressed about the working relationship between the agencies and other stake holders.

7.0 Technical Assessment

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

Yes, the review of documents, ARARs, risk assumptions, and the results of the site inspection indicate the remedy is functioning at both OU1 and OU2 as intended by the following decision documents:

- 1993 OU1 ROD
- 2004 OU1 ESD
- 2012 OU1 Tech Memo
- 1990 OU2 ROD
- 1994 OU2 ESD
- 1998 OU2 ESD

There have been no changes in the physical conditions of OU1 that affect the protectiveness of the remedy. The engineered cap constructed at OU1 continues to meet the remedial action objectives of preventing exposure to contaminated soil/tailings. Quarterly site inspections are performed by UDEQ to ensure that the integrity of the cap is maintained and that the Site is secure. Reports for each quarterly site inspection are prepared and provided to EPA. Minor issues identified during the quarterly site inspections such as fence damage and trees growing on the cap's surface have been or continue to be addressed. Little to no change is observed or recorded between quarterly inspections that impact the integrity of the remedy. Therefore, the frequency of the inspections will be changed from quarterly to twice a year. Institutional controls maintaining the integrity of the cap during redevelopment and reuse of the property are administered by Midvale City.

The UDEQ conducts annual groundwater and surface water sampling to ensure that arsenic concentrations greater than the established action levels have not migrated beyond the boundaries of OU1. Reports summarizing the sampling data are prepared and provided to EPA. With the exception of monitor well MW-7A, as previously discussed, arsenic concentrations in groundwater and surface water have not exceeded action levels. Groundwater use at the OU1 site is prohibited by the Salt Lake Valley Groundwater Management Plan administered by the Utah Division of Water Rights and institutional control ordinance administered by Midvale City. Monitoring wells MW-551 and MW-701 are no longer easily accessible and arsenic concentrations have been less than or near detection limits since 1998. These wells will be abandoned and no longer sampled.

The OU2 remedy continues to meet the objectives defined in the OU2 ROD. The OU2 remedy eliminated exposure to contaminated soils by excavating and replacing soils that exceeded the established health-based action levels and where excavation was not possible institutional controls are in place to control future potential exposure. Institutional Controls for OU2 established procedures for future excavations that may encounter contaminated soils beneath hard surfaces. Institutional controls were removed for some properties when the remedy was reevaluated and deemed to be protective of human health without institutional controls as documented in the June 1994 and December 1998 ESDs. Institutional controls for select city

properties, transportation right-of-ways and one privately owned property that were not remediated remain in place and are enforced by Midvale City. Only the portions of OU2 where institutional controls remain in place will be included in future Five-Year Reviews.

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

Yes, the toxicity data, cleanup levels, and remedial action objectives are still valid; however, the exposure assumptions for inhalation have changed, but do not impact the protectiveness of the remedy.

Cleanup levels set for the Site were presented in the 1990 and 1993 RODs. Because the document was developed prior to EPA's Risk Assessment Guidance for Superfund (RAGS) Part F (2009), the exposure assumptions for the inhalation exposure pathway were conducted differently. The exposure metric that was used in the Baseline Human Health Risk Assessment (BHHRA) (1990) used inhalation concentrations that were based on ingestion rate and body weight (mg/kg-day). Inhalation intake on a mg/kg-day is no longer estimated during the exposure assessment step of baseline risk assessments. The updated methodology found in EPA's RAGS Part F uses the concentration of a chemical in the air, with the exposure metric of ug/m³. These assumptions of exposure duration and exposure frequency are unchanged; inhalation rate and body weight are no longer relevant. These changes do not impact the protectiveness of the remedy.

The UDEQ and EPA reviewed State and Federal ARARs that were identified in the OU1 and OU2 RODs. This review found that no State or Federal ARARs were changed during the last 5 years that would affect the protectiveness of the OU1 and OU2 remedies.

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

No additional information has come to light during this Five-Year Review that could call into question the protectiveness of the remedy. Future Five-Year Reviews for OU2 will only review the select city properties, transportation right-of-ways and one privately owned property where institutional controls remain in place.

8.0 Issues

The following issues were identified during this Five-Year Review.

Table 4 – Summary of Site Issues

Item No.	Issues	OU	Affects Current Protectiveness (Y/N)?	Affects Future Protectiveness (Y/N)?
1	Installation and operation of additional JWWCD wells west of the Jordan River could potentially impact groundwater conditions at Sharon Steel. It is anticipated that additional wells will be operational in November 2015.	1	N	Y
2	Holes were observed in the chain-link fence near the end of Lennox Street and along the Jordan River Parkway Trail.	1	N	Y
3	Trees and brush are growing on the cap's surface.	1	N	Y

Table 5 – Summary of Site Issues That Do Not Affect Protectiveness

Item No.	Issues	OU	Affects Current Protectiveness (Y/N)?	Affects Future Protectiveness (Y/N)?
1	The OU1 Site remains undeveloped and little to no change is observed or recorded between quarterly O&M site inspections that would impact the integrity of the remedy. Therefore, the frequency of the inspections will be changed from quarterly to twice a year.	1	N	N

Table 5 – Summary of Site Issues That Do Not Affect Protectiveness (continued)

Item No.	Issues	OU	Affects Current Protectiveness (Y/N)?	Affects Future Protectiveness (Y/N)?
2	Monitoring Wells MW-551, MW-552 and MW-701 are no longer easily accessible and arsenic concentrations have been less than or near detection limits since 1998. These wells are sampled once every five years in conjunction with the Five-Year Review. Based on this information it is recommended that these wells be abandoned and no longer sampled.	1	N	N

9.0 Recommendations and Follow-Up Actions

Table 6 – Recommendations and Follow-Up Actions

Item No.	Issues	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
						Current	Future
1	Installation and operation of additional JWCD wells west of the Jordan River could potentially impact groundwater conditions at Sharon Steel. It is anticipated that additional wells will be operational in November 2015.	Monitor groundwater annually at OU1 in order to evaluate any potential impacts to groundwater.	UDEQ	EPA	11/1/2016	N	Y
2	Holes were observed in the chain-link fence near the end of Lennox Street and along the Jordan River Parkway Trail.	Repair fence at these locations.	Property Owner	Midvale City	11/19/2014	N	Y
3	Trees and brush are growing on the cap's surface.	Remove trees and brush growing on cap's surface.	Property Owner	Midvale City	11/19/2014	N	Y

Table 7 – Recommendations and Follow-Up Actions For Issues That Do Not Affect Protectiveness

Item No.	Issues	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
						Current	Future
1	The OUI Site remains undeveloped and little to no change is observed or recorded between quarterly inspections that would impact the integrity of the remedy. Therefore, the frequency of the inspections will be changed from quarterly to twice a year.	Inspections will be conducted in the Fall and Spring of each year.	UDEQ	EPA	11/14/2016	N	N
2	Monitoring Wells MW-551, MW-552 and MW-701 are no longer easily accessible and arsenic concentrations have been less than or near detection limits since 1998. These wells are sampled once every five years in conjunction with the Five-Year Review. Based on this information it is recommended that these wells be abandoned and no longer sampled.	The UDEQ will implement this recommendation and coordinate the abandonment of these wells by August 2016.	UDEQ	EPA	8/24/2016	N	N

10.0 Protectiveness Statement

10.1 Operable Unit One (OU1)

The remedy at OU1 currently protects human health and the environment because tailings have been capped, groundwater monitoring is conducted and institutional controls prohibiting groundwater use and maintaining the integrity of the cap during development are in place. However, in order for the remedy to be protective in the long-term, holes observed in the chain-link fence need to be repaired, trees and brush growing on the cap's surface need to be removed and groundwater monitoring needs to continue in order to evaluate potential impacts from future groundwater wells that will be installed west of the Jordan River.

10.2 Operable Unit Two (OU2)

The remedy at OU2 is protective of human health and the environment. Contaminated soils were excavated and replaced with clean soils and institutional controls are in place for properties where excavation of contaminated soils was not possible. Institutional controls for select city properties, transportation right-of-ways and one privately owned property that were not remediated remain in place and are enforced by Midvale City. Future Five-Year Reviews for OU2 will only review the select city properties, transportation right-of-ways and one privately owned property where institutional controls remain in place.

