Fourth Five-Year Review Report
for the
Republic Steel Corporation Quarry Superfund Site
Elyria, Lorain County, Ohio

PREPARED BY:

U.S. Environmental Protection Agency
Region 5
Chicago, Illinois

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Approved by:

for Richard C. Karl, Director
Superfund Division
U.S. EPA Region 5

3/22/13
Date

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Five-Year Review Report

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List of Acronyms

AWQC	Ambient Water Quality Criteria
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIC	Community Involvement Coordinator
cPAH	Carcinogenic Polynuclear Aromatic Hydrocarbon
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FR	Federal Register
FS	Feasibility Study
FYR	Five-Year Review
MCL	Maximum Contaminant Level
NCP	National Contingency Plan
ncPAH	Non-carcinogenic Polynuclear Aromatic Hydrocarbon
NPL	National Priorities List
Ohio EPA	Ohio Environmental Protection Agency
O&M	Operation and Maintenance
OSWER	Office of Solid Waste and Emergency Response
PCBs	Polychlorinated biphenyls whose trade names begin with "Arochlor"
PCOR	Preliminary Closeout Report
ppb	parts per billion
PRPs	Potentially Responsible Parties
RA	Remedial Action
RAO	Remedial Action Objective
RD	Remedial Design
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
SARA	Superfund Amendments and Reauthorization Act of 1986
SDWA	Safe Drinking Water Act
SVOC	Semi-Volatile Organic Compound
SWRAU	Site-wide Ready for Anticipated Use
TBC	To Be Considered
UECA	Uniform Environmental Covenants Act
VOC	Volatile Organic Compound

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Executive Summary

This is the fourth Five-Year Review (FYR) Report for the Republic Steel Corporation Quarry Superfund site (RSQ Site or "the Site") located in Elyria, Lorain County, Ohio. The purpose of a FYR is to review information to determine if a remedy is and will continue to be protective of human health and the environment. The U.S. Environmental Protection Agency (EPA) issued the previous FYR Report on June 26, 2008.

The RSQ Site consists of a 4.9-acre quarry containing water and 7.4 acres of fenced land surrounding the quarry. From 1950 to 1975, the Republic Steel Corporation discharged pickle liquor and rinse water containing sulfuric acid and dissolved metal oxides into the quarry via a ditch. EPA placed the Site on the National Priorities List (NPL) in 1986 due to the findings of heavy metals in the groundwater. A Remedial Investigation (RI) was conducted between 1986 and 1988 and results indicated that all contamination caused by past disposal practices were limited to quarry sediments, the pickle liquor discharge ditch, and several soil locations around the quarry's edge. Carcinogenic polynuclear aromatic hydrocarbons (cPAHs) and heavy metals posed the greatest potential health risks.

On September 30, 1988, EPA issued a Record of Decision (ROD) containing the selected cleanup remedy for the Site, which consisted of excavating soil contaminated by cPAHs, additional groundwater monitoring, and fish tissue sampling. EPA also conducted the Remedial Action (RA) at the Site with the support of the Ohio Environmental Protection Agency (Ohio EPA). The Site is currently in the Operation and Maintenance (O&M) phase. EPA issued an Explanation of Significant Differences (ESD) in September 2001 that specified the inclusion of institutional controls (ICs) as a component of the remedy. EPA deleted the Site from the NPL in November 2002.

EPA conducted the fourth FYR at the Site as mandated by Section 121(c) of CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). This FYR was triggered by the presence of hazardous substances, pollutants, and contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

Upon completing this FYR, EPA concluded that the remedy was executed according to the requirements of the ROD and ESD and, based on the data available and the information collected during the FYR process, the remedy at the RSQ Site is protective of human health and the environment. There are no current exposure pathways to groundwater contaminants and there is no significant risk from exposure to contaminants in quarry sediments, soils, or fish tissue under circumstances of occasional or seasonal trespassing and recreating. Institutional controls have been implemented that prohibit residential and recreational uses of the Site; the ICs are in place and effective. EPA has evidence that trespassers occasionally access the Site; however, no unacceptable Site contaminant-related health risks would be anticipated or have been documented. The maintenance of the Site access controls (perimeter fence and warning signs) should be improved to better discourage trespassing.

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Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name *(from WasteLAN)*: Republic Steel Corporation Quarry Site		
EPA ID *(from WasteLAN)*: OHD980903447		
Region: 5	**State:** OH	**City/County:** Elyria/Lorain County
SITE STATUS		
NPL status: ☐ Final ☒ Deleted ☐ Other (specify)		
Remediation status (choose all that apply): ☐ Under Construction ☐ Operating ☒ Complete		
Multiple OUs?* ☐ YES ☒ NO		**Construction completion date:** 12/31/1992
Has site been put into reuse? ☐ YES ☒ NO		
REVIEW STATUS		
Lead agency: ☒EPA ☐ State ☐ Tribe ☐ Other Federal Agency		
Author name: Sheila A. Sullivan		
Author title: Remedial Project Manager		**Author affiliation:** U.S. EPA, Region 5
Review period:** 04/30/2012 to 03/26/2013		
Date(s) of site inspection: 08/22/2012		
Type of review: Statutory		
Review number: Fourth		
Triggering action date *(from WasteLAN)*: 06/26/2008		
Due date *(five years after triggering action date)*: 06/26/2013		

*Operable units

Five-Year Review Summary Form (continued)

Issues/Recommendations
Operable Unit(s) without Issues/Recommendations Identified in the Five-Year Review:
OU 1
Site-wide Protectiveness Statement
Protectiveness Determination: **Protective**
Protectiveness Statement: The remedy at the RSQ Site is protective of human health and the environment. There are no current exposure pathways to groundwater contaminants and there is no significant risk from exposure to contaminants in quarry sediments, soils, or fish tissue under circumstances of occasional or seasonal trespassing and recreating. Institutional controls have been implemented that prohibit residential and recreational uses of the Site; the ICs are in place and effective. EPA has evidence that trespassers occasionally access the Site; however, no unacceptable Site contaminant-related health risks would be anticipated or have been documented. The maintenance of the Site access controls (perimeter fence and warning signs) should be improved to better discourage trespassing.

Five-Year Review Report

I. Introduction

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy continues to be protective of human health and the environment. The methods, findings, and conclusions of such reviews are documented in the site-specific FYR reports. In addition, FYR reports identify issues found during the review, if any, and recommendations to address them.

EPA prepares FYR reports pursuant to 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.*

EPA interpreted this requirement further in the National Contingency Plan (NCP); 40 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.*

EPA, as the lead agency, conducted a FYR of the remedy implemented at the RSQ Superfund Site in Elyria, Lorain County, Ohio. The Ohio EPA, as the support agency representing the State of Ohio, has reviewed all supporting documentation and provided input to EPA during the FYR process.

This is the fourth FYR report for the RSQ Superfund Site. The triggering action for this statutory review is the completion date of the previous FYR report, June 26, 2008. The FYR is required due to the presence of hazardous substances, pollutants and contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

II. Site Chronology

Table 1: Chronology of Site Events

Event	Date
Site operated as a sandstone quarry.	pre-1950 to 1950
Republic Steel discharges 200,000 gallons per day of wastewater containing sulfuric acid and metal oxides (pickle liquor) to the quarry via a discharge ditch.	1950 - 1975
LTV Steel acquires Republic Steel. The wastewater discharge ditch to the quarry is dammed.	1976
The city of Elyria purchases the 12-acre quarry property from LTV Steel.	1977
Republic/LTV Steel notifies EPA of past disposal practices as per CERCLA, Section 103(c).	1981
EPA investigates the Site and discovers heavy metal contamination in groundwater and quarry.	Late 1983
Proposed listing of Site to NPL.	October 15, 1984
LTV Steel conducts Site investigation and, together with the city of Elyria, challenges NPL listing.	December 13, 1984
NPL listing is finalized.	June 10, 1986
EPA extends offer to former Site owner (LTV Steel) and current Site owner (city) to conduct RI. Offer is rejected.	April 1986
Ohio EPA sends letter of concurrence to EPA regarding RI/FS SOW and indicates desire to support and assist.	May 9, 1986
Remedial Investigation is conducted.	June 1987 - March 1988
EPA signs Record of Decision.	September 30, 1988
EPA and Ohio EPA sign State Superfund Contract.	September 15, 1989
Remedial Design/Remedial Action negotiations occur.	February 23, 1989 - June 8, 1989
Remedial Design (RD) occurs.	July 19, 1989 - September 15, 1989
Remedial Action (RA) occurs.	September 21, 1989 - September 25, 1990
Removal Action Memorandum is approved.	September 19, 1989

Table 1: Chronology of Site Events

Event	Date
Removal Actions (as part of the RA) are completed.	February 1990 and June 1990
Construction (Remedial Action) is completed.	September 25, 1990
Final Close-Out Report is signed.	December 31, 1992
EPA signs administrative order on consent with city of Elyria for settlement of past costs.	June 20, 1997
First Five-Year Review Site investigation and sampling.	November 1996
First Five-Year Review Report completed.	June 26, 1998
ESD signed for institutional controls and deed restrictions.	June 28, 2001
City of Elyria authorizes Declaration of Restrictions by enacting Elyria City Ordinance No. 2002-119.	June 21, 2002
Site deleted from the NPL.	November 12, 2002
Second Five-Year Review sampling (groundwater, Black River surface water) is conducted.	February 25-28, 2003
Second Five-Year Review Sampling (quarry water, sediment, fish tissue and soils) is conducted.	July - August 2003
SWRAU achieved	January 2008
Second Five-Year Review Report completed.	June 27, 2003
Third Five-Year Review Report, including risk assessment, is completed.	June 26, 2008
Fourth Five-Year Review Site inspection conducted.	August 22, 2012

III. Background

Physical Characteristics

The RSQ Site is located in Elyria, Ohio, east of West River Road and west of the West Branch of the Black River. Elyria is located southwest of Cleveland in Lorain County in northeastern Ohio. The Site consists of a 4.9-acre water-filled quarry that is surrounded by 7.4 acres of densely vegetated land (see Figures 1-2). A fence surrounds the Site perimeter. The water depth of the quarry is approximately 60 feet and the sides of the quarry rise to about 25 feet above the water surface. The

quarry walls are formed by Berea Sandstone at and below the quarry water level. Above the Berea Sandstone, the walls consist of large vertically stacked sandstone blocks that were used as retaining walls during quarrying operations. Water discharges from the quarry directly into the Black River via the outlet depicted in Figure 2.

There are two hydraulic systems in the quarry. The first system is concrete outlet-works equipped with a gate valve located along the east quarry wall where the elevation dips to about 704 feet above mean sea level. Water is usually draining from the outlet works into the river, but the gate valve can no longer be adjusted. The second system is a four-inch diameter steel pipe located at the southeastern most corner of the quarry extending down into the water. The approximate locations are shown in Figure 2. This pipe is believed to have been used for withdrawing water from the quarry to the Republic Steel plant rather than being used to discharge the pickle liquor wastes. The pipe system is no longer operational.

In general, the groundwater flow direction beneath the Site is from southwest to northeast. The water table contours suggest that the quarry area is a partial groundwater sink from which discharge is uniformly directed toward the river.

The topography of the area is flat to gently rolling, except for the valleys eroded by the Black River. The West Branch of the Black River is located along the eastern boundary of the RSQ Site, and at one time was used as an overflow relief for the quarry during seasonal flooding periods. The river flows directly north from Elyria into the city of Lorain, where it discharges into Lake Erie.

Land Resource and Use

The quarry property is circumscribed by Mussey Avenue to the south, West River Road to the west, and the West Branch of the Black River to the east. The closest establishment is the former LTV Steel steel rolling facility located at 525 Mussey Avenue (see Figure 2), to which the quarry property sits directly north of. The facility was most recently owned and operated by the Maverick Tube Corporation. Maverick Tube has since been acquired by Tenaris, and all production/distribution at the Elyria plant ceased in July 2006. A housing development is now located directly north and adjacent to the Site property. Small commercial/light industrial buildings are located across from the Site along West River Road. Otherwise, there are no other residences or businesses in the immediate areas of the Site property.

Along the eastern perimeter of the property fence line, vegetation is very dense, consisting of thick brush and small trees. The remaining areas of the quarry perimeter contain mostly grass and small brush. Several larger trees can be found around the Site property and along the river and vegetation is fairly dense over most of the Site. Wildlife, such as deer, geese, and small mammals are frequently seen.

Although the Site is fenced, it is accessible through occasional breaches in the fence and in a few areas where the bottom of the fence is one to three feet above the ground surface. Trespassers are known to enter the Site, as debris associated with drinking, fishing, and swimming is evident. Well-

worn foot paths lead inward to the quarry pond from gaps in the fence.

The Elyria Water Works provides the potable water supply to the area using Lake Erie as its water source. According to past residential well inventories, there are no known residential wells operating within a one-half mile radius of the Site; and, there are no known existing downgradient wells that were previously used to provide potable water.

History of Contamination

The RSQ Site was operated as a sandstone quarry during an unknown period of time prior to 1950. From 1950 to 1975, the Republic Steel Corporation discharged about 200,000 GPD of waste pickle liquor and rinse water from steel pickling operations to the quarry. The pickle liquor was a sulfuric acid-based solution that was used to dissolve oxides, which are a constituent of mill scale. Mill scale develops on the steel during the hot rolling process. The waste pickle liquor, consisting largely of spent sulfuric acid and dissolved metal oxides, was pumped through an aboveground pipe to a large ditch which flowed into the quarry. In 1976, LTV Steel Corp. acquired Republic Steel and the discharge ditch leading to the quarry was dammed. The city of Elyria purchased the quarry and the seven surrounding acres of land in 1977 from LTV Steel with the intention of establishing a municipal park on the property in the future.

In 1981, Republic Steel Corporation notified EPA of its past disposal activities in order to comply with Section 103(c) of CERCLA. The EPA subsequently performed a site investigation in 1983.

Initial Response

EPA's 1983 site investigation indicated the presence of heavy metals, such as chromium, arsenic, lead, and cadmium in the groundwater downgradient of the Site. The Site was proposed for the National Priorities List (NPL) on October 15, 1984. LTV Steel Corporation, which later acquired Republic Steel Corporation, performed an investigation in November 1984 which included analysis of the quarry water and groundwater from EPA's eight monitoring wells (see Figure 3).

Basis for Taking Action

EPA conducted a remedial investigation (RI) at the Site from June 1987 through March 1988. The following information about Site contamination was discovered during the RI.

Groundwater

The RI groundwater sampling indicated that the quarry affects the water chemistry within the Berea Sandstone immediately adjacent to and downgradient of the Site. Site-related organic chemical contaminants were detected only adjacent to the eastern quarry wall. Inorganic contaminants were detected downgradient from the quarry and across the Black River.

The groundwater is free of volatile organic compounds (VOCs) at the Site; however, downgradient from the quarry, the groundwater showed elevated levels of semi-volatile organic chemicals

(SVOCs), namely pentachlorophenol and phenol, and the heavy metals barium, beryllium, manganese, chromium, copper, lead, nickel, silver, vanadium, and zinc.

The groundwater at or near the Site has not and is not currently used as a potable water supply. Since there is no groundwater use within a one-half mile radius of the Site, the exposure of individuals to chemicals in groundwater was not considered to be a complete exposure pathway under current-use conditions at the Site.