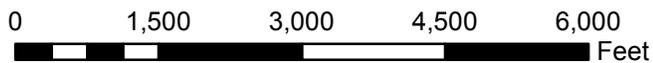
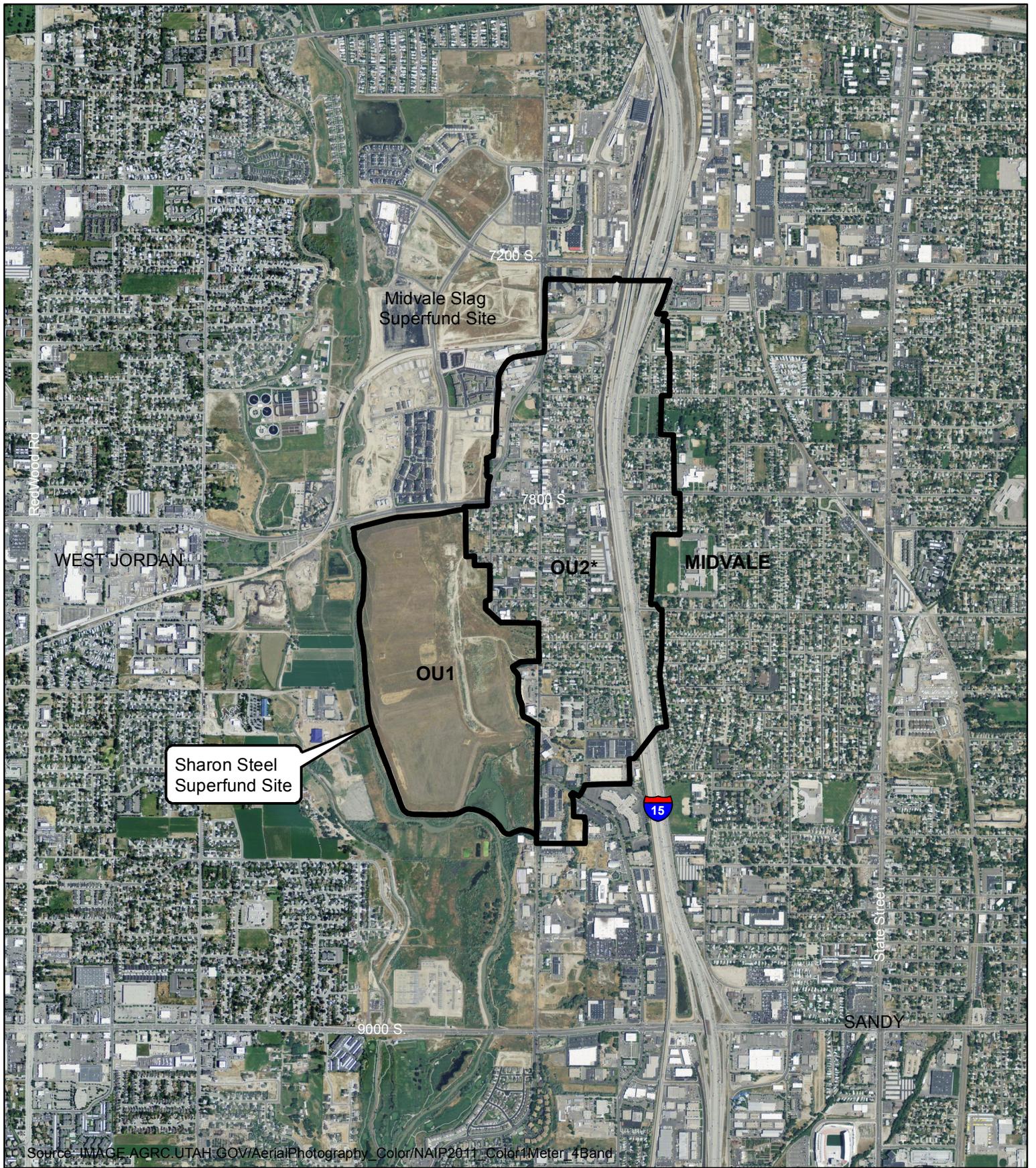
10.3 Site-Wide

The remedial action at OU2 is protective. However, because the remedial action at OU1 is currently protective, the site is currently protective of human health and the environment. In order for the site to be protective in the long-term, holes observed in the chain-link fence need to be repaired (at OU1), trees and brush growing on the cap's surface need to be removed (at OU1), and groundwater monitoring (at OU1) needs to continue in order to evaluate potential impacts from future groundwater wells that will be installed west of the Jordan River.

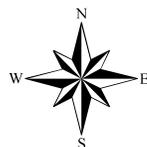
11.0 Next Review

The next Five-Year Review for the Site will be performed on or before five years from the signature date for this review. For OU2, the Five-Year Reviews will only review the select city properties, transportation right-of-ways and one privately owned property where institutional controls remain in place.

**Attachment A:
General Site Location Map**



Scale 1:24,000



Attachment A:
General Site Location Map

Sharon Steel Superfund Site
April 2014

**Attachment B:
Public Notice**



PUBLIC NOTICE
Five-Year Review of
Sharon Steel Superfund Site
Salt Lake County



The Utah Department of Environmental Quality (UDEQ), in cooperation with the U.S. Environmental Protection Agency (EPA), is conducting a fourth Five-Year Review of the Sharon Steel Superfund Site. Sharon Steel, a former smelting and milling facility was located at 7500 South 700 West in Midvale, Utah and added to the EPA Superfund National Priorities List (NPL) in 1980. EPA and UDEQ completed the cleanup in 1989 and the site was deleted from the NPL on September 24, 2004.

What is a Five-Year Review? It is a protective measure required by law to ensure that EPA cleanup actions are protective of human health and the environment. The review includes physically inspecting the site and all cleanup technologies in place, while examining collected monitoring data and maintenance records. This process is repeated every five years.

The Five-Year Review will determine whether the cap installed at the site is performing as expected and remains in good condition. It will also determine whether the completed site work is meeting the goals of EPA's cleanup decision for the site. Upon completion of the review, a report will be compiled and made available to the public. The review is scheduled to be completed by September 2014.

To review previous Five-Year Review reports and other site-related files used for the cleanup of the Sharon Steel Superfund Site, documents are available for the public at:

Tyler Branch Library 6041 South Wood Street Midvale, Utah 84047 Phone: 801-943-4836 Hours: M-Th: 10 a.m. - 8 p.m., F-Sa: 10 a.m. - 5 p.m.	UDEQ-DEIR Records Center Multi Agency State Office Building 196 North 1850 West (First Floor) Salt Lake City, Utah 84116 Phone: 801-536-0028	EPA Superfund Records Center 1595 Wynkoop Street Denver, Colorado 80202 Phone: 303-312-8473 Appointment is necessary
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You can also find information about the Sharon Steel site on the EPA Website at:
<http://www2.epa.gov/region8/sharon-steel-corp-midvale-tailings>

If you would like more information about the Sharon Steel Superfund Site Five-Year Review or participate in an interview, please contact:

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Jennifer Chargo
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Phone: 303-312-6601
E-Mail: chargo.jennifer@epa.gov

**Attachment C:
List of Documents Reviewed**

Attachment C: List of Documents Reviewed

Annual Groundwater and Surface Water Monitoring Report, Sharon Steel OU1 Superfund Site, October 2013.

Declaration and Decision Summary for the Record of Decision Sharon Steel (Operable Unit 2) Residential Soils, Midvale, Utah, September 24, 1990.

Declaration and Decision Summary for the Record of Decision Sharon Steel (Operable Unit 1) Sharon Steel/Midvale Tailings Site Midvale, Utah, December 1993.

Geotechnical Review of Sharon Steel Site Operable Unit 1 Midvale, Utah, Prepared for U.S. EPA Region 8 by Skeo Solutions and Stark Consultants, Inc., May 2, 2011.

Institutional Controls Ordinance for Bingham Junction, Jordan Bluffs and Designated Rights-of-Way Chapter 8.10, Midvale City, June 6, 2011.

Memorandum, Minor Modification of the Selected Remedy, Sharon Steel Superfund Site, OU1, September 27, 2014.

Operation Maintenance and Monitoring Manual for Sharon Steel Superfund Site Operable Unit 1 Midvale, Utah, October 2001.

Remedial Action Report for Sharon Steel/Midvale Tailings Operable Unit No. 1, March 1999.

Remedial Action Report for Sharon Steel/Midvale Tailings Operable Unit No. 2, March 1999.

Sharon Steel Superfund Site Operable Unit 1, Explanation of Significant Differences, July 2004.

Sharon Steel Operable Unit 1 Operation and Maintenance Quarterly Site Inspection Reports, November 2009 through February 2014.

U.S. Environmental Protection Agency (EPA), March 27, 1991, Action Memorandum, Request for Removal Restart Approval at Sharon Steel Site, Midvale, Utah: Action Memorandum. 10p.

U.S. Environmental Protection Agency (EPA), September 30, 2004, Ready for Reuse Determination Sharon Steel Superfund Site.

U.S. Environmental Protection Agency (EPA), January 2009, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment), OSWER 9285.7-82.

Utah Department of Environmental Quality (DEQ), September 21, 2009, Third Five-Year Review for Sharon Steel Superfund Site, Midvale, Salt Lake County, Utah.

Attachment D:
Figure of Arsenic Concentrations in the
Upper Sand and Gravel Aquifer

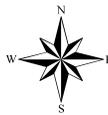


Source: IMAGE.AGRC.UTAH.GOV Aerial Photography_ColorNAIP2011_Color1Meter_4Band

EXPLANATION

- ◆ Monitor Well
- (5)T Total Arsenic Concentration ppb
- (5)D Dissolved Arsenic Concentration ppb
- > Surface Water Flow Direction

Note: The action level for wells 2A - 4A, 402, 551, 552 and 702 is 50 µg/L and for wells 5A - 15A the action level is 190 µg/L.



Scale: 1:10,000

Attachment D:
Figure of Arsenic
Concentrations in the
Upper Sand and Gravel Aquifer

Sharon Steel OU1
Superfund Site
October 2013

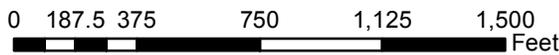
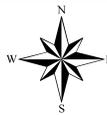
Attachment E:
**Figure of Arsenic Concentrations in the Deep
Principal and Perched Aquifers**



Source: IMAGE.AGRC.UTAH.GOV/Aerial Photography_Color/NAIP2011_Color1Meter_4Band

EXPLANATION

- Monitor Well
- (5)T** Total Arsenic Concentration ppb
- (5)D** Dissolved Arsenic Concentration ppb
- MW-404** Perched Aquifer Monitor Well
- Surface Water Flow Direction



Note: The action level for wells 401 & 404 is 50 µg/L and for well 651 the action level is 190 µg/L

Scale: 1:7,000

Attachment E:
Figure of Arsenic
Concentrations in the
Deep Principal and Perched Aquifers

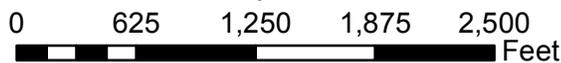
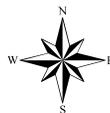
Sharon Steel OU1
Superfund Site
October 2013

**Attachment F:
Figure of Arsenic Concentrations in Surface
Water**



EXPLANATION

- Surface Water Sample Location
 - (3)T Total Arsenic Concentration ppb
 - (3)D Dissolved Arsenic Concentration ppb
 - Surface Water Flow Direction
- Note: Action Level for Surface Water is 190 ppb



Scale 1:12,000

Attachment F:
Figure of Arsenic
Concentrations in Surface Water

Sharon Steel OU1
Superfund Site
October 2013

**Attachment G:
Summary Table of Dissolved Arsenic
Concentrations in Groundwater and Surface
Water**

Attachment G: Summary Table of Dissolved Arsenic Concentrations in Groundwater and Surface Water

Sample Date	Dec-97	1st Qtr-98	Feb-98	Mar-98	2nd Qtr-98	May-98	Aug-98	4th Qtr-98	1st Qtr-99	2nd Qtr-99	4th Qtr-99	Ann-2000	Ann-2001	Ann-2002	Ann-2003	Ann-2004	Ann-2005	Sep-06	Sep-07	Oct-08	Oct-09	Oct-10	Oct-11	Oct-12	Oct-13	
Well ID	Action Level	Dissolved Arsenic																								
MW-1A	50.0	NS	6.0	NS	NS	<5.0	NS	35.0	<10.0	<10.0	<10.0	<10.0	<4.5	<5.0	NS											
MW-2A	50.0	45.0	67.0	47.0	46.0	76.0	55.0	25.4	47.2	59.7	72.6	38.4	44.0	18.0	7.8	12.0	18.0	14.0	11.0	7.3	13.0	14.0	10.6	13.5	10.2	6.5
MW-3A	50.0	NS	12	NS	NS	10.0	NS	11.2	10.3	15	<10.0	<10.0	9.0	<5.0	<5.0	17.0	8.2	7.8	8.6	6.6	8.4	8.04	17.8	11.0	9.9	
MW-4A	50.0	NS	<5.0	NS	NS	<5.0	NS	<10.0	<10.0	25.4	<10.0	<10.0	NS	NS	<5.0	<5.0	8.9	5.5	8.6	11.0	15.0	22.0	9.06	10.1	17.9	11.5
MW-5A	190.0	5.0	7.0	14.0	15.0	24.0	8.0	12.2	<10.0	<10.0	<10.0	<10.0	<4.5	6.7	5.8	<5.0	8.9	11.0	11.0	5.7	7.0	6.3	5.61	7.5	6.9	6.0
MW-6A	190.0	NS	<5.0	NS	NS	10.0	NS	31.7	291.0	<10.0	<10.0	<10.0	NS	NS	NS	<5.0	NS	NS	NS	NS	4.9	NS	NS	NS	NS	5.2
MW-7A	190.0	370.0	320.0	310.0	210.0	370.0	410.0	316.0	302.0	302.0	320.0	310.0	340.0	260.0	290.0	270.0	270.0	240.0	210.0	190.0	190.0	185.0	219.0	215.0	177.0	
MW-8A	190.0	NS	8.0	NS	NS	7.0	NS	<10.0	<10.0	<10.0	<10.0	<10.0	NS	NS	NS	<5.0	NS	NS	NS	NS	8.0	NS	NS	NS	NS	10.4
MW-9A	190.0	NS	10.0	NS	NS	6.0	NS	<10.0	18.5	<10.0	<10.0	<10.0	NS	NS	NS	6.6	NS	NS	NS	NS	6.2	NS	NS	NS	NS	10.1
MW-10A	190.0	NS	15.0	NS	NS	13.0	NS	16.2	10.8	<10.0	11.3	11.5	13.0	13.0	10.0	11.0	15.0	17.0	16.0	12.0	14.0	15.0	14.8	14.9	13.5	16.7
MW-11A	190.0	NS	10.0	NS	NS	14.0	NS	20.0	12.6	<10.0	<10.0	<10.0	NS	NS	NS	6.5	NS	NS	NS	NS	7.6	NS	NS	NS	NS	8.2
MW-12A	190.0	<5.0	5.0	8.0	8.0	14.0	17.0	<10.0	<10.0	<10.0	15.2	<10.0	10.0	8.8	6.2	5.4	7.3	6.1	<5.0	5.9	6.6	12.0	5.55	3.4	4.2	5.2
MW-13A	190.0	NS	11.0	NS	NS	6.0	NS	12.4	<10.0	12.0	<10.0	13.9	NS	NS	NS	9.0	NS	NS	NS	NS	8.6	NS	NS	NS	NS	9.9
MW-14A	190.0	NS	18.0	NS	NS	16.0	NS	<10.0	18.1	34.6	16.8	25.3	NS	NS	NS	14.0	NS	NS	NS	NS	12.0	NS	NS	NS	NS	35.0
MW-15A	190.0	55.0	15.0	49.0	7.0	<5.0	84.0	96.8	100.0	48.4	54.7	104.0	62.0	89.0	54.0	52.0	66.0	72.0	42.0	34.0	13.0	38.0	50.8	24.4	28.1	88.1
MW-401 ¹	50.0	NS	<5.0	NS	NS	<5.0	NS	<10.0	<10.0	<10.0	<10.0	<10.0	<4.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	1.5	1.6	1.81	1.6	1.7	1.6
MW-402	50.0	NS	<5.0	NS	NS	<5.0	NS	<10.0	<10.0	23.4	<10.0	<10.0	NS	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	1.2	1.1	1.36	2.1	2.5	1.0 U
MW-404 ²	50.0	NS	13.0	NS	NS	10.0	NS	<10.0	<10.0	<10.0	10.8	<10.0	11.0	11.0	8.7	<5.0	13.0	12.0	12.0	7.1	9.3	9.8	11.7	13.4	19.9	11.7
MW-551	50.0	NS	<5.0	NS	NS	<5.0	NS	<10.0	<10.0	<10.0	<10.0	<10.0	<4.5	NS	NS	<5.0	NS	NS	NS	NS	0.8	NS	NS	NS	NS	1.0 U
MW-552	50.0	NS	<5.0	NS	NS	<5.0	NS	<10.0	<10.0	<10.0	<10.0	<10.0	NS	NS	NS	<5.0	NS	NS	NS	NS	1.1	NS	NS	NS	NS	1.0 U
MW-651 ¹	190.0	NS	<5.0	NS	NS	<5.0	NS	<10.0	<10.0	<10.0	<10.0	<10.0	<4.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	2.0	2.2	2.28	2.6	2.9	2.1
MW-702	50.0	NS	<5.0	NS	NS	<5.0	NS	<10.0	<10.0	12.7	<10.0	<10.0	NS	NS	NS	<5.0	NS	NS	NS	NS	1.1	NS	NS	NS	NS	1.1
ITMG ³	190.0	NS	18.0	NS	NS	14.0	NS	<10.0	11.4	12.7	11.4	<10.0	9.0	9.0	6.5	7.2	11.0	10.0	8.5	NS	NS	NS	NS	12.9	9.6	NS
SW-JR78S ⁴	190.0	NS	6.0	NS	NS	10.0	NS	<10.0	<10.0	14.0	<10.0	10.7	11.0	8.9	10.0	9.4	14.0	12.0	14.0	13.0	12.0	12.0	12.1	10.1	13.0	9.0
SW-JR90S ⁴	190.0	NS	5.0	NS	NS	10.0	NS	<10.0	<10.0	11.2	<10.0	11.4	14.0	9.4	11.0	9.0	15.0	13.0	16.0	13.0	13.0	12.0	12.5	10.0	13.2	10.2