Surface Water

No organic compounds in the quarry water were identified as being potentially Site-related. Several inorganic compounds such as barium, calcium, iron, magnesium, manganese, nickel, vanadium, and zinc were identified as being possibly Site-related. When compared to levels in groundwater upgradient of the Site, all of the inorganic compounds were detected at elevated concentrations, with the greatest concentrations observed near the quarry bottom. A comparison of downgradient and upgradient Black River surface water samples, however, indicated that the Site was not adversely affecting river water quality.

Fish Tissue

Fish tissue concentrations were modeled in the RI and the model predicted that mercury, manganese, and cPAHs could cause the greatest potential health risks to humans eating fish from the Black River. Actual fish tissue samples taken in 1989 during a Supplemental Investigation showed elevated levels of mercury and manganese in fish tissue samples taken from the quarry and downstream of the quarry in the river relative to the samples taken upstream. The concentrations of these compounds were not as high as those predicted by the sediment to fish tissue model, however.

Surface Soil

Surface soils were analyzed at the quarry discharge, the pickle liquor ditch, the south boat launch, and at the southern end of the steel plant yard, where slag material had been deposited onto the Site from an offsite area of the steel plant yard.

Before any cleanup actions occurred, surface soil samples obtained from areas of the Site that were periodically inundated by quarry water or exposed to waste discharges in the past indicated that VOCs, SVOCs including phthalates and PAHs, and heavy metals such as chromium, copper, manganese, and mercury were present above background concentrations. Past disposal activities appeared to have affected the quality of the surface soils at the Site. Semi-volatile and inorganic compounds were also detected in a sample of the steel yard soils that were sliding into the quarry. These findings reflected steel plant yard chemicals as opposed to chemicals associated with historic Site activities.

Sediment

Results of sediment samples collected from the quarry indicated elevated levels of VOCs, SVOCs, and inorganic compounds. Volatile organic compounds were detected only in the quarry sediment samples which lay below a water depth greater than 35 feet, while SVOCs and inorganic compounds were detected in both deep and shallow samples. Concentrations of the SVOCs and inorganic compounds in sediment collected from deeper water were greater than those collected from shallow water.

The SVOCs, including PAH contaminants, may have originated from the cutting oils used in steel manufacturing as the PAH concentrations correspond to oil and grease concentrations in these sediments. It should be noted that PAHs are ubiquitous in the environment; hence the background levels may be relatively high. The PAHs are produced by virtually every combustion process, from forest fires to refuse burning. They are also released from internal combustion engine emissions.

As with the Black River surface water, Black River sediment samples indicated that the Site was not adversely affecting sediment quality in the river. The RI determined that there are no site-related impacts to aquatic receptors from the quarry.

The RI results indicated that all contamination caused by the Republic Steel disposal practices was limited to quarry sediments, the pickle liquor discharge ditch and several soil locations around the quarry's edge. As part of the RI, a baseline risk assessment was performed to evaluate human health risks at the Site under various current and future exposure scenarios. The baseline risk assessment found that under current-use scenarios, the combined risks to trespassers were driven by the potential uptake of cPAHs and mercury from the quarry sediment to fish tissue, as modeled. Under future use scenarios, the risks are driven by direct contact and ingestion of soil and groundwater.

A feasibility study (FS) was not conducted for this Site because the contaminants exceeding risk-based action levels in the soil were limited in volume and distribution to specific areas or hotspots. The contaminated sediments were confined to the quarry bottom and were not readily accessible to humans, except via the fish consumption pathway. In addition, the groundwater was not being used as a potable water source. The preliminary remedial action objectives for these media were:

- Quarry Surface Water: Protect public from ingestion of contaminated fish.
- Sediment: Protect public from ingestion of contaminated fish.
- Surface Soil: Protect public from dermal absorption or incidental ingestion of contaminated soils.

IV. Remedial Actions

Remedy Selection

EPA issued a Record of Decision (ROD) on September 30, 1988, that called for excavating and

removing combined sediment and soils such that the selected Action Level or cleanup goal of 300 parts per billion (ppb) for total cPAHs was not exceeded.[1] These soils were primarily located in the pickle liquor discharge ditch and the boat ramp areas around the southern edge of the quarry. The ROD also specified that a fish species survey, fish tissue bioassays, and groundwater resampling be conducted during a Supplemental Investigation in order to recalculate the risks using actual fish tissue data instead of modeled fish tissue values and more recent groundwater data. Since groundwater at the time was not used as a potable water supply, nor was it expected to be used in the future, the ROD did not select a groundwater treatment remedy.

The contaminated quarry sediments were to be left in place since they lay below the mixing zone and fish were not likely to come in contact with them. Further, quarry remediation would entrain contaminated sediments, thereby increasing the likelihood of exposure to the contaminants.

Remedy Implementation

The Remedial Action (RA) was implemented by EPA in two phases between September 21, 1989, and September 25, 1990. The first phase focused on resolving the groundwater and fish tissue risk issues that arose during the RI baseline risk assessment. The second phase was to address contaminated soil and sediment.

EPA estimated the fish tissue concentrations during the 1989 RA by using a conservative sediment-to-fish tissue model incorporating quarry sediment and surface water data collected during the RI. According to the exposure conditions in the baseline risk assessment, fish consumed on a regular basis from the quarry posed an unacceptable noncarcinogenic risk to humans due to manganese and mercury concentrations. EPA concluded that PAHs would not be of concern in the fish tissue as they are metabolized by fish. Further, Ambient Water Quality Criteria (AWQC), used to define risk-based acceptable surface water concentrations to protect aquatic organisms, were exceeded for mercury, manganese, and copper in the quarry water.

The subsequent 1990 Supplemental Investigation risk recalculation using actual fish tissue data found that the previous assumptions made during the modeling of mercury, manganese, and cPAH concentrations in fish tissue, in lieu of actual data, were too conservative and unreliable. The risk recalculations confirmed that no unacceptable risks were posed to humans consuming fish from either the quarry or the Black River.

EPA performed the second phase of the RA that addressed contaminated soil and sediments. In February 1990, 150 cubic yards of soil were removed from the boat launch area and pickle liquor discharge ditch such that the remaining total cPAH concentration in soil did not exceed 300 ppb.

[1] 300 ppb is the selected soil cleanup goal for total cPAHs benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and benzo(a)anthracene present at the Site. This soil cleanup goal was determined for current use scenarios by evaluating the combined exposure pathways of dermal absorption and soil ingestion to the trespasser, and for future use by evaluating these exposure pathways for potential park patrons and residents.

Confirmatory sampling indicated that the cleanup goal had been achieved for the boat launch. An additional 40 cubic yards of soil were removed from the pickle liquor ditch in June 1990 in order to achieve the cleanup criterion. The Supplemental Investigation Report, issued in September 1990 as a requirement of the ROD, concluded that the objectives of the ROD had been accomplished.

EPA issued the first FYR report in June 1998 and recommended that the fence be restored to a functional condition, warning signs be posted, monthly inspections of the fence be conducted (with increased vigilance during warm weather months), and the city should detect and repair vandalism to the fence and signs. EPA also recommended that Elyria should enact land-use restrictions so that no residential development could occur on Site and that the use of groundwater as a potable water source be prohibited for current and future commercial/ industrial or public purposes. In response to EPA's recommendation, the city passed an emergency Resolution of Intent on November 1, 1999, to prohibit certain uses of the Site.

After completing an ESD in 2001 (see below), EPA deleted the Site from the NPL on September 12, 2002.

Institutional Controls

Institutional controls (ICs) are required to ensure the protectiveness of the remedy. Institutional controls are non-engineered instruments, such as administrative and/or legal controls, that help minimize the potential for exposure to contamination and protect the integrity of the remedy. Compliance with ICs is required to assure long-term protectiveness for any areas which do not allow for unlimited use or unrestricted exposure (UU/UE).

ESD Provisions:

On September 28, 2001, EPA issued an ESD requiring ICs to be placed on the Site. The ICs would enhance the protectiveness of the remedy by decreasing the frequency of trespassing incidents or the recreational use of the quarry, which would cause soil ingestion and fish consumption levels to rise above reasonable maximum exposure scenarios. In addition, residential use of the property, which assumes exposure to contaminated groundwater and soils, would present unacceptable risks. The ESD required ICs to prevent human and environmental contact with the Site and to enhance the remedy's protectiveness of human health and the environment. The city of Elyria owns the property and maintains the fence surrounding the quarry. Since ICs or deed restrictions were not part of the original remedy, EPA worked with the city to codify an ordinance to prevent current and future exposures to Site-related contaminants.

Physical Area:

Figure 4 identifies those areas that do not support UU/UE. The table below summarizes ICs for these restricted areas.

Table 2: Institutional Controls Summary

Map of Media, Engineered Controls, & Areas that Do Not Support UU/UE Based on Current Conditions.	IC Objective in Decision Document	Implemented Institutional and Physical Area Covered by Control
Site Property surrounding quarry - Area of soil remediated to achieve removal action level for total cPAHs is identified in Area A of Figure 4.	Prohibit residential and recreational use	City of Elyria Ordinance No. 2002-119; City of Elyria Declaration of Restrictions recorded July 25, 2002 with the Lorain County Recorder. The IC objective applies to and covers the physical area (8.46 acres) in Area A.
Quarry surface water, sediments and fish- Area B of Figure 4.	Prohibit recreational use	City of Elyria Ordinance No. 2002-119; City of Elyria Declaration of Restrictions recorded July 25, 2002 with the Lorain County Recorder. The IC objective applies to and covers the physical area (3.78 acres) in Area B of Figure 4.
	Prohibit fish ingestion	Statewide Fish Consumption Advisory applies to all Ohio water bodies.
Groundwater – entire Site area identified in Areas A and B of Figure 4.	Prohibit groundwater use on Site property; require the use of the Elyria municipal water supply for potable water.	City of Elyria Ordinance No. 2002-119; City of Elyria Declaration of Restrictions recorded July 25, 2002 with the Lorain County Recorder. The IC objective applies to and covers the physical area (12.3 acres) in Areas A and B of Figure 4.

Objectives of the ICs:

The objectives of the ICs at the Site are to prohibit groundwater use for any purpose and to prohibit future residential, recreational, and commercial use of the Site property since it overlays contaminated groundwater. The ICs also prohibit current and future use of the quarry itself. All non UU/UE areas are addressed by ICs as determined by IC evaluation activities are discussed below.

Existing ICs:

City of Elyria Declaration of Restrictions

EPA worked with Elyria to craft a Declaration of Restrictions for the RSQ Site. The Declaration was subsequently executed by the city on June 21, 2002, and imposed the following restrictions:

1) Restrict property use to H-I (Heavy Industrial) uses only; 2) prohibit the use of groundwater as a source of drinking water; 3) require the use of the Elyria municipal water supply as the source of potable water for any industrial or commercial development or public use; 4) require the posting of warning signs to keep off the quarry Site; 5) require maintenance of the perimeter fence; 6) prohibit fishing, swimming and boating in the quarry; and 7) prohibit public access or use of the quarry, its sediment, and soil. As a formal component of the RA, the implementation of the ICs and deed restrictions requires O&M activities (i.e., maintaining the perimeter fence and warning signs, and controlling vegetative growth along the fence line). The city will continue to assume responsibility for the observance of the ICs and deed restrictions as the local authority and Site owner (see Attachment 1).

Ohio Statewide Fish Advisory

The Ohio Department of Health currently advises that all persons limit consumption of sport fish caught from all water bodies in Ohio to one meal per week, unless there is a more or less restrictive advisory already in place. The advisory protects sensitive populations, including women of child bearing age and children under age 15. The statewide Advisory also applies to the quarry at the RSQ Site because the quarry is considered to be an Ohio water body. In Lorain County, a specific fish advisory is also in effect for the West Branch of the Black River that includes the segment alongside the Quarry property. The advisory limits consumption of White Sucker to once per month due to elevated mercury levels. The updated February 2013 listing of water bodies having advisories is available to the public on the Ohio EPA website (see Attachment 2).

Current Compliance:

The Site ICs are effectively preventing residential and commercial use of the Site. Restrictions on groundwater use are effective. As verified by the city, there are no drinking water supply wells installed within the impacted groundwater area and all new potable water needs must be supplied by the Elyria municipal supply. Because restrictions to Site access are not functioning as effectively as intended, recreational use of the quarry still occurs. Although access to the Site is limited, there is evidence of trespassing. Based on data collected and analyzed between 2003 and 2008, EPA believes that any resulting exposures to Site-related contaminants from trespassing and recreational activities, such as swimming, boating, and fishing in the quarry are not significant and would not result in unacceptable risks. This opinion is based on the risk assessment presented in the 2008 FYR report, which provides more detailed information.

In January 2008, EPA issued a Site-Wide Ready for Anticipated Use (SWRAU) determination. The determination concluded that all cleanup goals in the ROD have been achieved for any media that may affect current and reasonably anticipated future land uses, so that there are no unacceptable risks, and that under current conditions, all ICs required by the ESD to the ROD are in place and effective.

EPA believes the ICs in place are adequate at the Site; hence, no additional ICS are planned at this time. The property is zoned industrial. There are several restrictions on property use, including a

requirement to use the Elyria municipal water supply if the Site were ever to be developed. There are no prospective purchasers for the Site and currently no plans for development. If the city decides to develop the Site, the city has indicated it intends to cooperate and work with EPA to evaluate and enhance the existing ICs, if necessary.

System Operations and Maintenance (O&M)

The Site has been in the O&M phase since December 31, 1993, when the Final Close Out Report was completed. Because the RA involved only soil removal, there are no on-Site operating structures and there was no formal O&M plan. The RI monitoring wells remain in place but are not sampled by the city or EPA as groundwater is not currently used, nor will it ever be used as a drinking water supply under the effective and enforced ICs at the Site. The RSQ Site is currently owned and maintained by the city of Elyria. Under an EPA Management Assistance Grant, Ohio EPA has been conducting annual compliance inspections since 2003; however, no formal documentation existed prior to July 2006. A compliance inspection report and guidance used by the Ohio EPA is attached and has also been available to the city (see Attachment 3). The city does not perform its own regular compliance inspections but does accompany Ohio EPA on its annual inspections and receives copies of the final compliance reports prepared by Ohio EPA.

Elyria has incurred expenses relating to Site security and maintenance. These costs include the installation of warning signs and the procurement of Site security supplies such as chains, locks, and keys, repair of the perimeter fence, and increased security patrolling during the warmer months. The budget for repair/replacement of the Site fencing and warning signs comes from the city's general fund. The city's O&M costs vary, depending on the amount of fence and sign vandalism and trash deposited. In the past, the city has spent as much as $3,500/year on fence and sign repair and/or replacement. More recent costs were not available for this FYR.

V. Progress since the Last Review

EPA completed the third FYR for the Site in June 2008. The FYR report concluded that the remedy was functioning as designed and was anticipated to remain functional in the future as long as the Declaration of Restrictions City Ordinance is effectively monitored and enforced. Public health benefits have been achieved thus far by interrupting current and/or potential future exposure pathways such as ingestion and direct contact with contaminated soils and sediment, groundwater, and fish tissue via the current ICs. Table 3 (next page) presents the protectiveness statements from the third FYR report and Table 4 (next page) presents EPA's recommendations.

Table 3: Protectiveness Determination Statements from the 2008 FYR Report

OU	Protectiveness Determination	Protectiveness Statement
Sitewide	Protective	The remedy at the RSQ Site is protective of human health and the environment in the short term and the long term. There are no current exposure pathways to the groundwater contaminants and the quarry sediments under normal circumstances. Institutional controls have been implemented which prohibit residential and recreational uses of the Site; the ICs are in place and effective. EPA has evidence that trespassers occasionally access the Site; however, no unacceptable Site-related risks are documented. The access controls (Site perimeter fence and warning signs) should be better maintained to discourage trespassing. Long-term protectiveness also requires compliance with effective ICs. Long-term stewardship must be ensured to verify compliance with ICs.