Note: Concentrations are in µg/L

Red value exceeds action level

< Measurement is below detection limit

NS Not Sampled

¹Monitor well screened in the Deep Principal Aquifer

²Monitor well screened in the Perched Aquifer

³Interceptor Trench Manhole/ Drain G

⁴Surface water samples collected from the Jordan River

U - The analyte was not detected above the level of the associated value. The value is either the sample quantitation limit or sample detection limit.

**Attachment H:
Summary Table of Total Arsenic
Concentrations in Groundwater and Surface
Water**

Attachment H: Summary Table of Total Arsenic Concentrations in Groundwater and Surface Water

Sample Dates		Ann-2000	Ann-2001	Ann-2002	Ann-2003	Ann-2004	Ann-2005	Sep-06	Sep-07	Oct-08	Oct-09	Oct-10	Oct-11	Oct-12	Oct-13
Well ID	Action Level	Total Arsenic													
MW-1A	50.0	<5.0	<5.0	NS											
MW-2A	50.0	45	22.0	10.0	12.0	20.0	14.0	14.0	7.1	13.0	15.0	10.2	14.8	11.9	7.7 J
MW-3A	50.0	<5.0	5.2	5.9	<5.0	16.0	8.4	8.1	8.4	8.4	8.8	8.2	23.6	12.1	9.0 J
MW-4A	50.0	NS	NS	<5.0	<5.0	9.4	6.3	11.0	11.0	16.0	22.0	8.9	16.8	19.5	10.6 J
MW-5A	190.0	<5.0	18.0	6.8	6.4	11.0	13.0	11.0	7.7	7.5	11.0	6.0	8.9	8.4	5.9 J
MW-6A	190.0	NS	NS	NS	<5.0	NS	NS	NS	NS	5.1	NS	NS	NS	NS	5.1 J
MW-7A	190.0	300.0	350.0	340.0	280.0	280.0	280.0	240.0	220.0	190.0	190.0	189.0	247.0	215.0	176.0 J
MW-8A	190.0	NS	NS	NS	<5.0	NS	NS	NS	NS	7.9	NS	NS	NS	NS	9.4 J
MW-9A	190.0	NS	NS	NS	<5.0	NS	NS	NS	NS	9.6	NS	NS	NS	NS	9.3 J
MW-10A	190.0	8.9	13.0	13.0	10.0	16.0	16.0	16.0	14	14.0	14.0	14.9	15.3	13.7	16.4 J
MW-11A	190.0	NS	NS	NS	<5.0	NS	NS	NS	NS	7.8	NS	NS	NS	NS	7.6 J
MW-12A	190.0	8.8	9.2	7.0	<5.0	6.2	10.0	40.0	10	11.0	15.0	25.5	8.1	6.7	5.8 J
MW-13A	190.0	NS	NS	NS	6.5	NS	NS	NS	NS	9.9	NS	NS	NS	NS	8.8 J
MW-14A	190.0	NS	NS	NS	57.0	NS	NS	NS	NS	39.0	NS	NS	NS	NS	41.6 J
MW-15A	190.0	100	170.0	75.0	98.0	100.0	280.0	170.0	78.0	69.0	61.0	78.7	101.0	92.2	101.0 J
MW-401 ¹	50.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	1.5	1.5	1.9	12.0	1.8	1.7 J
MW-402	50.0	NS	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	2.3	0.95	1.4	2.6	2.4	1.0 UJ
MW-404 ²	50.0	8.4	12.0	9.3	<5.0	13.0	12.0	12	7.7	8.9	9.7	11.9	15.6	19.9	12.4 J
MW-551	50.0	<5.0	NS	NS	<5.0	NS	NS	NS	NS	0.92	NS	NS	NS	NS	1.0 U
MW-552	50.0	NS	NS	NS	<5.0	NS	NS	NS	NS	1.2	NS	NS	NS	NS	1.0 U
MW-651 ¹	190.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	2.3	3.0	2.9	3.1	3.1	2.4 J
MW-702	50.0	NS	NS	NS	<5.0	NS	NS	NS	NS	1.2	NS	NS	NS	NS	1.1 J
ITMG ³	190.0	7.8	8.5	9.0	5.8	10.0	11.0	8.8	NS	NS	NS	NS	13.9	9.6	NS
SW-JR78S ⁴	190.0	8.8	11.0	14.0	11.0	14.0	15.0	15.0	14.0	14.0	12.0	13.0	10.4	12.2	8.9
SW-JR90S ⁴	190.0	13.0	12.0	14.0	11.0	16.0	14.0	17.0	15.0	15.0	12.0	13.1	9.9	12.3	10.7

Note: Concentrations are in µg/L

Red value exceeds action level

< Measurement is below detection limit

NS Not Sampled

¹Monitor well screened in the Deep Principal Aquifer

²Monitor well screened in the Perched Aquifer

³Interceptor Trench Manhole/ Drain G

⁴Surface water samples collected from the Jordan River

J - The associated value is an estimated quantity and is the approximate concentration of the analyte in the sample.

U - The analyte was not detected above the level of the associated value. The value is either the sample quantitation limit or sample detection limit.

UJ - The reported quantitation limit is estimated because quality control criteria were not met. Element may or may not be present.

**Attachment I:
Statistical Trend Analysis of Dissolved
Arsenic Concentrations in Monitoring Well
MW-7A**

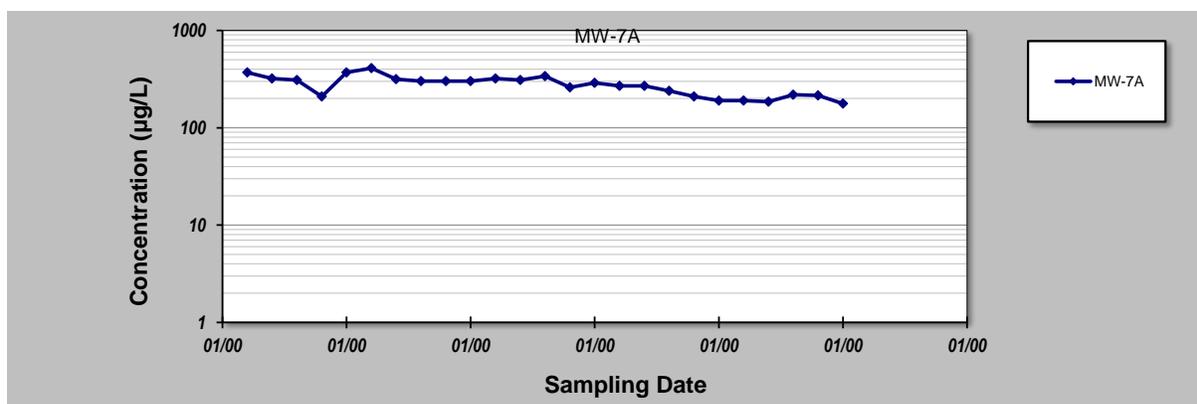
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 30-Apr-14	Job ID: US&G Aquifer
Facility Name: Sharon Steel	Constituent: Dissolved Arsenic
Conducted By: Tony Howes	Concentration Units: µg/L

Sampling Point ID: **MW-7A**

Sampling Event	Sampling Date	DISSOLVED ARSENIC CONCENTRATION (µg/L)					
1	Dec-97	370					
2	1st Qtr-98	320					
3	Feb-98	310					
4	Mar-98	210					
5	2nd Qtr-98	370					
6	May-98	410					
7	Aug-98	316					
8	4th Qtr-98	302					
9	1st Qtr-99	302					
10	2nd Qtr-99	302					
11	4th Qtr-99	320					
12	Ann-2000	310					
13	Ann-2001	340					
14	Ann-2002	260					
15	Ann-2003	290					
16	Ann-2004	270					
17	Ann-2005	270					
18	Sep-06	240					
19	Sep-07	210					
20	Oct-08	190					
21	Oct-09	190					
22	Oct-10	185					
23	Oct-11	219					
24	Oct-12	215					
25	Oct-13	177					
26							
27							
28							
29							
30							

Coefficient of Variation:	0.23
Mann-Kendall Statistic (S):	-191
Confidence Factor:	>99.9%
Concentration Trend:	Decreasing



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.

Attachment J:
Site Inspection Check List

Inspection Form Operable Unit One (OU1)

Site Name: Sharon Steel Superfund Site

Date of Inspection: April 16, 2014

Location and Region: Midvale, UT/EPA Region 8

EPA ID: UTD980951388

Agency leading the Five-Year Review: Utah Department of Environmental Quality

Weather/temperature: Sunny/58°F

	<u>Yes</u>	<u>No</u>
1. Is redevelopment occurring at the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Are there any signs of damage to the access gates and locks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Has erosion occurred which impacts or could impact the integrity of the cap?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Are there any signs of slope sloughing or displacement of material due to slope failure?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Are there cracks at the top of the slope which could indicate the potential for slope failure?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Is there evidence of thinning or thickening of portions of the cap or changes in the engineered grade?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Are there any signs of erosion or undercutting of the Jordan River Riverbank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Has animal activity (i.e. digging, burrowing, paths, etc.) displaced capped material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Are there signs of subsidence, differential settlement, or water ponding?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Are there any obstructions or debris in the ditches or culverts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Are there any signs of damage that would impact the integrity of the interceptor trench and drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Are the groundwater monitoring wellheads accessible and secured/locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Additional Comments or Observations: Photos shown in Attachment K were taken during the site inspection conducting on April 16, 2014. Holes were observed in the chain-link fence near the end of Lennox Street and along the Jordan River Parkway Trail. Trees and brush were observed growing on the cap's surface.

**Attachment K:
Site Photos**



Photo No. 1 – Hole in chain-link fence near the end of Lennox Street at OU1



Photo No. 2 – Hole in chain-link fence near the Jordan River Parkway Trail at OU1



Photo No. 3 – Tree growing on the cap's surface at OU1



Photo No. 4 – Brush growing on cap's surface at OU1



Photo No. 5 – View of cap's north slope parallel to 7800 South at OU1



Photo No. 6 – View of cap's west slope parallel to the Jordan River at OU1



Photo No. - 7 View of wetland area at OU1



Photo No. 8 – View of wetland pond at OU1

**Attachment L:
Interview Summary Reports**

**Sharon Steel Superfund Site
Five-Year Review
Interview of Local Agencies**

Site Name: Sharon Steel EPA ID: UTD980951388	March 26, 2014
Type of Contact: Telephone Visit - X Email	Contact Made By: Name: Dave Allison Organization: Utah Department of Environmental Quality
Person Contacted	
Name: Phillip Hill	Organization: Midvale Assistant City Manager / Comm. & Econ. Development Director
Address: Midvale City Hall 655 W Center St. Midvale, UT 84047	Telephone Number: (801) 567-7214 Email Address: phill@midvale.com

1. **Is your organization/department aware of the Sharon Steel Superfund site and the actions underway to address environmental contamination?** Hill has worked Midvale City for the last 13 years as the Assistant City Administrator and Director of Community & Economic Development and after the Sharon Steel property was cleaned up. Hill is actively involved with all development activities for properties in Midvale City.

2. **What's your overall impression (your general sentiment) of the actions performed at the Sharon Steel Superfund Site?** Hill wished more had been done with the initial cleanup other than a cap-in-place remedy which didn't include a future re-use plan for a 265-acre area. Hill understands the Site's history and reasons why decisions were made, yet is faced with limited and expensive options for developing the Site. Hill stays positive with the successful and rapid development of the adjacent Bingham Junction (a former Midvale Slag Superfund Site) where others will see opportunity with the Sharon Steel property.

3. **Does your office conduct routine communications and/or activities (site visits, inspections, reporting activities, participation in meetings, etc.) for the Sharon Superfund Site? If so, please briefly summarize the purpose and results of these communications and/or activities over the past several years.** Hill said Midvale City is provided and participates with a quarterly inspection report from UDEQ and EPA and feels Midvale City is contacted if anything is going on with the site. Hill said he is informed and doesn't feel the remedy was or will be compromised. Hill said the site operations and maintenance plans include making sure fencing and any potholes remain serviced and followed appropriately by contractors working in the area. Hill was also involved recently updating the institutional controls and received good ideas and collaboration from EPA and UDEQ.