Table 4: Status of Recommendations from 2008 Five-Year Review Report

Issue	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Original Milestone Date	Current Status	Completion Date
Establish and maintain documentation of O&M activities	The city should prepare O&M reports using a format such as Ohio EPA's and provide copies to the Ohio EPA and EPA. The city should adopt mechanisms to inspect and monitor engineering and access controls and ensure compliance with ICs.	City of Elyria	Ohio EPA/ EPA	June 2009	Ohio EPA has conducted annual compliance inspections in conjunction with the city since July 2006. The city relies on Ohio EPA to provide copies of the completed reports for its files. The city documents O&M repair.	August 2009

Issue	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Original Milestone Date	Current Status	Completion Date
The Site perimeter fence is frequently breached by vandals, allowing trespassers to gain access. The quarry is used during the warmer months for activities such as swimming and fishing. This behavior has been observed during Site inspections and sampling. Evidence of these activities has been documented.	The city should increase surveillance of the RSQ Site. The owner (city of Elyria) should schedule O&M activities involving inspection of perimeter fence and signs on a regular basis with increased frequency during the warmer months.	City of Elyria	Ohio EPA/ U.S. EPA	June 2009	The city initiates repair of damage to the perimeter fence and signs within 24 hours of the report of an incident. Increased Site security has not been effectively achieved; however, community watches for vandalism and trespassing have been implemented.	August 2009
Enhancements to existing ICs are recommended to ensure that they will run with the land and that they can be enforced.	Re-examine title work and explore implementing a UECA covenant.	City of Elyria	Ohio EPA/ U.S. EPA	June 2009	There are no prospective purchasers and no proposed development of the Site. Existing ICs and the O&M activities currently performed by the city are protective. If development or reuse of the Site were to occur, EPA would need to ensure that the ICs were still protective. EPA would explore whether or not additional ICs need to be implemented and would work with the city of Elyria to implement additional ICs, as determined necessary by EPA.	

Recommendation 1:

Annual compliance inspections are performed by the Ohio EPA Site Coordinator and the Elyria Engineering Department. Since the previous FYR of July 2008, a compliance inspection was conducted by Ohio EPA Site Coordinator, Bruce Miller, in autumn 2009 to represent the 2010 annual inspection (see Attachment 3).

During the intervening years since autumn 2009, Ohio EPA's annual inspection schedule was not observed due to the retirement of its Site Coordinator in 2010; hence, compliance/O&M reports are not available for that time period. Ohio EPA assigned the Site Coordinator duties to Andrew Kocher

in 2012 and Mr. Kocher conducted his first Site visit and compliance inspection in conjunction with EPA during the recent 2012 FYR Site inspection. These inspections are now back on schedule and will be conducted on an annual basis in conjunction with the city. The completed inspection report including photographs will be compiled by Ohio EPA and sent to the city and EPA. A major component of the compliance inspection involves surveying the condition of the Site perimeter fence line and the number and condition of the posted signs.

Recommendation 2:

A perennial problem at the Site has been the difficulty in maintaining Site security, which requires frequent surveillance and continual O&M due to the attractiveness of the quarry property to adolescent and young adult trespassers who often gain access to the Site by vandalizing the fence.

In the most recently documented 2009 annual Site inspection, the Ohio EPA Site Coordinator noted that the fence line between Maverick Tube's fenced property and the RSQ Site was in acceptable condition. The fence line along the western Site boundary revealed a damaged section of fence and, further north, a breach in the fence with evidence of trespassing (footprints, beverage containers). The Site Coordinator interviewed a resident on the east side of the Site boundary (along the river) and learned that throughout the summer, teens and young adults cross the Black River to trespass on the Site for recreational (mainly swimming) purposes.

As documented in the 2008 FYR Report, the main route trespassers use to enter the RSQ Site is via a trail that leads from the end of 11th Street and Riverside Drive, through the wooded area on the east side of the Black River, across the Black River (which can be easily traversed during low flow conditions), to the quarry outfall, and finally, through a breach in the fence. This is evidenced by the presence of articles of clothing, shoes, and food and beverage containers in the area between the opening in the fence and the east edge of the quarry pond. However, the resident also stated that if someone reports Site trespassing to the Elyria Police Department, the police respond by using loud speakers to order trespassers off the Site.

The observations and conclusions from the past Ohio EPA inspections were that the city had not assumed regular and effective O&M actions with regard to the posting of signs, fencing, and the prevention of unauthorized access beyond the initial Site security actions. EPA and Ohio EPA have recommended that the city take the following actions, consistent with the established institutional and engineering controls, in order to secure future Site access:

1) Repair the perimeter fence in such a way as to prevent human trespass;

2) Replace any illegible warning sign with legible signs;

3) Remove vegetation from both sides of the fence line in order to expose vandalism and signs; and

4) Post additional warning signs on the north perimeter fence due to the presence of the new single family housing units to the north of the Site.

As per this recommendation, the city has addressed EPA's and Ohio EPA's concerns regarding Site security and its obligations under Elyria City Ordinance 2002-119, authorizing the Declaration of Restrictions discussed previously.

Evidence suggests that swimming and sunbathing are the predominant on-site activities that occur during the warmer months. The city indicates that no active fishing has been recently observed at the quarry. This assertion is supported by the fact that fishing gear has not been seen at the Site as frequently as it was found during past annual compliance inspections at the Site. Since no fishing gear was found during the August 2012 FYR inspection, it is difficult to know whether quarry fish are currently being caught and consumed. Although trespassers are not subjected to significant Site contaminant-related health risks because contaminant levels are low and exposures are minimal, the quarry presents a physical potential health risk. An incident occurred on August 7, 2012, when a 21-year old distressed swimmer (one of four trespassers) had to be rescued by the Elyria Fire Department (see Attachment 4).

The fact that the quarry acts as a magnet for local teens and young adults was confirmed by nearby residents who indicated that typically, 50 to 60 youths swim and recreate there throughout the day during the summer. Further, the city's decreased operating budget has necessitated closing two of its three municipal pools. This factor may be contributing to the attractiveness of the quarry for swimming and recreating during the summer months.

The city has made a concerted effort to enforce the ICs, which in part restrict Site access and prohibit all uses of the quarry. The city asks surrounding residents to be aware of vandalism to the fence and to report any incidences to the city and police so they can prosecute these individuals. The city has asked the police to increase patrols on Riverside Drive. When damage to the fencing is detected, the city's Safety Director initiates fence repair within 24 hours. The city periodically fixes the fence along West River Road, but the fence along the river is not regularly fixed because it is vandalized again shortly thereafter. Signs reading "No Trespassing by Order of City of Elyria City Ord. 541.05" are posted along West River Road and the adjacent housing development (see Attachment 8, Photo 18).

As a result of the depressed economy, vandalism in general has increased, necessitating organized neighborhood watches in every part of the city. The RSQ Site is located toward the south end of the city—a particularly depressed area. This fact, coupled with a reduced budget available for repair and replacement of fencing and warning signs makes strict Site security infeasible.

In addition, since the adjacent Maverick Tube mill facility has closed, the security guards that had been posted on 24-hour duty are now only present in the afternoons, from 2:00 pm to 10:00 pm. The guards patrol the former Maverick Tube property and effectively discourage and reprimand trespassers. They also notify the city if they observe anyone attempting to access the RSQ Site.

Recommendation 3:

See discussion in the section above on ICs.

VI. Five-Year Review Process

Administrative Components

EPA notified members of the Ohio EPA and the city of the start of the fourth FYR in April 2012. The RSQ Site FYR Team was led by EPA Site Remedial Project Manager (RPM) Sheila Sullivan. Other EPA members include Community Involvement Coordinator (CIC) Patricia Krause, and EPA Site Attorney, Jerome Kujawa. The Ohio EPA representatives included Site Coordinator Andrew Kocher and Kevin Palumbo. The city was represented by Aaron Klein of Elyria's Engineering Department. Beginning in April 2012, the Site RPM established the components of the Review, which included:

- Community Notification;
- Document Review;
- Site Inspection/Community Interviews;
- Data Review; and,
- Five-Year Review Report Development and Review.

Community Notification and Involvement

Activities to involve the community in the FYR process were initiated in April 2012 in the form of a notification to the Ohio EPA Site Coordinator and the city of Elyria. A notice announcing the initiation of the FYR process and soliciting Site information and concerns from the community was published in the local newspaper, the *Elyria Chronicle-Telegram*, on March 3, 2013 (see Attachment 5). Since the notice was published, no community members voiced an interest or concern regarding the Site itself or the FYR process.

Document Review

The FYR included a review of the relevant documents such as the 2008 FYR Report, applicable ground water and surface water cleanup standards, and risk-based cleanup levels. Also reviewed were the ICs, EPA's written SWRAU determination, and applicable Agency guidance. A comprehensive list of documents reviewed is included as Attachment 6.

Data Review

No monitoring programs or data is being collected at the Site nor has been since the previous FYR (2008). Only O&M information related to Site security was reviewed on an annual or as available basis. A summary of Site risks as determined by the 2008 FYR Report is presented below to provide relevant Site information. As mentioned, the full analysis is available in the 2008 FYR Report.

Summary of Risks

The risks estimated in the 2008 FYR Report as compared to the 1998 FYR Report have decreased

due to several factors. These include lower concentration levels detected for the contaminants of concern, changes in toxicity factors, changes in risk methodologies, etc. When the individual noncancer risks resulting from exposure to on Site soil, quarry fish, and quarry surface water are added to determine the total potential noncancer risk to an adolescent trespasser on the Site, the data show that no adverse effects would be anticipated. The ingestion of fish is the largest contributor to the noncancer risk. The noncancer risk to adults was estimated to be slightly higher than the adolescent receptor risk for the same activity, but still within EPA's acceptable range. Regarding cancer risks, the only trespasser activity evaluated that presented exposure to carcinogens was the incidental ingestion of on Site soils. This pathway was assessed because it was predicted to show a higher risk relative to the other exposure pathways based on the 1998 FYR Report assessment. These risks do not exceed EPA's acceptable risk range for carcinogens. EPA anticipates that these cancer and noncancer risks to Site trespassers will continue to decrease as quarry contaminants become less bioavailable over time.

A semi-quantitative ecological risk assessment was performed for the 2008 FYR due to the fact that contaminant levels have not changed appreciably since the 1998 FYR quantitative ecological risk assessment. Any noted changes in contaminant levels for the most part, have decreased since the 1998 assessment. During the process of screening chemical concentrations in the various media against ecological criteria, the following inferences could be made about the current potential ecological risks.

The Black River has not been impacted by the RSQ Site. The quarry surface water did not exceed the most stringent aquatic life criteria; hence, there is not a high likelihood that fish would be potentially impacted. Fish caught from the quarry in 2003 appeared to be healthy and did not exhibit DELT abnormalities (i.e., deformities, fin erosion, lesions, and tumors). Likewise, because no persistent bioaccumulative toxic chemicals were detected in the fish tissue samples, piscivorous birds would not be expected to sustain adverse effects and have been observed at the quarry. The quarry sediment exceeded the criteria for several contaminants which could present a potential for adverse effects to benthic organisms. The soil concentrations for six metals also exceeded some of the terrestrial screening levels applicable to plants, birds, invertebrates, and mammals. However, the exceedance of a screening level does not necessarily indicate a significant risk, but allows the risk assessor to focus on those chemicals which are most likely to present the potential for adverse effects to occur.

The habitat appears to support ecological receptors. As discussed below, during the Site inspection it was noted that an abundance of terrestrial plants and animals, birds and insects were seen at the Site. No stressed vegetation or base spots were noted. In addition, fish were noted in the quarry, as well as piscivorous birds.

Site Inspection

A Site inspection was conducted on August 22, 2012, by the EPA RPM Sheila Sullivan, Ohio EPA representative Kevin Palumbo, and Elyria Engineering Department representative Aaron Klein. The purpose of the inspection was to assess the protectiveness of the remedy, including the condition of the fencing and posted signs to restrict access, and the condition of the Site itself, i.e., the quarry

pond and surrounding land. The 2013 FYR Site inspection form is included as Attachment 7. The accompanying inspection photos are included as Attachment 8.

The weather conditions during the inspection on August 22, 2012, were sunny and clear and the air temperature was about 75-80 degrees Fahrenheit. Because this inspection was conducted during the height of the summer, we anticipated a worst-case scenario with respect to trespassing and recreating in the quarry. While the inspection team assembled at the Site gate, the Elyria Fire Department came to reconnoiter the Site access. This was in response to the previous day when the Fire Department rescued an overcome swimmer from the quarry as detailed in Attachment 4. At that time, the rescue team gained access through the fence opening along the Black River. Mr. Klein met the rescue unit representatives at the Site along with the security staff of the adjacent mill property to provide a key to the gate to facilitate future rescues (see Photo 1).

During the inspection, the representatives walked the perimeter fence line to observe the Site access conditions and signage. The fence is a six-foot high cyclone fence that has been topped by about one-foot of barbed wire strands to discourage climbing the fence. From the shore of the quarry pond extending beyond the perimeter fence, the RSQ Site is vegetated with dense recent growth of deciduous woodland indigenous to the region (see Photos 2-3). Evidence of trespassing activity, such as food containers and trash, was noted along the quarry edges. Permanent, well-worn foot paths were seen between the quarry pond and the perimeter fence. Evidence was found of recreational use in the form of an established trail along the shoreline, and discarded clothing, footwear, and toys (see Photo 9). As previously mentioned, no clear evidence of fishing was detected.

The Agencies noted several areas where the cyclone fence had been cut by trespassers to gain access to the quarry. These areas were most notably on the eastern fence line alongside the Black River. One notably large gap was detected near the quarry outfall on the eastern edge of the quarry where most access to the Site is gained. A large length of fencing spanning three fence poles (about 18-20 feet) had been cut and rolled up (see Photos 6-7). Also in that area was evidence of a campfire and a crude tree-ladder lookout post. Signs prohibiting trespassing were visible.

Soil erosion on the southern and eastern edges of the fence line has created some gaps between the bottom edge of the fence and the ground where access can be gained. There are visible signs posted on the fence line warning trespassers to stay out; however, some of the signs have faded. Under the circumstances, the city has tried to do a good job of maintaining and repairing the fence when it has been breached.

The pickle liquor discharge ditch leading into the quarry was still visible but has continued to fill in with dense vegetation. The quarry water level appeared to be low and along the southeastern corner of the quarry edges. During past inspections since the early 1980s, the surface water along the southeastern edge of the quarry showed areas of a visible oily sheen that was seen bubbling up from the lower depths, ruling out the possibility that the sheen could be from bacteria. During this inspection, however, the total area of the sheen was less than previous years and no ebullition of the sheen was seen. The team noted the presence of several species of fish along the eastern quarry

edge. These included sunfish and blue gill measuring three to four inches in length and rock bass measuring about eight inches in length. These features are included in Photo 11.

Inside the fenced area, an abundance of wildlife and vegetation was noted. Some waterfowl were observed swimming in the quarry. Evidence of deer was noted in the former boat launch area and in the western yard. Also in the Western Yard was evidence of a makeshift camp with blankets, cooking utensils, pots, clothing, and refuse. The camp appeared to be abandoned (see Photo 13).