- 4. Are you aware of any community concerns regarding the Sharon Steel Superfund Site or its operation and administration? If so, please give details.** Hill said he does not hear of any health or environmental concerns, the community mostly wonders if the property will ever be developed.
- 5. Over the past five years, have there been any complaints, violations, or other incidents (e.g., vandalism, trespassing, or emergency responses) at or related to the Sharon Steel Superfund Site requiring your office to respond? If so, please give details of the events and results of the response.** Hill said there are no emergencies but the Site fencing is cut and repaired regularly due to trespassing through a portion of the site. Hill said the City is strict with code enforcement and quick to notify the property owner if any issues develop.
- 6. Do you feel well informed about the site's activities and progress over the last five years? Do you know how to contact the Environmental Protection Agency if you have questions or concerns about the Sharon Steel Superfund Site?** Hill said Midvale is kept up-to-date on site activities and speaks to Kerri Fiedler, EPA Project Manager, and Tony Howes, UDEQ Project Manager, with any questions.
- 7. Over the past five years, have there been any changes in your department's policies or regulations that impact the Sharon Steel Superfund Site and/or your role? If so, please describe the changes and the impacts.** There were no changes to the institutional controls ordinance, site management and operations and maintenance plans are followed Hill said.
- 8. Over the past five years, have there been any changes in land use surrounding the Sharon Superfund Site? Are you aware of potential future changes in land use? If so, please describe.** Hill said the land use remains the same and the Jordan Bluffs ownership group has not presented any new proposals for development. Any future consideration for changes to land use would depend upon new ownership.
- 9. Do you have any comments, suggestions, or recommendations regarding the site's management or operation (institutional controls)? If so, what types of future problems do you think (1) could occur; or (2) would concern you and/or your department?** Hill said existing institutional controls and maintenance plans are working fine and does not have any improvement suggestions. As for the future of the Sharon Steel Property, Hill said there are always costs involved the longer the site takes to develop and for developers to do their due diligence. Hill said it's been 12 years post cleanup and would like to see a solution for development like everyone else with interest in the Site.
- 10. Do you have any additional comments?** Hill did say a 30-year Superfund agreement was about to expire regarding the Sharon Steel Superfund Site and will have to work with EPA and UDEQ to figure out what happens next.

**Sharon Steel Superfund Site
Five-Year Review
Interview of Local Agencies**

Site Name: Sharon Steel EPA ID: UTD980951388	March 26, 2014
Type of Contact: Telephone Visit - X Email	Contact Made By: Name: Dave Allison Organization: Utah Department of Environmental Quality
Person Contacted	
Name: John Jacobson	Organization: Midvale City Permit Coordinator
Address: Midvale City Hall 655 W Center St. Midvale, UT 84047	Telephone Number: (801) 567-7287 Email Address: jjacobson@midvale.com

1. **Is your organization/department aware of the Sharon Steel Superfund site and the actions underway to address environmental contamination?** John Jacobson is the Development Site Coordinator for Midvale City and oversees the requirements for building on or near the Sharon Steel and Midvale Superfund Sites.
2. **What's your overall impression (your general sentiment) of the actions performed at the Sharon Steel Superfund Site?** Jacobson knows the history and subsequent remedy complications for the Sharon Steel Site for development. Jacobson said the capping remedy with protective membrane and stability of the tailings complicates any development. Jacobson has seen rapid development of the former Midvale Tailings site and expects Sharon Steel property will happen with the right plan.
3. **Does your office conduct routine communications and/or activities (site visits, inspections, reporting activities, participation in meetings, etc.) for the Sharon Superfund Site? If so, please briefly summarize the purpose and results of these communications and/or activities over the past several years.** Jacobson said his involvement on the site is limited to operations and management. Jacobson is involved with the required quarterly site inspections conducted by the Utah Department of Environmental Quality and reviewed by EPA. Jacobson says some fencing is regularly cut and trespassers cut through the site. Minor weed control are the only issues with the site. Jacobson said Midvale City works well with the Property Owners to address any problems and fix the mentioned issues.
4. **Are you aware of any community concerns regarding the Sharon Steel Superfund Site or its operation and administration? If so, please give details.** Jacobson said the community

doesn't have any environmental or health concerns regarding the site. The community would like to see the area developed as soon as possible and there is interest from prospective developers. Jacobson receives a call once in a while from a resident selling or buying a house wanting a copy of a clean letter. Jacobson said they (Midvale City) has copies on file of all of the clean letters for the Vicinity Properties cleaned up within OU-2.

- 5. Over the past five years, have there been any complaints, violations, or other incidents (e.g., vandalism, trespassing, or emergency responses) at or related to the Sharon Steel Superfund Site requiring your office to respond? If so, please give details of the events and results of the response.** Jacobson said other than the fence cut frequently, some littering or trash would be the extent of any concerns for the site. Jacobson said calls are made to UDEQ and the EPA if anything is discovered and needs to be addressed.
- 6. Do you feel well informed about the site's activities and progress over the last five years? Do you know how to contact the Environmental Protection Agency if you have questions or concerns about the Sharon Steel Superfund Site?** Jacobson feels informed and works with the UDEQ Project Manager and speaks to EPA regularly.
- 7. Over the past five years, have there been any changes in your department's policies or regulations that impact the Sharon Steel Superfund Site and/or your role? If so, please describe the changes and the impacts.** Jacobson said he's only worked for Midvale City for a year and a half and isn't aware of any changes policies or roles over the last five years.
- 8. Over the past five years, have there been any changes in land use surrounding the Sharon Superfund Site? Are you aware of potential future changes in land use? If so, please describe.** Jacobson said Midvale City has not changed any zoning or land use for the site and is not aware of any plans to do so in the near future.
- 9. Do you have any comments, suggestions, or recommendations regarding the site's management or operation (institutional controls)? If so, what types of future problems do you think (1) could occur; or (2) would concern you and/or your department?** Jacobson said everything is working well with the site's institutional controls, State and EPA coordination, and doesn't know any potential problems with the site management plan.
- 10. Do you have any additional comments?** Jacobson did not have any additional comments and will participate with EPA and UDEQ for the Site inspection for the Five-Year Review.

**Sharon Steel Superfund Site
Five-Year Review
Interview of Local Agencies**

Site Name: Sharon Steel EPA ID: UTD980951388	April 10, 2014
Type of Contact: Telephone-X	Contact Made By: Name: Dave Allison Organization: Utah Department Environmental Quality
Person Contacted	
Name: Dave Barry	Organization: Consultant for Sharon Steel Property Ownership Group
Address: N/A	Telephone Number: Email Address: dvbarry@gmail.com

1. **Is your organization/department aware of the Sharon Steel Superfund site and the actions underway to address environmental contamination?** Dave Barry said he's worked for the lender group/ trustees holding title to the Sharon Steel Superfund Site property for four years as a paid consultant from 2010. Barry is familiar with the site history, conducted Expanded Site Assessment (ESA) on the property, and was hired to sort out environmental and legal issues from a previous developer working with the ownership group.

2. **What's your overall impression (your general sentiment) of the actions performed at the Sharon Steel Superfund Site?** Barry said he has two impressions. One, the remedy EPA provided the 200-acre site with the geosynthetic membrane works adequately and is protective of the capped tailings. And two, for re-use purposes, the remedy does not work at all and the primary reason development has not occurred at the 200-acre site. Building on top of the cap would require a substantial and costly amount of soil to off-set differential settlement conditions and damaging the membrane. Barry mentioned the contrasting Midvale Superfund Site remedy across the street which is experiencing rapid and nearly complete development to the North of Sharon Steel as an example of a remedy for reuse. Barry is optimistic saying the property is for sale and has always had a casual level of interested buyers. A decision by the ownership group may happen as early as May of 2014 to sell or develop the property. Barry has worked with Environmental and Geotechnical Consultants, is familiar with the Stark Report (an EPA funded study of redevelopment at Sharon Steel), and heard a variety of ways, both negative and positive to rectify development of the site. Barry feels development will eventually happen.

3. **Does your office conduct routine communications and/or activities (site visits, inspections, reporting activities, participation in meetings, etc.) for the Sharon Superfund Site? If so, please briefly summarize the purpose and results of these communications**

and/or activities over the past several years. Barry said he was a participant in the Citizens for a Safe Midvale Technical Advisory Group (TAG) and receives quarterly sampling results from UDEQ.

- 4. Are you aware of any community concerns regarding the Sharon Steel Superfund Site or its operation and administration? If so, please give details.** Other than an interest for development of the site from the community, Barry has not heard any other health or environmental concerns.
- 5. Over the past five years, have there been any complaints, violations, or other incidents (e.g., vandalism, trespassing, or emergency responses) at or related to the Sharon Steel Superfund Site requiring your office to respond? If so, please give details of the events and results of the response.** Fence damage and litter are regular occurrences at one area of the site near an apartment complex. Barry has worked with Midvale City over the years to maintain site conditions and with the property owners to handle any repair issues in a timely manner.
- 6. Do you feel well informed about the site's activities and progress over the last five years? Do you know how to contact the Environmental Protection Agency if you have questions or concerns about the Sharon Steel Superfund Site?** Barry said he works well with EPA and UDEQ and the Agencies are always available. Receiving the quarterly reports keeps Barry regularly up to date on site conditions.
- 7. Over the past five years, have there been any changes in your department's policies or regulations that impact the Sharon Steel Superfund Site and/or your role? If so, please describe the changes and the impacts.** Barry said there haven't been any changes he's aware of and as far as land use, much would depend on the future development opportunities for the property.
- 8. Over the past five years, have there been any changes in land use surrounding the Sharon Superfund Site? Are you aware of potential future changes in land use? If so, please describe.** Barry said the land use has remained the same since his involvement at the Sharon Steel Site.
- 9. Do you have any comments, suggestions, or recommendations regarding the site's management or operation (institutional controls)? If so, what types of future problems do you think (1) could occur; or (2) would concern you and/or your department?** Barry said the Midvale Slag Superfund Site created a template for cleanup remedy and reuse and is expecting the same results for Sharon Steel. Redevelopment is huge for the site and realizes (Sharon Steel Superfund Site) is what it is even with a functioning remedy.
- 10. Do you have any additional comments?** Barry did not have any additional comments.

**Sharon Steel Superfund Site
Five-Year Review
Interview of Local Agencies**

Site Name: Sharon Steel EPA ID: UTD980951388	April 30, 2014
Type of Contact: Visit -X	Contact Made By: Name: Dave Allison Organization: Utah Department of Environmental Quality
Person Contacted	
Name: Tony Howes	Organization: Utah Department of Environmental Quality- Sharon Steel Site Project Manager
Address: Utah Department of Environmental Quality (UDEQ) 195 N. 1950 W. Salt lake City, UT 84403	Telephone Number: 801-536-4100 Email Address: thowes@utah.gov

- 1. Is your organization/department aware of the Sharon Steel Superfund site and the actions underway to address environmental contamination?** Tony Howes is the current Project Manager assigned by the Division of Environmental Response and Remediation (DERR) to oversee all aspects of Operations and Maintenance of the Sharon Steel Superfund Site. Howes' has worked on the Sharon Steel Superfund Site since 2007.

Howe's said his oversight responsibilities include two operable units (OUs). OU1 is a capped 10-million cubic yard waste tailing pile on the southwest side of the site and consists of approximately 270 undeveloped acres. OU2 consists of approximately 200 acres and 600 residential and commercial properties adjacent to OU1 on the northeast side of the site.

- 2. What's your overall impression (your general sentiment) of the actions performed at the Sharon Steel Superfund Site?** Howes said the capped tailings remedy remains protective of health and the environment as implemented in 1996 and the site was delisted from the (National Priorities List) NPL in 2004. However, the combination clay soil and geosynthetic membrane capping the lead and arsenic tailings was not the best solution for future reuse of the property. The property owners continue to try to find developers with the expertise and financial resources to stabilize the site for redevelopment.
- 3. Does your office conduct routine communications and/or activities (site visits, inspections, reporting activities, participation in meetings, etc.) for the Sharon Superfund Site? If so, please briefly summarize the purpose and results of these communications**

and/or activities over the past several years. Howes said UDEQ works with EPA and has required responsibilities since the site has waste left in place. Howes conducts quarterly (will change to semi-annually in 2015) site inspections and annual groundwater monitoring to make sure the cap remedy is functioning as intended.

Howes said he coordinates all site inspections with Midvale City to address any concerns or issues. Howes' inspection and sampling reports is publicly available and copies are provided to EPA, Midvale City, and the Property Owner. The EPA also requires Five-Year Reviews of the Sharon Steel Site which entail a review of site records, community interviews, and a site inspection. Howes used to attend quarterly Technical Advisory Group (TAG) Meetings held by the Citizens for a Safe Future for Midvale which recently disbanded in 2013 due to Midvale Slag redeveloping and no immediately plans for Sharon Steel Property.

- 4. Are you aware of any community concerns regarding the Sharon Steel Superfund Site or its operation and administration? If so, please give details.** Howes does not hear any concerns regarding health or environmental impacts from the community and only occasional inquiries regarding development of the site.
- 5. Over the past five years, have there been any complaints, violations, or other incidents (e.g., vandalism, trespassing, or emergency responses) at or related to the Sharon Steel Superfund Site requiring your office to respond? If so, please give details of the events and results of the response.** Howes said a locked chain gate located on the northeast portion of the site was cut frequently and signs of motorized vehicles entering the site were once a problem. Howes said Midvale City increased police enforcement of the area and the appearance of motor vehicles has stopped. Howes said there is some fence cutting and littering which still occurs in the area and he works with Midvale City and the Property Owner to respond and fix any problem areas. None of the trespassing incidents have jeopardized the remedy.
- 6. Do you feel well informed about the site's activities and progress over the last five years? Do you know how to contact the Environmental Protection Agency if you have questions or concerns about the Sharon Steel Superfund Site?** Howes said it's his responsibility to know everything about the Sharon Steel Superfund Site as long as the site has capped tailings. Howes works well with support from EPA Project Managers at Region 8 EPA and an open door anytime questions or issues regarding the site.
- 7. Over the past five years, have there been any changes in your department's policies or regulations that impact the Sharon Steel Superfund Site and/or your role? If so, please describe the changes and the impacts.** Other than a change to the frequency of the inspections from quarterly to semi-annual, Howes has not had any changes to UDEQ's role at Sharon Steel. Howes said the semi-annual inspection change was a mutual decision made with EPA and Midvale City as site conditions rarely change between winter and summer seasons.

- 8. Over the past five years, have there been any changes in land use surrounding the Sharon Superfund Site? Are you aware of potential future changes in land use? If so, please describe.** Howes is not aware of any changes to plans Midvale City or the Property Owner has for the Sharon Steel Site other than efforts to develop the site.

- 9. Do you have any comments, suggestions, or recommendations regarding the site's management or operation (institutional controls)? If so, what types of future problems do you think (1) could occur; or (2) would concern you and/or your department?** Howes did not have any suggestions as the site is deleted from the NPL and in an operations and maintenance phase and the Site Management Plan is working well. Other than groundwater monitoring and site inspections not much will happen at the site until development interest happens.

- 10. Do you have any additional comments?** No additional comments were provided from Howes.

**Sharon Steel Superfund Site
Five-Year Review
Interview of Community Members**

Site Name: Sharon Steel EPA ID: UTD980951388	Date: May 1, 2014
Type of Contact: E-Mail response to questionnaire	Contact Made By: Dave Allison, Utah Department of Environmental Quality
Person Contacted	
Name: Kristen Thelen	Organization: Citizens for a Safe Future for Midvale Technical Advisory Group
Address: 4777 Travis Cir West Jordan, UT 84088	Telephone Number: 801-518-1371 Email Address: kristen.thelen@gmail.com

1. **How long have you lived in the area?** I'm not currently living in the area, but I have lived in Midvale for 7 years.
2. **Are you aware of the Sharon Steel Superfund site and the work that was completed to address historical environmental contamination?** Yes. I was the grant administrator for Citizens for a Safe Future for Midvale (CSFM) for eight years, and learned about the history of the site and the cleanup efforts.
3. **Were you involved with any of the past public outreach activities associated with remedy actions at the Sharon Steel Superfund site? If yes, was such helpful for you to understand the remedy actions?** Yes. I attended CSFM meetings where various groups attended, including members of the community, EPA, Utah Department of Environmental Quality (UDEQ), property owners, and Salt Lake County. The meetings were very helpful in understanding what was happening at the site and to talk about quarterly site inspections and ground water monitoring reports.
4. **What's your overall impression (your general sentiment) of the work that was completed at the Sharon Steel Superfund Site?** It appears the remedy has successfully contained the contamination, but has also limited the ease of development on the site.
5. **What would you say are the effects that site operations had on the community surrounding the Sharon Steel Superfund Site?** Community members seem to feel safe on the site, and the trails along the site get a lot of use. It's unfortunate that the land is not being used for more than casual recreation. It's a large area, in a prime location in the Salt

Lake Valley, and could have been a much bigger asset for the community if a different remedy had been executed.