As mentioned in the 2010 Ohio EPA Site inspection report, signs prohibiting trespassing posted by the city were observed at large intervals along the exterior of the perimeter fence. The signs varied in their visibility from clearly visible to partially obscured by vegetation, to completely illegible. The portion of the fence separating the Site from the steel mill property also had warning signs that were posted and are maintained by the steel mill facility.

The eight groundwater monitoring wells generally appeared to be in good condition, albeit very rusty, and appropriately secured. The wells are no longer used and a few of them, such as B-4, are solidly rusted shut. An RI background monitoring well B-2 is located in one of the backyards of the subdivision (see Photo 17). These wells should be abandoned and this is included as a recommendation in Section IX.

As noted in the previous FYR report, the New Riverbend Homes Project is a lease/purchase development scattered sites project subdivision adjacent to the northern Site property fence line. Along West River Road and directly north of the Site, about 60 single-family two-story homes have been built. The drinking water supply for these homes, as well as any future developments, is the Elyria municipal water supply. The additional planned housing projects discussed in the 2008 FYR Report have been abandoned due to lack of financing.

Interviews

After the Site inspection, EPA, Ohio EPA, and Elyria city officials met at the Elyria City Hall to discuss the Site security issues, and the city plans for future development, as well as any related community issues.

The discussion/interviews were conducted with the city staff referenced above and listed in Attachment 7. Most of the discussions focused on the effectiveness of the Site access controls and how they are being implemented by the city in order to prevent trespassing and vandalism. Short of filling in the quarry pond, it is very difficult to discourage trespassing and recreational use of the quarry. Preserving the integrity of the fence and signs, particularly along the river, would require continuous monitoring, repair, and replacement. The city representatives indicated that there are no other known Site-related community issues or concerns. As previously mentioned, the city noted that there has been less evidence of fishing at the quarry property. This was also observed during the FYR Site inspection. This could indicate that the warning signs against quarry use are effective with respect to fish consumption.

The parties also discussed the possibility of pursuing reuse and redevelopment at the RSQ Site in the future. The RPM discussed the process that would be used through Region 5 Brownfields Redevelopment Program to determine the suitability of the Site property and its environs. Should reuse be possible and the city decides to pursue this course, then EPA will need to ensure that the monitoring wells are properly abandoned.

VII. Technical Assessment

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

Yes. Based on a review of relevant documents, applicable or relevant and appropriate requirements, risk assumptions, and the results of the Site inspection, the remedy is functioning as intended by the ROD and ESD, and is expected to continue in this manner. The RA for this Site included soil excavation, groundwater monitoring for as long as necessary, installing Site access controls, and establishing ICs. No further remedial or removal actions are necessary.

Based on the past sampling results and observations made during the Site visit, the remedy appears to be containing any Site-related contaminants. Black River water quality data indicate that it is not being impacted by contaminants in the groundwater or quarry sediment. The contaminated areas of this Site included the quarry sediments, which are inaccessible to humans and fish to a large degree because they are progressively silted over and lay beneath an average water depth of 60 feet. The quarry and surrounding land are also enclosed by a fence to prevent potential exposure to Site soils and fish tissue; however, Site access controls are not completely effective in deterring trespassing and recreational use of the quarry. There is no potential exposure to the other media of concern, Site groundwater, because all potable water is supplied by the Elyria municipal water supply.

As previously discussed, the implementation of ICs as part of the RA serve to limit the Site uses and afford no opportunity for exposure to any contaminated media as long as the ICs are complied with. Elyria City Ordinance 2002-119 is in place to restrict access and use of the quarry for any purposes such as fishing, swimming and boating, and the property zoning has been restricted to H-1 (Heavy Industrial). These controls also prohibit the use of groundwater and require the use of the Elyria public water supply for all potable water.

Consistent with the observations of the previous FYR report, the Site is not adversely impacting the terrestrial, aquatic, and avian receptors on Site and in the surrounding areas. An abundance of wildlife was noted during the inspection.

Regarding O&M at the Site, the RD/RA did not formally require O&M. The currently adopted procedures have involved maintaining Site security, Site appearance, and ICs. The city, as the Site owner, is responsible for enforcing the ICs at the Site since it adopted Elyria City Ordinance 2002-119. Ohio EPA also provides O&M support through a Management Assistance Grant with EPA. This support consists of conducting annual compliance inspections at the Site to identify actual or potential problems with Site management of the ICs.

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

Yes. The ROD identified federal Maximum Contaminant Levels under the Safe Drinking Water Act and some federal AWQC as standards for groundwater. These criteria continue to define acceptable groundwater and surface water concentrations at the Site. Any future new or revised drinking water or surface water criteria would not be expected to affect the protectiveness of the remedy because the ICs prohibit the use of groundwater at the Site for any and all current and future purposes and restrict uses of the quarry that would result in exposures to surface water. There have been no newly promulgated standards or "To Be Considered (s)" (TBCs) standards affecting remedy protectiveness.

There have been no changes in the physical conditions of the RSQ Site that would affect the protectiveness of the remedy. There have been no changes in exposure pathways since the 2008 FYR.

There has been no change to the standardized risk assessment methodology or contaminant characteristics that would affect the protectiveness of the remedy. There have been no changes in toxicity factors or cleanup levels. As per the ICs, the property is currently zoned for industrial use; however, there is currently no formal use of the property except for trespassing and seasonal recreation activities. No unacceptable risks would be sustained.

Question C: Has any other information become available that could call into question the protectiveness of the remedy?

No. There is no new information that has come to light that could affect the protectiveness of the remedy.

Technical Assessment Summary

Based on the past sampling results and observations made during the Site visit, the remedy is functioning as intended by the ROD and ESD, and is expected to continue in this manner. No further remedial actions are necessary. The quarry and surrounding land are enclosed by a fence to prevent potential exposure to Site soils and fish tissue; however, Site access controls are not completely effective in deterring trespassing and recreational use of the quarry due to the city's limited ability to inspect and maintain them. There is no potential exposure to the other media of concern, groundwater, because all potable water is supplied by the Elyria municipal water supply. The data for the adjacent Black River indicate that it is not being impacted by the quarry or groundwater contaminants. Observations made during the inspection indicate that the Site is not adversely affecting the terrestrial, aquatic, and avian receptors on Site and in the surrounding areas as an abundance of wildlife was seen.

The implementation of ICs limit the Site to heavy industrial use and serve to prevent opportunities for exposure to Site media as long as they are complied with. A city ordinance is in place to restrict access and use of the quarry for any purposes such as fishing, swimming, and boating. The ordinance also prohibits groundwater use and specifies the municipal water supply for all potable

uses. While there is some media contamination, the levels that trespassers and recreational users would be exposed to are not significant. From a human health risk perspective, of greater concern are the physical hazards present at the Site.

There is no new information that has come to light that could affect the protectiveness of the remedy. There have been no newly promulgated standards or TBCs affecting remedy protectiveness. Further, there have been no changes in toxicity factors, standardized risk assessment methodology, exposure pathways, Site physical conditions, contaminant characteristics, or cleanup levels that would affect the protectiveness of the remedy. At some point in the future, the city may choose to explore reuse planning. Under this scenario, future uses of the area may be possible and ICs would need to be reviewed to ensure continued protectiveness. Based on the cooperative relationship EPA has with the city, we are confident that the city would work closely with us to implement appropriate ICs should they be indicated.

The current O&M procedures consist of maintaining Site security, visible warning signs, and ICs. The city of Elyria, as the Site owner, is responsible for enforcing the ICs at the Site since it enacted Elyria City Ordinance 2002-119. The Ohio EPA provides O&M support under a Management Assistance Grant through EPA.

VIII. Issues

There are no Site-related contaminant issues that affect the short-term or long-term protectiveness of the Site.

IX. Recommendations and Follow-up Actions

The following recommendations do not affect the protectiveness of the Site remedy but warrant further attention:

1) The eight on-site and off-site groundwater monitoring wells that were installed by EPA during the RI need to be properly abandoned. This will be particularly necessary if the city pursues reuse and redevelopment of the Site property. EPA is currently working with Ohio EPA to determine the appropriate method of abandonment and costs.

2) Elyria should continue to maintain the Site access controls. This includes controlling vegetative growth along the fence line, repairing breaches and holes within the perimeter fence and gaps beneath the fence, and maintaining posted warning signs to the greatest extent possible. The city should also actively pursue enforcement of the Declaration of Restrictions under the city ordinance.

X. Protectiveness Statement

EPA has concluded that based on the data available and the information collected during the FYR process, the remedy at the RSQ Site is protective of human health and the environment. There are no current exposure pathways to groundwater contaminants and there is no significant risk from exposure to contaminants in quarry sediments, soils, or fish tissue under circumstances of occasional or seasonal trespassing and recreating. Institutional controls have been implemented that prohibit residential and recreational uses of the Site; the ICs are in place and effective. EPA has evidence that trespassers occasionally access the Site; however, no unacceptable Site contaminant-related health risks would be anticipated or have been documented. The maintenance of the Site access controls (perimeter fence and warning signs) should be improved to better discourage trespassing.

XI. Next Review

The next FYR for the RSQ Site is required five years from the date of this review.

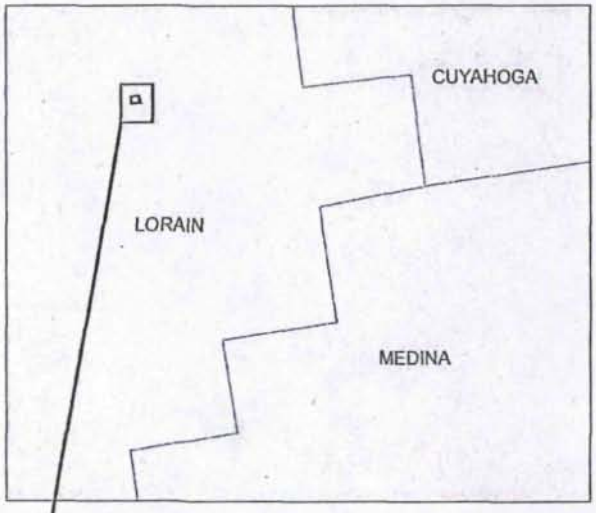
Site Location

Superfund
U.S. Environmental Protection Agency

Republic Steel Corp. Quarry
Lorain County, Ohio

EPA ID# OHD980903447

State



County

Site

Figure 1

N

Produced by Julie Schilf
U.S. EPA Region 5 on June 16, 2008
Image Date: 2005

GEOS

Republic Steel Quarry
Lorain County, Ohio
OHD980903447

Superfund
U.S. Environmental Protection Agency

Site Features Map

Legend
- Site Fence
- Quarry Pond

0 550 1,100 Feet

N

GEOS

Created by Cesar Capacete
U.S. EPA Region 5 on 03/01/2013

FIGURE 2

Republic Steel Quarry
Lorain County, Ohio
OHD980903447

Superfund
U.S. Environmental Protection Agency

Monitoring Well Locations

Legend
- Site Fence
- Quarry Pond
- Monitoring Wells

0 310 620 Feet

N

GEOS

Created by Cesar Capacete
U.S. EPA Region 5 on 03/01/2013

FIGURE 3

Republic Steel Quarry
Lorain County, Ohio
OHD980903447

Superfund
U.S. Environmental Protection Agency

Implemented Institutional Controls

City of Elyria Declaration of Restrictions for Areas A and B

- Area A - Site Property Surrounding Quarry
- Area B - Quarry Proper
- Site Fence

0 320 640 Feet

N

GEOS

Created by Cesar Capacete
U.S. EPA Region 5 on 03/01/2013

FIGURE 4

Attachments

1 – City of Elyria Declaration of Restrictions, as Authorized by Ordinance No. 2002-119

2 – Fish Consumption Advisory

3 – Ohio EPA Site Inspection Form

4 – Elyria Chronicle Telegram Article

5 – Public Notice announcing start of Fourth Five-Year Review

6 – List of Documents Reviewed for Five-Year Review

7 – 2013 Five-Year Review Site Inspection Check list

8 – Photograph Log of 2013 Five-Year Review Inspection

Attachment 1

City of Elyria Declaration of Restrictions
Authorized by Ordinance No. 2002-119

LAW DIRECTOR
TERRY S SHILLING

THE CITY OF ELYRIA, OHIO
OFFICE OF LAW DIRECTOR
CITY HALL
328 BROAD STREET
ELYRIA, OHIO 44035
PHONE: (440) 323-5646
FAX: (440) 284-0829

ASST. LAW DIRECTORS
& PROSECUTORS
CYNTHIA M ADAMS
JAY B GRUNDA
STEPHEN J GURCHIK
MICHELLE D NEDWICK
QUENTIN J NOLAN
MARGARET A O'BRYON
HONEY ROTHSCHILD
MICHAEL E SZEKELY

July 25, 2002

Sheila Sullivan
Remedial Project Manager
U.S. EPA, Superfund Division
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Attn: SR-6J

Re: Republic Steel Quarry Institutional Controls

Dear Ms. Sullivan,

Enclosed pursuant to our telephone conversation of Wednesday, July 24, 2002 are the following items:

1) Copy of Declaration of Restrictions as recorded by the City of Elyria on Republic Steel Quarry.

2) Copy of Ordinance No. 2002-119 authorizing the Mayor to sign the Declaration of Restrictions.

3) Copy of Transmittal Letter to Mary Ann Jamison, Loran County Recorder for recording the Declaration of Restrictions.

4) Copy of Letter to John Hart, Elyria City Engineer transmitting a copy of Declaration of Restrictions for the Engineering Department.

5) Copy of Letter to Gerald Klein, Elyria City Building Inspector transmitting a copy of Declaration of Restrictions for the Building Department.

Please review the enclosed and advise if you need anything further regarding this matter.

Very truly yours,

Terry S. Shilling

TSS/jla

enclosures

DECLARATION OF RESTRICTIONS

This Declaration of Restrictions, authorized by Elyria City Ordinance No. 2002-119, is made at Elyria, Ohio, this 21st day of June, 2002, by the City of Elyria, Ohio, an Ohio Municipal Corporation, (Declarant).

Recitals

WHEREAS, Declarant owns real property **(Real Property)** situated in the City of Elyria, County of Lorain, State of Ohio, by and through a Limited Warranty Deed recorded in Volume 1191, page 463 of Lorain County Deed Records. Said real property is more fully described in Exhibit A attached hereto and made a part hereof as if fully rewritten herein; and

WHEREAS, there is contained within said Real Property a four acre sandstone quarry (Quarry) having a water depth of approximately 60'; and

WHEREAS, said Quarry contains contaminated sediments confined to the Quarry bottom and not easily accessed by humans except by fish consumption; and

WHEREAS, humans have on occasion swam and fished in or about said Quarry; and

WHEREAS, the U.S. EPA through a remedial investigation determined that the consumption of fish from said Quarry would be a risk to humans; and

WHEREAS, the U.S. EPA pursuant to the Explanation Of Significant Differences issued September 28, 2001 has determined that it is necessary for the City to restrict public access to said Quarry; and

WHEREAS, Declarant desires to impose certain restrictions, covenants and conditions upon the Quarry and the real property surrounding the Quarry consisting of approximately 12.299 acres, all of which is described in Exhibit B attached hereto and made a part hereof.

NOW, THEREFORE, Declarant for itself and its successors and assigns, hereby enters into this Declaration to impose and create restrictions, covenants and conditions set forth below.

Prohibition Against Extraction of Ground Water

1. The extraction of ground water located on, in, under or over the real property described in Exhibit A is specifically prohibited for any purpose, potable or otherwise, except for the investigation or remediation of the ground water.

Requirement for Use of City of Elyria Municipal Water Supply

2. The City of Elyria Municipal Water Supply shall be the sole source of potable water

for any industrial or commercial development or any other public or private use on, in, under or over said real property described in Exhibit A.

Public Access

3. Any and all fishing, swimming, boating, public access or use of the Quarry, its sediments and soils is specifically prohibited.

Warning signs and fence

4. Whoever owns or has control over the real property described in Exhibit B shall install and maintain signs warning any and all persons to keep off said real property and shall at all times maintain a fence around the perimeter of said real property sufficient to prevent humans from entering onto the real property described in Exhibit B.

Permitted Use

5. The zoning use for the real property described in Exhibit B shall be limited to heavy industrial use only and any residential, recreational and commercial use shall be prohibited.

Remedies

6. Declarant reserves onto itself the right in case of any violation or breach of any of the restrictions, covenants and conditions in this Declaration, to enter said real property on which the violation or breach exists and to summarily abate and remove, at the expense of the owner, any thing or condition that exists contrary to the intent and meaning of the provisions of this Declaration as determined by Declarant. Declarant shall not, by reason of any action under this paragraph, be deemed guilty of any manner of trespass for the entry, abatement, or removal. Failure of Declarant to enforce any of the restrictions, covenants and conditions contained in this Declaration shall in no event be construed, taken, or held to be a waiver, and Declarant shall at any and all times have the right to enforce this Declaration.

Covenants Running With the Land

7. The restrictions, covenants and conditions enumerated in this Declaration shall be deemed as covenants and not as conditions, and shall run with the land and shall bind all owners of all or any part or interest in and to said real property unless and until any change has been approved in writing by the City of Elyria.

Constructive Notice

8. All future grantees of any interest in said real property, by acceptance of the deed or other instrument of transfer, shall be deemed to be bound by the terms of this Declaration, whether or not specific reference is made to this Declaration in the deed or instrument of

transfer. It is understood and agreed that the restrictions, covenants and conditions are part of an overall prohibition on said real property as a whole, and upon the recording of this Declaration shall be constructive notice to any future owner or owners of any interest in said real property of the terms of this Declaration.

In Witness Whereof, this Declaration of Restrictions has been executed by William M. Grace, Mayor, City of Elyria, this 21st day of June, 2002

CITY OF ELYRIA

By: [signature]
William M. Grace, Mayor

Rebecca Stewart
Rebecca Stewart
Print Name

DeAnna Frye
DeAnna Frye
Print Name

State of Ohio)
SS
County of Lorain)

The foregoing instrument was acknowledged before me this 21st day of June, 2002, by William M. Grace, Mayor, City of Elyria.

[signature]
Notary Public

JEAN ANDERSON, Notary Public
State of Ohio
My Commission Expires January 24, 20__

This Instrument Prepared and Approved by:
Terry S. Shilling, Law Director, City of Elyria
Elyria, Ohio
(440) 323-5647

[signature]
Terry S. Shilling, Law Director

\\Clerk\...\Anderson\Tss\TSS-Declaration of Restrictions.wpd

EXHIBIT A

Situated in the City of Elyria, County of Lorain, State of Ohio and being known as part of Original Elyria Township Lots Numbers 8, 115, 116, and 117, West of the Black River and bounded and described as follows:

Beginning at a spike found set at the intersection of the centerline of West River Street and the centerline of Infirmary Road;

Thence South 13°25'40" West in the centerline of West River Street, a distance of 393.30 feet to a spike set;

Thence South 89°55'40" East, a distance of 33.36 feet to a point in the easterly sideline of West River Street; said point is the principal place of beginning;

Thence continuing South 89°55'40" East and in a line parallel to and six (6) feet distant northerly from an existing fence, a distance of 452.97 feet to a point;

Thence South 39°19'40" East in a line parallel to and six (6) feet distant northeasterly from an existing fence, a distance of 168.75 feet to an iron pin set;

Thence North 81°45'20" East, a distance of 197.92 feet to an iron pin set;

Thence North 46°04'20" East, a distance of 232.61 feet to a point in the easterly line of land conveyed to the Elyria Iron and Steel Company as recorded in Deed Volume 158, Page 398 of the Lorain County Deed Records; said line passes through an iron pin set 65.21 feet southwesterly from said easterly line;

Thence North 32°41'20" West in the easterly line of land so conveyed to the Elyria Iron and Steel Company, said line being the easterly line of land now or formerly owned by Republic Steel Corporation, a distance of 614.83 feet to a lower northeasterly corner of land so conveyed to the Elyria Iron and Steel Company;

Thence North 89°54'20" West in a lower northerly line of land so conveyed to the Elyria Iron and Steel Company, a distance of 55.30 feet to a point in the high water mark of the west bank of the westerly branch of the Black River;

The following 8 courses are in the high water mark of the Black River and in the easterly line of land now or formerly owned by Republic Steel Corporation and in the easterly line of a parcel conveyed to the Elyria Iron and Steel Company, recorded aforesaid;

Thence North 27°20'43" West, a distance of 126.25 feet to a point;

Thence North 19°32'27" East, a distance of 149.45 feet to a point;

Thence North 19°39'22" West, a distance of 53.75 feet to a point;

Thence North 21°27'04" East, a distance of 228.55 feet to a point;

Thence North 7°32'17" East, a distance of 159.15 feet to a point;

Thence North 15°23'40" East, a distance of 126.35 feet to a point;

Thence North 35°36'53" East, a distance of 276.22 feet to a point;

Thence North 23°40'38" East, a distance of 129.11 feet to a point in the northerly line of Original Lot 115;

Thence North 89°04'20" West in the northerly line of Original Lot 115, a distance of 402.95 feet to an iron pin found set in the easterly sideline of West River Street; said point being South 89°04'20" East, a distance of 33 feet from a spike found set at an angle point in the centerline of West River Street; said line passes through an iron pin set about 390 feet off the centerline of West River Street;

Thence South 0°12'45" West, a distance of 4.29 feet to a point;

Thence South 16°25'40" West, a distance of 399.55 feet to a point;

Thence South 73°34'20" East, a distance of 27.00 feet to a point;

Thence South 16°25'40" West, a distance of 20.00 feet to a point;

Thence North 73°34'20" West, a distance of 27.00 feet to a point;

Thence South 16°25'40" West, a distance of 768.00 feet to a point;

Thence South 20°08'39" East, a distance of 50.93 feet to a point;

Thence South 16°25'40" West, a distance of 20.00 feet to a point;

Thence North 73°34'20" West, a distance of 37.00 feet to a point;

Thence South 16°25'40" West, a distance of 396.99 feet to a point;

Thence South 73°34'20" East, a distance of 12.00 feet to a point;

Thence South 16°25'40" West, a distance of 10.00 feet to a point;

Thence North 73°34'20" West, a distance of 12.00 to a point;

Thence South 16°25'40" West, a distance of 247.00 feet to a point;

Thence South 73°34'20" East, a distance of 12.00 feet to a point;

Thence South 16°25'40" West, a distance of 10.00 feet to a point;

Thence North 73°34'20" West, a distance of 12.00 feet to a point;

Thence South 16°25'40" West, a distance of 226.55 feet to the principal place of beginning.

Containing within said bounds 20.913 acres of which about 3.780 acres are in Original Lot 8, about 8.278 acres are in Original Lot 115, about 2.092 acres are in Original Lot 116, and about 6.763 acres are in Original Lot 117, to be the same more or less, but subject to all legal highways, as surveyed by Kleinfelder-Schmidt and Associates in July, 197[illegible].

Sponsored by:

SAFETY:
E. Larkins
L. Tanner

ORDINANCE NO. 2002-119

AN ORDINANCE AUTHORIZING THE MAYOR TO SIGN A DECLARATION OF RESTRICTIONS REGARDING THE REPUBLIC STEEL QUARRY SITE AND REPEALING ORDINANCE NO. 2001-176.

WHEREAS, the City of Elyria is the owner of the Republic Steel Quarry Site (Quarry Site) on Mussey Avenue which Quarry Site has been listed as an NPL Site by the USEPA and is described in Exhibit A attached hereto and made a part hereof; and

WHEREAS, the USEPA is in the process of preparing an explanation of significant difference as part of the process of delisting said Quarry Site as an NPL site; and

WHEREAS, the USEPA has requested that the City of Elyria institute controls and deed restrictions to protect human health including but not limited to prohibiting the ground water at said Quarry Site as a source of drinking water and requiring the use of the City of Elyria Municipal Water Supply as the sole source of potable water for any industrial or commercial development or public use on said Quarry Site.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF ELYRIA, STATE OF OHIO:

SECTION 1. That the Mayor be and he hereby is authorized to sign a Declaration of Restrictions for and relating to said Republic Steel Quarry Site, which Declaration of Restrictions shall include but not be limited to the following:

a) Prohibition against Extraction of Ground Water;

b) Requiring the use of the City of Elyria Municipal Water Supply upon said real property;

c) Prohibiting public access

d) The erection of Warning Signs and Fences.

Any other deed restrictions which the United States Environmental Protection Agency (USEPA) or the City of Elyria shall deem necessary and appropriate. Said Declarations shall be recorded at the Lorain County Recorder's Office to run with the land, and shall be in form and substance and approved by the Elyria City Law Director and shall be recorded after the

I HEREBY CERTIFY THAT THIS IS AN EXACT AND TRUE COPY OF Ordinance 2002-119

ARTHUR J. WEBER, CLERK OF COUNCIL
CITY OF ELYRIA, OHIO

6-24-02
DATE

City of Elyria receives approval from the USEPA.

SECTION 2: This Ordinance hereby repeals Ordinance No. 2001-176 and any other ordinances or portions thereof which may be inconsistent herewith.

SECTION 3: That it is found and determined that all formal actions of this Council concerning and relating to the passage of this Ordinance were taken in meetings open to the public, in compliance with Ohio law.

SECTION 4: That this Ordinance shall take effect and be in force from and after the earliest period allowed by law.

PASSED: 6/3/02

Thomas O. Shores, President

ATTEST: _____
Arthur J. Weber, Clerk

APPROVED: 6/3/02

_____
William M. Grace, Mayor

DATE: 6-4-02

Approved as to form:

_____
Terry S. Shilling, Law Director

CERTIFICATE OF PUBLICATION

I, THE UNDERSIGNED CLERK OF COUNCIL OF THE CITY OF ELYRIA, OHIO, HEREBY CERTIFY THAT THE FULL TEXT OF THE FOREGOING ORDINANCE NO. 2002-119 WAS POSTED IN THREE PLACES WITHIN THE CITY AS DETERMINED BY COUNCIL, AND THAT SUCH PLACES WERE AS FOLLOWS: CITY HALL, CENTRAL FIRE STATION AND THE POLICE STATION.

DATED: 6/6/02

_____
CLERK OF COUNCIL
CITY OF ELYRIA, OHIO

Date presented to the Mayor: 6/4/02

ATK #2

TERRY S. SHILLING
ELYRIA CITY LAW DIRECTOR
131 Court Street
Elyria, Ohio 44035
Office (440) 326-1464
Fax (440) 326-1466

FAX

Date: October 5, 2005

Time: _____

To: Jerome Kujawa Fax No. 312-886-0747

From: Terry S. Shilling

RE: USEPA

Dear Mr. Kujawa,

Submitted with this fax pursuant to our telephone conversations of October 4th, 2005 is a copy of a Declaration of Restrictions for the Republic Steel Quarry in the City of Elyria as recorded on July 25, 2002. I will be sending by separate cover a certified copy of the Declaration of Restrictions. Also submitted is a certified copy of City Ordinance No. 2002-119 which authorized the Declaration of Restrictions.

Please review and advise if you have any questions.

Terry S. Shilling

TSS/jla

Enclosure

We are transmitting 11 pages. If this facsimile transmission is not complete, please call (440) 326-1464.

****CONFIDENTIALITY NOTICE****

The information contained in this facsimile transmission is attorney/client privileged and confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any disclosure, distribution or copying of this telecopied information is strictly prohibited. If you have received this communication in error, please immediately notify us by telephone and return the original documents to us at the above address via the U.S. Postal Service.

844429#1859 original given to Mayor's office to file in safe. 9/18/02 (cat)

DECLARATION OF RESTRICTIONS

This Declaration of Restrictions, authorized by Elyria City Ordinance No. 2002-119, is made at Elyria, Ohio, this 21st day of June, 2002, by the City of Elyria, Ohio, an Ohio Municipal Corporation, (Declarant).

Recitals

WHEREAS, Declarant owns real property **(Real Property)** situated in the City of Elyria, County of Lorain, State of Ohio, by and through a Limited Warranty Deed recorded in Volume 1191, page 463 of Lorain County Deed Records. Said real property is more fully described in Exhibit A attached hereto and made a part hereof as if fully rewritten herein; and

WHEREAS, there is contained within said Real Property a four acre sandstone quarry (Quarry) having a water depth of approximately 60'; and

WHEREAS, said Quarry contains contaminated sediments confined to the Quarry bottom and not easily accessed by humans except by fish consumption; and

WHEREAS, humans have on occasion swam and fished in or about said Quarry; and

WHEREAS, the U.S. EPA through a remedial investigation determined that the consumption of fish from said Quarry would be a risk to humans; and

WHEREAS, the U.S. EPA pursuant to the Explanation Of Significant Differences issued September 28, 2001 has determined that it is necessary for the City to restrict public access to said Quarry; and

WHEREAS, Declarant desires to impose certain restrictions, covenants and conditions upon the Quarry and the real property surrounding the Quarry consisting of approximately 12.299 acres, all of which is described in Exhibit B attached hereto and made a part hereof.

NOW, THEREFORE, Declarant for itself and its successors and assigns, hereby enters into this Declaration to impose and create restrictions, covenants and conditions set forth below.

Prohibition Against Extraction of Ground Water

1. The extraction of ground water located on, in, under or over the real property described in Exhibit A is specifically prohibited for any purpose, potable or otherwise, except for the investigation or remediation of the ground water.

Requirement for Use of City of Elyria Municipal Water Supply

2. The City of Elyria Municipal Water Supply shall be the sole source of potable water

for any industrial or commercial development or any other public or private use on, in, under or over said real property described in Exhibit A.

Public Access

3. Any and all fishing, swimming, boating, public access or use of the Quarry, its sediments and soils is specifically prohibited.

Warning signs and fence

4. Whoever owns or has control over the real property described in Exhibit B shall install and maintain signs warning any and all persons to keep off said real property and shall at all times maintain a fence around the perimeter of said real property sufficient to prevent humans from entering onto the real property described in Exhibit B.

Permitted Use

5. The zoning use for the real property described in Exhibit B shall be limited to heavy industrial use only and any residential, recreational and commercial use shall be prohibited.

Remedies

6. Declarant reserves onto itself the right in case of any violation or breach of any of the restrictions, covenants and conditions in this Declaration, to enter said real property on which the violation or breach exists and to summarily abate and remove, at the expense of the owner, any thing or condition that exists contrary to the intent and meaning of the provisions of this Declaration as determined by Declarant. Declarant shall not, by reason of any action under this paragraph, be deemed guilty of any manner of trespass for the entry, abatement, or removal. Failure of Declarant to enforce any of the restrictions, covenants and conditions contained in this Declaration shall in no event be construed, taken, or held to be a waiver, and Declarant shall at any and all times have the right to enforce this Declaration.