- 6. Are you aware of any community concerns regarding the Sharon Steel Superfund Site and its administration? If so, please give details.** They are concerned that any development done on the site is done in a safe manner without compromising the integrity of the cap.
- 7. Over the past five years, have there been any events, incidents, or activities at the Sharon Steel Superfund Site that concern you? If so, please provide details.** Only the lack of progress in developing the site.
- 8. Are you aware of any unusual activities at the Sharon Steel Superfund Site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give date(s), details, and outcome(s) if known.** Only minor violations of the fence being cut and occasional trespassing. The issues we were made aware of during CSFM meetings were resolved quickly and in a reasonable manner.
- 9. Do you feel well informed about the site's cleanup activities and progress over the last five years? Do you know how to contact the Environmental Protection Agency or UDEQ if you have questions or concerns about the Sharon Steel Superfund Site?** Yes. Yes.
- 10. Do you have any additional comments, suggestions, or recommendations regarding the Sharon Steel Superfund Site?** Excellent work was done on the Sharon Steel site along the Jordan River to stabilize the banks and improve the riparian area along the river.

**Sharon Steel Superfund Site
Five-Year Review
Interview of Community Members**

Site Name: Sharon Steel EPA ID: UTD980951388	Date: May 1, 2014 Time:
Type of Contact: Email response questionnaire	Contact Made By: Kristen Thelen, Grant Administrator TAG via Dave Allison, Utah Department of Environmental Quality
Person Contacted	
Name: Dennis Spackman	Organization: Citizen and Former TAG member
Address: 8332 So Jackson Street Midvale, Utah	Telephone Number: 801-255-2204

1. **How long have you lived in the area?** Since 1972
2. **Are you aware of the Sharon Steel Superfund site and the work that was completed to address historical environmental contamination?** Yes
3. **Were you involved with any of the past public outreach activities associated with remedy actions at the Sharon Steel Superfund site? If yes, was such helpful for you to understand the remedy actions?** I served as a member of the TAG. They were informative and helpful.
4. **What's your overall impression (your general sentiment) of the work that was completed at the Sharon Steel Superfund Site?** The capping solution appeared to be scientifically based. But if you look across the street to the other superfund site it is readily apparent that this remedy was the least beneficial option to the community and region. There has been no development of the site and no foreseeable benefit to the community or region.
5. **What would you say are the effects that site operations had on the community surrounding the Sharon Steel Superfund Site?** The site is fenced and offers some protection from unwanted intrusion. It is also maintained to avoid vegetation growth that could harm the cap. Testing is performed at reasonable intervals to determine whether there are toxic wastes getting into the river or ground water. The cap prevents the risk of windblown toxics. These measures provide some comfort to concerns for health and safety.
6. **Are you aware of any community concerns regarding the Sharon Steel Superfund Site and its administration? If so, please give details.** The concerns relate to the lack of development and the shortsighted decision to cap rather than remove the waste and

enable greater opportunity for development. What is left is an empty space with vibrant development on the other site and there is no foreseeable change to this situation.

- 7. Over the past five years, have there been any events, incidents, or activities at the Sharon Steel Superfund Site that concern you? If so, please provide details.**

No, there is nothing happening.

- 8. Are you aware of any unusual activities at the Sharon Steel Superfund Site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give date(s), details, and outcome(s) if known.**

Such events are minor and infrequent.

- 9. Do you feel well informed about the site's cleanup activities and progress over the last five years? Do you know how to contact the Environmental Protection Agency or UDEQ if you have questions or concerns about the Sharon Steel Superfund Site?**

We can make our contacts through the city if we have questions or concerns. The public's impression is – nothing is happening because they see no activity.

- 10. Do you have any additional comments, suggestions, or recommendations regarding the Sharon Steel Superfund Site? No.**

**Sharon Steel Superfund Site
Five-Year Review
Interview of Local Agencies**

Site Name: Sharon Steel EPA ID: UTD980951388	May 15, 2014
Type of Contact: Visit	Contact Made By: Dave Allison Utah Department of Environmental Quality
Person Contacted	
Name: Todd Marti and Marie Owens	Organization: Jordan Valley Water Conservancy District
Address: Jordan Valley Water Conservancy District 8215 South 1300 West P.O. Box 70 West Jordan, UT 84088-0070	Telephone Number: (801)565-4300 Email Address: toddm@jvwcd.org

- 1. Is your organization/department aware of the Sharon Steel Superfund site and the actions underway to address environmental contamination?** Todd Marti and Marie Owens are Engineers for the Jordan Valley Water Conservancy District (JVWCD) one of the largest water districts in the state and are tasked with well development projects. Marti and Owens are aware of the Sharon Steel Superfund Site through interaction with the Utah Department of Environmental Quality (UDEQ). UDEQ had contacted the Jordan Valley Water Conservancy for the 2009 Five-Year Review to see if any future well development in the area could impact groundwater conditions at Sharon Steel.
- 2. What's your overall impression (your general sentiment) of the actions performed at the Sharon Steel Superfund Site?** Marti and Owens said there are no issues with water quality with the shallow aquifer closest well to the Sharon Steel Site. The Sharon Steel Superfund Site, as far as JVWCD well projects, does not impact their well and the remedy is functioning as intended. The JVWCD has well rights adjacent to the Jordan River directly across from the site, sample the well annually, and have not seen arsenic in the groundwater above background levels. The water from well, and future wells in this area, would be headed for the reverse osmosis plant for treatment. Also, Owens said the flow rate of 600-800 gallons per minute would not be conducive to drawing of contaminants from the Sharon Steel Site.
- 3. Does your office conduct routine communications and/or activities (site visits, inspections, reporting activities, participation in meetings, etc.) for the Sharon Superfund Site? If so, please briefly summarize the purpose and results of these communications and/or activities over the past several years.** Marti and Owens do not have any direct responsibilities regarding the Superfund Site and only want to maintain a dialogue to stay informed on any ongoing activities in the area. The JVWCD shares maps and updates on

their projects with UDEQ on request and has permits and required reports with respective divisions within UDEQ, Division of Drinking Water and Division of Water Quality.

- 4. Are you aware of any community concerns regarding the Sharon Steel Superfund Site or its operation and administration? If so, please give details.** No concerns for health or the environment are expressed by the community. The only questions regarding the JWCD operations were asked for the 2009 Five-Year Review by UDEQ for the Sharon Steel Area and with future development and one operating well. The concern being possibility of JWCD wells drawing water from the aquifer under the Jordan River, adjacent to the Midvale Slag and Sharon Steel sites of which there is no indication based on groundwater sampling to date.
- 5. Over the past five years, have there been any complaints, violations, or other incidents (e.g., vandalism, trespassing, or emergency responses) at or related to the Sharon Steel Superfund Site requiring your office to respond? If so, please give details of the events and results of the response.** Marti and Owens have not received any complaints or aware of any vandalism or trespassing occurring on their property.
- 6. Do you feel well informed about the site's activities and progress over the last five years? Do you know how to contact the Environmental Protection Agency if you have questions or concerns about the Sharon Steel Superfund Site?** Marti and Owens feel the recurring Five-Year Reviews are sufficient and know to call Tony Howes at UDEQ if issues develop with regarding the Sharon Steel Superfund Site.
- 7. Over the past five years, have there been any changes in your department's policies or regulations that impact the Sharon Steel Superfund Site and/or your role? If so, please describe the changes and the impacts.** No impacts Marti or Owens could relate to the Sharon Steel Site.
- 8. Over the past five years, have there been any changes in land use surrounding the Sharon Superfund Site? Are you aware of potential future changes in land use? If so, please describe.** Marti and Owens did say the JWCD has a number of water rights in the area for development consideration yet none which would impact the Sharon Steel Site and potential groundwater impacts.
- 9. Do you have any comments, suggestions, or recommendations regarding the site's management or operation (institutional controls)? If so, what types of future problems do you think (1) could occur; or (2) would concern you and/or your department?** No other suggestions from Marti and Owens.
- 10. Do you have any additional comments?** None.