Covenants Running With the Land

7. The restrictions, covenants and conditions enumerated in this Declaration shall be deemed as covenants and not as conditions, and shall run with the land and shall bind all owners of all or any part or interest in and to said real property unless and until any change has been approved in writing by the City of Elyria.

Constructive Notice

8. All future grantees of any interest in said real property, by acceptance of the deed or other instrument of transfer, shall be deemed to be bound by the terms of this Declaration, whether or not specific reference is made to this Declaration in the deed or instrument of

transfer. It is understood and agreed that the restrictions, covenants and conditions are part of an overall prohibition on said real property as a whole, and upon the recording of this Declaration shall be constructive notice to any future owner or owners of any interest in said real property of the terms of this Declaration.

In Witness Whereof, this Declaration of Restrictions has been executed by William M. Grace, Mayor, City of Elyria, this 21st day of June, 2002

CITY OF ELYRIA

Rebecca Stewart
Rebecca Stewart
Print Name

By: William M. Grace
William M. Grace, Mayor

DeAnna Frye
DeAnna Frye
Print Name

State of Ohio)
SS
County of Lorain)

The foregoing instrument was acknowledged before me this 21st day of June, 2002, by William M. Grace, Mayor, City of Elyria.

Jean Anderson
Notary Public

JEAN ANDERSON, Notary Public
State of Ohio
My Commission Expires January 24, 2005

This Instrument Prepared and Approved by:
Terry S. Shilling, Law Director, City of Elyria
Elyria, Ohio
(440) 323-5647

Terry S. Shilling 6-2002
Terry S. Shilling, Law Director

BOX

\\Civil_ndJAnderson\Tss\TSS-Declaration of Restrictions.wpd

EXHIBIT A

Situated in the City of Elyria, County of Lorain, State of Ohio and being known as part of Original Elyria Township Lots Numbers 4, 115, 116, and 117, West of the Black River and bounded and described as follows:

Beginning at a spike found set at the intersection of the centerline of West River Street and the centerline of Infirmary Road;

Thence South 16°25'40" West in the centerline of West River Street, a distance of 393.00 feet to, a spike set;

Thence South 89°55'40" East, a distance of 34.36 feet to a point in the easterly sideline of West River Street; said point is the principal place of beginning;

Thence continuing South 89°55'40" East and in a line parallel to and six (6) feet distant northerly from an existing fence, a distance of 451.97 feet to a point;

Thence South 59°11'40" East in a line parallel to and six (6) feet distant northeasterly from an existing fence, a distance of 158.75 feet to an iron pin set;

Thence North 82°45'20" East, a distance of 197.43 feet to an iron pin set;

Thence North 46°04'20" East, a distance of 232.61 feet to a point in the easterly line of land conveyed to the Elyria Iron and Steel Company as recorded in Deed Volume 158, Page 398 of the Lorain County Deed Records; said line passes through an iron pin set 65.21 feet southwesterly from said easterly line;

Thence North 22°41'20" West in the easterly line of land so conveyed to the Elyria Iron and Steel Company, said line being the easterly line of land now or formerly owned by Republic Steel Corporation, a distance of 614.83 feet to a lower northeasterly corner of land so conveyed to the Elyria Iron and Steel Company;

Thence North 89°50'20" West in a lower northerly line of land so conveyed to the Elyria Iron and Steel Company, a distance of 45.00 feet to a point in the high water mark of the west bank of the westerly branch of the Black River;

The following 8 courses are in the high water mark of the Black River and at the easterly line of land now or formerly owned by Republic Steel Corporation and in the easterly line of a parcel conveyed to the Elyria Iron and Steel Company, recorded aforesaid;

Thence North 27°20'43" West, a distance of 136.26 feet to a point;

Thence North 19°32'27" East, a distance of 144.45 feet to a point;

Thence North 19°39'26" West, a distance of 53.76 feet to a point;

Thence North 21°37'02" East, a distance of 128.55 feet to a point;

Thence North 7°22'17" East, a distance of 159.15 feet to a point;

Thence North 15°23'40" East, a distance of 326.35 feet to a point;

Thence North 26°36'43" East, a distance of 276.02 feet to a point;

Thence North 58°40'34" East, a distance of 129.16 feet to a point in the northerly line of Original Lot 115;

Thence North 89°04'20" West in the northerly line of Original Lot 115, a distance of 402.96 feet to an iron pin found set in the easterly sideline of West River Street; said point being South 89°04'20" East, a distance of 33 feet from a spike found set at an angle point in the centerline of West River Street; said line passes through an iron pin set about 399 feet off the centerline of West River Street;

EXHIBIT B

Former Republic Steel Quarry Boundary

LEGAL DESCRIPTION

Situated in the City of Elyria, County of Lorain, State of Ohio and known as being part of Original Elyria Township Lots Number 8, 115, 116 and 117, West of the Black River and bounded and described as follows:

Commencing at a spike found set at the intersection of the centerline of WEST RIVER ROAD (S) (66 foot right of way) and INFIRMARY ROAD (60 foot right of way); thence S 16° 25' 40" W along the centerline of said WEST RIVER ROAD (S), a distance of 393.00 feet to a spike set; thence S 89° 55' 40" E, a distance of 34.36 feet to a point on the easterly right of way limits of said WEST RIVER ROAD (S); said point being the true place of beginning;

Thence continuing S 89° 55' 40" E and being in a line parallel to and six (6) foot perpendicular with an existing fence, a distance of 451.97 feet to a point;

Thence S 29° 14' 40" E and being in a line parallel to and six (6) foot perpendicular with an existing fence, a distance of 168.75 feet to an iron pin;

Thence N 81° 45' 20" E, a distance of 197.43 feet to an iron pin;

Thence N 46° 04' 20" E, a distance of 232.61 feet to an angle point;

Thence N 22° 41' 20" W, a distance of 614.83 feet to an angle point;

Thence N 89° 54' 20" W, a distance of 45.00 feet to a point;

Thence N 27° 20' 43" W, a distance of 136.26 feet to a point;

Thence N 60° 59' 14" W, a distance of 331.44 feet to a point on the easterly right of way of WEST RIVER ROAD (S);

Thence S 16° 25' 40" W along the easterly right of way of said WEST RIVER ROAD (S), a distance of 82.00 feet to an angle point;

Thence S 30° 09' 49" E continuing along the easterly right of way of said WEST RIVER ROAD (S), a distance of 50.93 feet to an angle point;

Thence S 16° 25' 40" W continuing along the easterly right of way of said WEST RIVER ROAD (S), a distance of 20.00 feet to an angle point;

Thence N 73° 34' 20" W along the easterly right of way of said WEST RIVER ROAD (S), a distance of 37.00 feet to an angle point;

Former Republic Steel Quarry Boundary

Thence S 16° 25' 40" W continuing along the easterly right of way of said WEST RIVER ROAD (S), a distance of 296.99 feet to an angle point;

Thence S 73° 34' 49" E continuing along the easterly right of way of said WEST RIVER ROAD (S), a distance of 12.00 feet to an angle point;

Thence S 16° 25' 40" W continuing along the easterly right of way of said WEST RIVER ROAD (S), a distance of 10.00 feet to an angle point;

Thence N 73° 34' 49" W continuing along the easterly right of way of said WEST RIVER ROAD (S), a distance of 12.00 feet to an angle point;

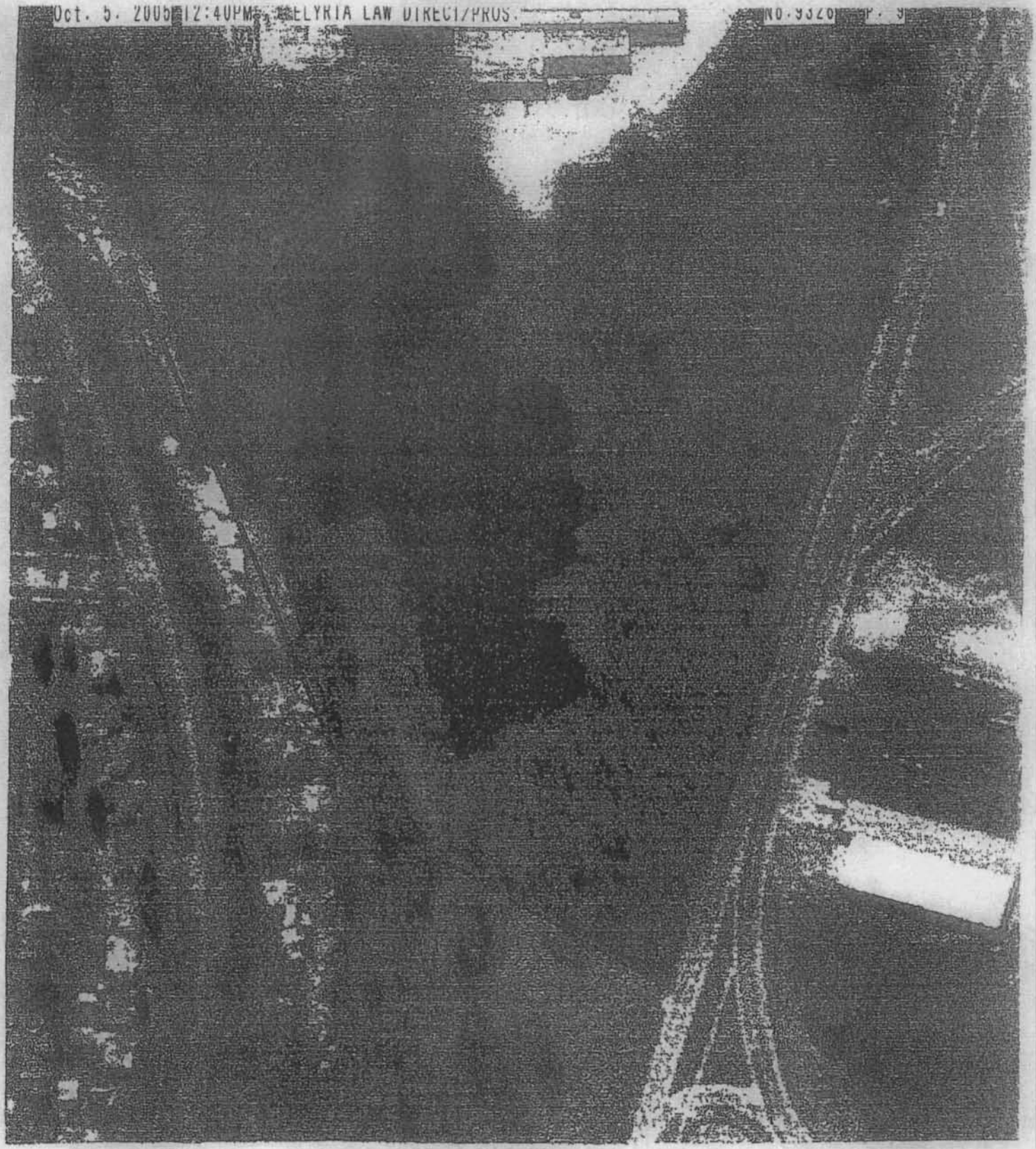
Thence S 16° 25' 40" W continuing along the easterly right of way of said WEST RIVER ROAD (S), a distance of 247.00 feet to an angle point;

Thence S 73° 34' 20" W continuing along the easterly right of way of said WEST RIVER ROAD (S), a distance of 12.00 feet to an angle point;

Thence S 16° 25' 40" W continuing along the easterly right of way of said WEST RIVER ROAD (S), a distance of 10.00 feet to an angle point;

Thence N 73° 34' 49" W continuing along the easterly right of way of said WEST RIVER ROAD (S), a distance of 12.00 feet to an angle point;

Thence S 16° 25' 40" W continuing along the easterly right of way of said WEST RIVER ROAD (S), a distance of 228.35 feet to the true place of beginning and containing 12.299 acres of which about 3.780 acres are in Original Lot 8, about 0.022 acres are in Original Lot 115, about 1.834 acres in Original Lot 116 and about 6.663 acres in Original Lot 117, to be the same more or less, but subject to all legal highways.



Sponsored by:

SAFETY:
H. Larkins
L. Tanner

ORDINANCE NO. 2002-119

AN ORDINANCE AUTHORIZING THE MAYOR TO SIGN A DECLARATION OF RESTRICTIONS REGARDING THE REPUBLIC STEEL QUARRY SITE AND REPEALING ORDINANCE NO. 2001-176.

WHEREAS, the City of Elyria is the owner of the Republic Steel Quarry Site (Quarry Site) on Mussey Avenue which Quarry Site has been listed as an NPL Site by the USEPA and is described in Exhibit A attached hereto and made a part hereof; and

WHEREAS, the USEPA is in the process of preparing an explanation of significant difference as part of the process of delisting said Quarry Site as an NPL site; and

WHEREAS, the USEPA has requested that the City of Elyria institute controls and deed restrictions to protect human health including but not limited to prohibiting the ground water at said Quarry Site as a source of drinking water and requiring the use of the City of Elyria Municipal Water Supply as the sole source of potable water for any industrial or commercial development or public use on said Quarry Site.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF ELYRIA, STATE OF OHIO:

SECTION 1. That the Mayor be and he hereby is authorized to sign a Declaration of Restrictions for and relating to said Republic Steel Quarry Site, which Declaration of Restrictions shall include but not be limited to the following:

a) Prohibition against Extraction of Ground Water;

b) Requiring the use of the City of Elyria Municipal Water Supply upon said real property;

c) Prohibiting public access

d) The erection of Warning Signs and Fences.

Any other deed restrictions which the United States Environmental Protection Agency (USEPA) or the City of Elyria shall deem necessary and appropriate. Said Declarations shall be recorded at the Lorain County Recorder's Office to run with the land, and shall be in form and substance and approved by the Elyria City Law Director and shall be recorded after the

I HEREBY CERTIFY THAT THIS IS AN EXACT AND TRUE COPY OF Ord. 2002-119

ARTHUR J. WEBER, CLERK OF COUNCIL
CITY OF ELYRIA, OHIO

6-24-02
DATE

City of Elyria receives approval from the USEPA.

SECTION 2: This Ordinance hereby repeals Ordinance No. 2001-176 and any other ordinances or portions thereof which may be inconsistent herewith.

SECTION 3: That it is found and determined that all formal actions of this Council concerning and relating to the passage of this Ordinance were taken in meetings open to the public, in compliance with Ohio law.

SECTION 4: That this Ordinance shall take effect and be in force from and after the earliest period allowed by law.

PASSED: 6/3/02 Thomas O. Shores

Thomas O. Shores, President

ATTEST: Arthur J. Weber

Arthur J. Weber, Clerk

APPROVED: 6/3/02

William M. Grace, Mayor

DATE: 6-4-02

Approved as to form:

Terry S. Shilling, Law Director

CERTIFICATE OF PUBLICATION

I, THE UNDERSIGNED CLERK OF COUNCIL OF THE CITY OF ELYRIA, OHIO, HEREBY CERTIFY THAT THE FULL TEXT OF THE FOREGOING ORDINANCE NO. 2002-119 WAS POSTED IN THREE PLACES WITHIN THE CITY AS DETERMINED BY COUNCIL, AND THAT SUCH PLACES WERE AS FOLLOWS: CITY HALL, CENTRAL FIRE STATION AND THE POLICE STATION.

DATED: 6/6/02

Arthur J. Weber

CLERK OF COUNCIL
CITY OF ELYRIA, OHIO

Date presented to the Mayor: 6/4/02

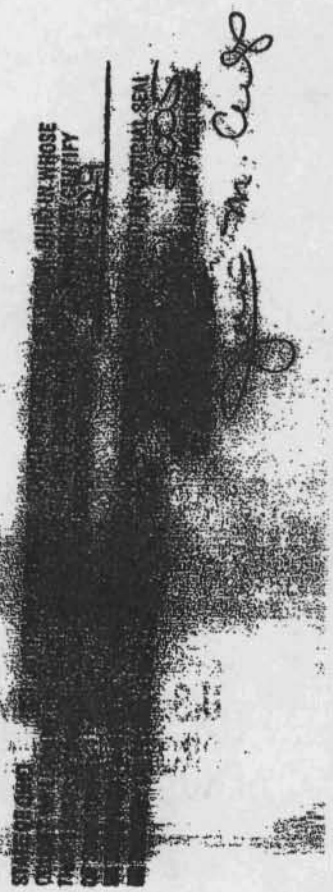
[redacted]

MARY ANN JAMISON
LORAIN COUNTY
RECORDER

2002 JUL 25 P 2:07

RECEIVED FOR RECORD

38.00
BH



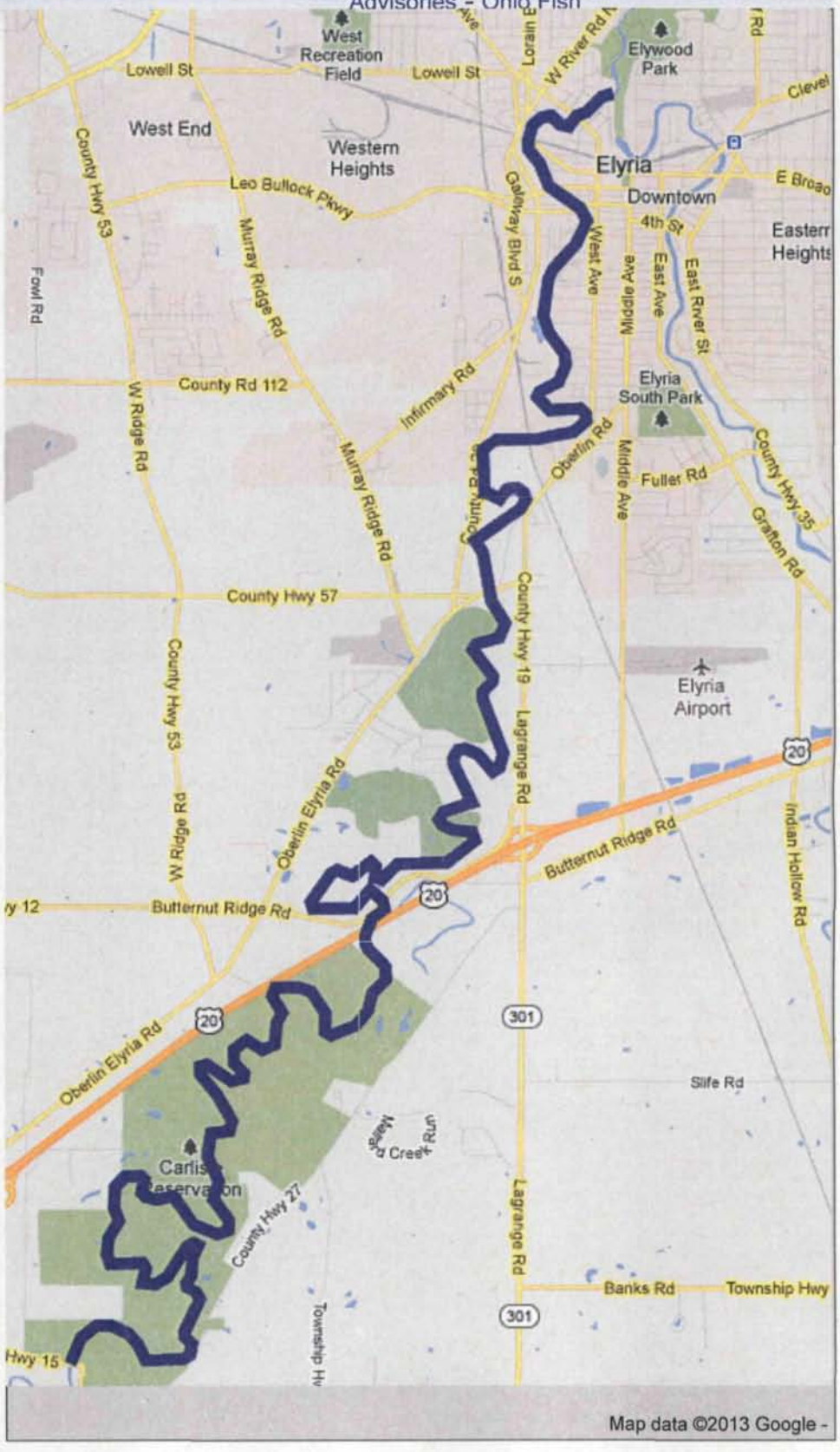
Attachment 2

2012 Ohio Sport Fish Consumption Advisories

Advisory Home - Statewide
Advisories - Ohio Fish

This page displays sport fish consumption advisories for streams and lakes in the State of Ohio. Select a water body below to display it on the map. Then, click on the water body to show its advisory information. For more information regarding how to use this map, view these detailed instructions.

- [ ] Adams Lake
- [ ] Ashtabula River - Hilldom Road to U.S. Route 20 (Prospect Road)
- [ ] Ashtabula River - U.S. Route 20 (Prospect Road) to mouth (Lake Erie)
- [ ] Auglaize River - U.S. Route 33, Wapakoneta to Maumee River
- [ ] Berlin Lake
- [ ] Big Darby Creek - U.S. Route 42 (Plain City) to Alkire Road (Georgesville)
- [ ] Big Darby Creek - Alkire Road (Georgesville) to mouth (Scioto River)
- [ ] Black Fork Mohican River - State Route 39 (Melco) to mouth (Mohican River)
- [x] Black River - Interstate 80 to mouth (Lake Erie)
- [ ] Buckeye Lake
- [ ] Caesar Creek Lake
- [ ] Chagrin River - I-90 to mouth (Lake Erie)
- [ ] C.J. Brown Reservoir
- [ ] Clear Creek - Clearport Road (Clearport) to mouth (Hocking River)
- [ ] Clear Fork Reservoir
- [ ] Conneaut Creek - All



2013 Ohio Sport Fish Health and Consumption Advisory

Advice for anyone who eats fish caught in Ohio.

Mercury and lead were found in the meat samples taken from four water bodies, resulting in the **Ohio Snapping Turtle Consumption Advisory**

read more

FISH IS GOOD FOR YOU!
Eat fish low in contaminants.

Fish are generally low in fat and high in protein. Fish contain a number of vitamins and minerals, and are the primary food source for long-chain omega-3 fatty acids. Studies suggest that omega-3 fatty acids are important during fetal brain and eye development and may help to prevent heart disease in adults.

The Ohio Department of Health advises that everyone limit consumption of sport fish caught from all waterbodies in Ohio to one meal per week, unless there is a more or less restrictive advisory.

2 meals per week	Yellow perch, sunfish (e.g., bluegill, green, longear, redear)*
1 meal per week	All fish not specified in this table
1 meal per month	Flathead catfish 23" and over, northern pike 23" and over, steelhead trout from Lake Erie and its tributaries
Do not eat	See the Do Not Eat Tab below.

*Consumption of these species should be limited to one meal per week from: Ashtabula River, Cuyahoga River, Mahoning River, Nesmith Lake, Ohio Canal, Ohio River, and West Branch Reservoir; and as otherwise indicated in the "Limit Your Meals From These Waters" tab.

Statewide | **Do Not Eat** | **Do Not Wade or Swim** | **Meal Preparation** | **FAQs**

General and Statewide Advisories

The Ohio Department of Health advises that **everyone** limit consumption of sport fish caught from **all water bodies** in Ohio to **one meal per week**, unless there is a more or less restrictive advisory.

The one meal per week advisory protects sensitive populations, including women of child bearing age and children under age 15.

Listings of water bodies sampled for fish contaminants are available **here**.

QUICK LINKS

- **LIMIT YOUR MEALS**
  Waterbody areas in which one or more species of fish are contaminated.
- **SNAPPING TURTLES**
  Avoid eating fat or liver tissue from snapping turtles caught in Ohio.
- **LAKES AND STREAMS**
  See if the lakes and streams where you fish have been sampled.

CONTACTS

Call: Ohio Department of Health
(800) 755-4769

Request publications: Ohio EPA Public Interest Center
(614) 644-2160

Questions? Ohio EPA Division of Surface Water
fishmail@epa.ohio.gov
(614) 644-2001

Ohio EPA Division of Surface Water
Standards and Technical Support Section
P.O. Box 1049
Columbus, OH 43216-1049

PUBLICATIONS

- **2013 UPDATES**
  Ohio Fish Consumption Advisory Updates for 2013
- **2013 Ohio Sport Fish Consumption Advisory Booklet**
- **FISH FOR YOUR HEALTH Palm Card**
- **FISH FOR YOUR HEALTH Brochure**
- **Spanish FISH FOR YOUR HEALTH Brochure**
- **Chinese FISH FOR YOUR HEALTH Brochure**

Statewide/Nationwide Mercury Advisory for Sensitive Populations

The statewide mercury advisory is primarily for women of child-bearing age and children age 15 and under. They are advised to eat no more than one meal per week of fish (any species) from any Ohio water body unless there is a more or less restrictive advisory. Although the one meal per week advice applies mainly to these sensitive populations, the general advisory recommends that everyone follow that advice.

The United States Environmental Protection Agency (U.S. EPA) and the Food and Drug Administration (FDA) jointly issued a national mercury-related advisory for store-bought fish and fish served in restaurants. This advice is for women of child-bearing age and young children. This advice states:

1. Do not eat Shark, Swordfish, King Mackerel, or Tilefish because they contain high levels of mercury.
2. Eat up to 12 ounces (two average meals) a week of a variety of fish and shellfish that are lower in mercury.
   - Five of the most commonly eaten fish that are low in mercury are shrimp, canned light tuna, salmon, pollock, and catfish.
   - Another commonly eaten fish, albacore ("white") tuna has more mercury than canned light tuna. So, when choosing your two meals of fish and shellfish, you may eat up to six ounces (one average meal) of albacore tuna per week.
3. Check local advisories about the safety of fish caught by family and friends in your local lakes, rivers and coastal areas. If no advice is available, you may eat up to six ounces (one average meal) per week of fish you catch from local waters, but don't consume any other fish during that week.

- Korean FISH FOR YOUR HEALTH Brochure
- Two Meals Per Week Advisory List

RELATED LINKS

- Identifying Fish Species
  Ohio Department of Natural Resources
- U.S. Environmental Protection Agency
  Fish Advisories
- Advice For Women Who Are Pregnant and Nursing Mothers, Avoiding Harm To Your Baby Or Young Child From Mercury in Fish and Shellfish.
- Mercury Levels in Seafood Species
- American Heart Association
  Fish and Omega-3 Fatty Acids
- Great Lakes Fish Consumption Advisories

The Ohio Department of Health, in cooperation with Ohio EPA and the Ohio Department of Natural Resources, issues sport fish consumption advisories under Ohio law (Ohio Revised Code Chapter 3701).

Division of Surface Water
Phone: (614) 644-2001 ~ Fax: 644-2745 ~ Contact

Mailing Address: P.O. Box 1049, Columbus, OH 43216-1049
Street Address: 50 West Town Street, Suite 700, Columbus, OH 43215
Report a spill, release or environmental crime (800) 282-9378

Attachment 3

OhioEPA
State of Ohio Environmental Protection Agency
Northeast District Office

2110 East Aurora Rd.
Twinsburg, Ohio 44087

TELE: (330) 963-1200 FAX: (330) 487-0769
www.epa.state.oh.us

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

December 16, 2009

Ms. Sheila A. Sullivan, Environmental Scientist
Remedial Response Section # 4, SR-6J
U.S. EPA, Region 5
77 West Jackson Blvd.
Chicago, IL 60604

Re: Republic Steel Quarry 2009 Periodic Compliance Inspection, OHD 980903447, Lorain County, Ohio

Dear Ms. Sullivan:

Enclosed, please find the Periodic Compliance Inspection Form and Photo Log Supplement for the Republic Steel Quarry site, located in Elyria (Lorain Co.), Ohio. After you have reviewed the enclosed documents, please contact me at your convenience regarding the coordination of any additional actions Region 5 may wish to pursue. I can be reached at bruce.miller@epa.state.oh.us or (330) 963-1211.

Respectfully,

B C Miller

Bruce C. Miller
Environmental Specialist
Division of Emergency and Remedial Response

BCM/kss

enclosures (2)

ec: Mike Eberle, Ohio EPA, DERR, NEDO

PERIODIC COMPLIANCE INSPECTION FORM

I. GENERAL INFORMATION

Name of Inspector:	Bruce Miller	**Inspection Date:**	September 3, 2009
Construction Completion Date:	November 1, 1999	**Date of Last Periodic Compliance Inspection:**	May 9, 2007
Site Name:	Republic Steel Quarry ("RSQ Site")	**Site ID:**	OHD980903447
Operable Unit(s):			
Site Address: (attach map)	(see attached map)	**County:**	Lorain
Name and Address Current Property Owner(s):	City of Elyria, Office of the Engineer 131 Court Street, Suite 303 Elyria, Ohio 44035		
Name of Site Contact:	Aaron Klein, P.E.	**Telephone Number:**	440.326.1435
Address:	(as above)		
Operators Name: (if applicable)		**Telephone Number:**	
Persons Present During Inspection: (include affiliations)	Aaron Klein, Project Engineer, Office of the Engineer		

II. CHECKLIST

Site Security

Condition of Fences / Gates: Perimeter fence is still in place (photos: *RSQ2009C**, *RSQ2009K* and *RSQ2009L*). The fence line between Maverick Tube's fenced site and the RSQ Site appeared to be in acceptable condition. The fence line along the western Site boundary revealed a damaged section of fence and, further north, a breach in the fence with signs of trespass (footprints, beverage containers; photos: *RSQ2009F*, *RSQ2009G* and *RSQ2009H*). The Site Coordinator interviewed a resident on the east side of the site boundary (along the Black River). The resident stated that throughout the summer, youth and young adults cross the Black River to trespass on the Site for fishing and swimming purposes (Photo: *RSQ2009A*). The resident also stated that if someone calls the Elyria Police Department regarding Site trespassing, they always respond and use loud speakers to order trespassers off the Site. The entire fence line could not be evaluated during this inspection, due to an inability to access the (former) Maverick Tube facility (which is closed; Photo: *RSQ2009B*). Mr. Klein had made prior arrangements with the security company responsible for the (former) Maverick Tube facility, but no representative of the company was present to unlock the gate. Phone calls at the time of inspection to the security company were unsuccessful.

Condition of Warning Signs: Warning signs are posted at intervals along the exterior of the perimeter fence. The signs vary in their legibility from clearly legible to partially legible (obscured by vegetation), to painted over with graffiti (Photos: *RSQ2009D*, *RSQ2009E* and *RSQ2009J*).

Evidence of Unauthorized Access: There is evidence of trespassing at the RSQ Site, including sections of damaged perimeter fence where there are fresh pathways into the Site and fresh empty beverage containers within the Site boundary. (*RSQ2009C*, *RSQ2009K* and *RSQ2009L*). No trespassers were observed on the RSQ Site during the site inspection.

Enforcement of Institutional Controls: Institutional Controls were established by the City of Elyria as "Resolution No. R99-31," effective November 2, 1999 and included:

Post warning signs to prohibit entry to the RSQ Site;
Maintain the perimeter fence;
Prohibit fishing, swimming, and boating in the RSQ Site;
Prohibit public access or use of the RSQ Site, its sediments and soil; and
Inspect the RSQ Site to ensure that the previous controls are complied with.

Although the City of Elyria has made periodic repairs and improvements to the perimeter fence, the fence is regularly vandalized, breached, and the Site trespassed upon.

General Site Conditions

Vegetative Conditions: With the obvious exception of the quarry pond, the RSQ Site is vegetated with dense recent growth deciduous woodland indigenous to the region (Photo: *RSQ2009K*).

Condition of Drainage System: The RSQ Site drains into the quarry pond. The quarry pond drains into the West Branch of the Black River via a concrete sluiceway that includes a non functional gate valve. There is a non functional 4" steel pipe extending down into the quarry water that is believed to be a remnant of a system used to drain water from the quarry into the former Republic Steel Plant (based in information found in the Third Five-Year Review Report of 2009 by U.S. EPA).

Ground Water Monitoring Network

Condition of Wells: Eight test boring / monitor wells were established at and adjacent to the RSQ Site circa 1988. It is unknown how many of these wells are still intact. During the site inspection, only one monitoring well was observed, located on the west side of the RSQ Site. This well appeared to be in reasonable condition, with an outer protective casing of steel with a locked lid. Three bumpers were in place around the well and appeared undamaged (Photo: *RSQ2009I*).

Off-Site Inspection

Changes in Property Use: There were no changes in property use from the prior Site inspection.

Evidence of Nearby Contamination: There was no evidence of nearby contamination adjacent to the RSQ Site at the time of inspection.

On-Site Documents and Records Verified

O & M Manual, Safety Plan, Permits & Service Agreements: The RSQ site does not contain any on site documents. Documents are kept at the City of Elyria City Hall.

O & M Maintenance Summary

Maintenance Operator/s: City of Elyria
Maintenance Logs: None available.
Activities Conducted Since Last Inspection: The City of Elyria continues to address perimeter fence repairs and site security as the city's budget allows; however, the fence is periodically breached by trespassers despite the city's attempts at repair.

III. RECOMMENDATIONS:

The general impression by the site coordinator, based upon the property inspection and a review of the case file, especially the results of the Third Five-Year Review Report (2008), is that the City of Elyria attempts to take proper and regular operation and repair actions with regards to the sign posting, fencing, and preventing of unauthorized access beyond the initial site security actions (circa 1993, i.e., the original establishment of the fence and warning signs). However, the City of Elyria cannot keep the fence repaired frequently enough to prevent fence vandalism and subsequent trespass.

The City of Elyria should take the following actions, in order to be consistent with the established institutional and engineering controls and to secure future site access:

1) Repair the perimeter fence in such a way as to prevent human trespass;
2) Remove vegetation from both sides of the fence line;
3) Secure an agreement with the property owner of the (former) Maverick Tube Corp. to provide site access necessary for O & M maintenance, inspections, safety, and security purposes or construct an additional gate into the Site that does not require access to the (former) Maverick Tube Corp.

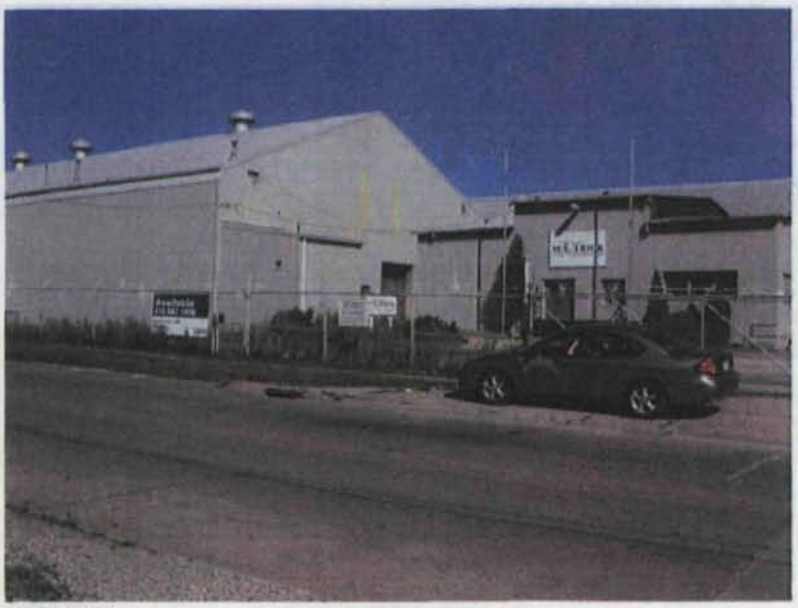
* See attached Photo Log

REPUBLIC STEEL QUARRY

SFY 2009 ANNUAL SITE INSPECTION

PHOTO LOG:

RSQ2009A



RSQ2009B

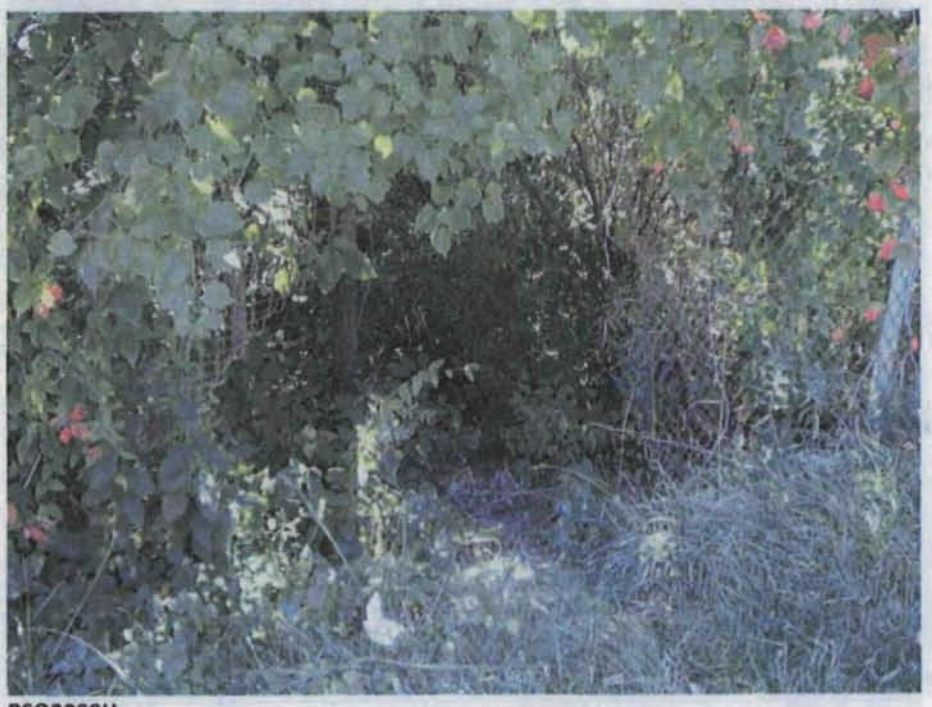
RSQ2009C

RSQ2009D

RSQ2009E

RSQ2009F

RSQ2009G



RSQ2009H

RSQ2009I

RSQ2009J

RSQ2009K

SUBJECT: PROCEDURES FOR CONDUCTING PERIODIC COMPLIANCE INSPECTIONS AT REMEDIAL RESPONSE SITES

PURPOSE:

This document outlines the procedure Ohio Environmental Protection Agency (EPA) uses to conduct periodic compliance inspections at remedial response sites. Periodic inspections are conducted where there are ongoing operation and maintenance (O&M) obligations. The general objectives of the inspections are to 1) verify compliance with performance standards, 2) verify compliance with the approved O&M Plan and Orders, and 3) identify changes in remedy protectiveness.

BACKGROUND:

Periodic compliance inspections are conducted to confirm that the remedial response action performance standards are being met and to ensure that the integrity of the remedy at sites that have completed state remedial response actions is maintained by implementing routine O&M activities. The Division of Emergency and Remedial Response (DERR) Remedial Design/Remedial Action (RD/RA) Generic Statement of Work (Task VI) states, "The Respondent(s) shall implement performance monitoring and operation and maintenance procedures as required by the approved Performance Standard Verification Plan (if applicable) and approved O&M Plan for the RA once it is demonstrated that the RA components are operational and functional." Ohio EPA certifies that the remedy is operational and functional based on certification of construction completion.

Operation and Maintenance is required under the authority of a Director's Final Findings and Orders for RD/RA, Interim Action (IA), or O&M. In rare situations, a decision document may be issued that requires no engineering controls and, therefore, there may be no Construction Completion Report and Certification. Operation and Maintenance may, for example, consist merely of ensuring continuing property use restrictions. For sites that don't have Construction Completion Report and Certification, O&M activities will begin on the date that the O&M Plan is approved or, if needed, the date that the O&M Orders are issued.

Interim Action Orders typically incorporate a remedy to be performed that includes provisions for operation and maintenance. The remedy could be as simple as property use restrictions or as complex as the construction of an interim treatment system with operation and maintenance provisions. If a Construction Certification Report is required by the Interim Action Orders, the O&M activities begin upon approval of the Construction Certification Report. For sites that don't have Construction Certification Reports, O&M

activities will begin on the date that the O&M and Monitoring Plans are approved or, if appropriate, the date that the Interim Action Orders are issued.

District site coordinators/inspectors have not previously been provided with standard guidance or procedures for conducting compliance inspections of completed remedial response actions or O&M Plans.

PROCEDURE:

A. **Frequency:** Periodic compliance inspections will be conducted on an annual basis beginning one year after the Construction Completion Report is approved or the Interim Action is preformed. The annual inspection frequency will be evaluated during each inspection. If the remedy continues to consistently meet the performance standards, then the inspection frequency may be reduced; however, the inspection frequency will, in no case, be reduced to less than every two years. If the site coordinator/inspector recommends a change in the inspection frequency, they will meet with their management to determine a new schedule. Any change in Ohio EPA's inspection schedule does not alleviate the Potentially Responsible Parties (PRPs) of their responsibility to implement their O&M Plan and scheduled inspections. Additionally, there is language in many Director's Final Findings and Orders or judicial decrees (collectively "Orders") that have requirements associated with a 5-year review. Site coordinator/ inspectors should review site Orders and ensure that DERR's periodic compliance inspections are coordinated with these requirements as appropriate.

B. **Pre-Inspection Activities:** The site coordinator/inspector will conduct several preparatory activities and reviews prior to conducting the field inspection. (See Attachment V for an example of one approach to documenting pre-inspection activities.) An outline of key activities in preparation for field activities follows:

1. Review the approved O&M Plan, Orders and other appropriate documents (see Attachment I).

2. Review monthly reports, quarterly reports, inspection reports, other data, and applicable correspondence.

3. Review data generated during O&M and evaluate the overall effectiveness of the remedy compared to the performance standards.

4. Review previous annual inspection reports.

5. Determine the current status of applicable permits.

6. Verify if required financial assurance submittals were submitted in accordance with Orders.

7. Develop a site specific Periodic Compliance Inspection Form (Attachment II). The form should be developed to include all remedy components and performance standards for the specific site (see Exhibit 1 for possible remedy components to include).

8. Prepare a summary of performance standards to be incorporated into the site inspection report consisting of a letter with an attached inspection form (see Exhibit 2).

9. Review pertinent guidance to enhance knowledge of O&M requirements for applicable remedy components.

10. Contact appropriate parties to schedule the site inspection.

11. If use restrictions are part of the remedy, verify if declaration of restrictions is properly filed in the county or city and are still in effect. If a property has been transferred, make sure the use restrictions were added to or cross-referenced in the deed.

    (a) Determine the property's use restrictions. Learn about the use restrictions by reviewing:

        (i) The deed restrictions or declaration of use restrictions.

        (ii) The property map (or legal description if needed) to determine the extent of the property that's restricted and to know where to inspect.

    (b) The property's deed records are located at the county recorder's office for the county in which the property is located. The county recorder will likely have its deed records (sometimes called official records) indexed by:

        (i) The tax parcel numbers, per the county auditor's office or engineer's office using the property's address. This is likely the

most reliable method as these are "permanent" numbers that are said to follow the property;

(ii) The name of the person or business transferring or accepting the property.

(iii) The dates when the property was transferred, per the most recent deed(s).

(c) To know which method will work best, the site coordinator should talk with the appropriate county personnel.

C. **Inspection Activities:** The inspection will focus on operation and maintenance of components of the remedy. Typical inspection activities will include:

1. Review of on-site operational logs and/or sampling records for compliance with any discharge permits.

2. Observations of general site conditions such as landscape, drainage, erosion, integrity of structures and fences and site security.

3. Inspection of all visible components of the remedial system such as wells, piping, treatment facilities, mechanical and electrical systems, equipment and any other engineering controls.

   (a) Record observations regarding the operation and condition of mechanical systems.

   (b) Note any changes from the approved Final Design and O&M Plan. These observations will be documented in the Periodic Complaince Inspection Form.

4. Documentation of the current condition of the remediation system(s) with photographs, sketches, videos, or other visual media. Include these in the inspection report.

   (a) Each area of the Site, if any, that may have a noncomplying use.

   (b) The Site's general use, *i.e.*, of the commercial building fronts, with company signs shown.

(c) Photographs from different perspectives, *i.e.*, north, south, east, and west views.

(d) Each area of the site that was photographed and a site map noting what portions were photographed and at what position the photo was taken from.

5. A determination that compliance with institutional controls is in place.

(a) Document current land use. If land use has changed from previous inspections, list type of structures, organizations, or activities in operation and photograph or sketch any structural changes.

(b) Note any site uses that do not comply with institutional controls. In some cases noncompliance may be easy to spot; in other cases the situation may require further evaluation. Some examples follow.

(i) If the use restriction limits property use to 'commercial uses only', a telemarketing firm would be an appropriate use. An on-site daycare or playground, however, may be a noncomplying use depending on the actual use (is the use more residential or commercial; compare the land use categories defined in the declaration of restrictions).

(ii) If the use restriction 'prohibits extraction of ground water for any potable use', a well head or casing requires further information about the ground water's use.

D. Inspection Follow-Up: The site coordinator/inspector will complete the Periodic Compliance Inspection Form (Attachment II), if it was not completed during the inspection. After completing the inspection, the site coordinator/inspector will develop one of the following cover letters based on the inspection findings:

1. In compliance: If the inspection reveals that the PRP is in compliance with the Orders and the approved O&M Plan, the site coordinator/inspector will draft and issue a Periodic Compliance Inspection Notice of Findings letter (Attachment III) with an attached copy of the Periodic Compliance Inspection Form (Attachment II). The site coordinator/inspector will issue the Periodic Compliance Inspection Notice of Findings letter within thirty (30) days of the date of the inspection.

2. Out of compliance: Out of compliance means the remedial action is not in compliance with Final Design, the Orders, O&M Plan, performance standards, and/or approved workplans. See Table 1, Enforcement Response Matrix, for types of noncompliance and suggested enforcement responses. When considering an appropriate response, the site coordinator/inspector will need to consider issues like the number of inspections conducted and their outcomes, the magnitude of noncompliance, and any patterns of noncompliance. The time-frame for actions will be site specific.

Table 1
Enforcement Response Matrix

Type of Noncompliance/Issue Requiring Action	Suggested Response
Failure to comply with the approved O&M Plan and Orders	
one occurrence	NOV(s)
multiple occurrences	NOV(s); Consensual DFFO with up front penalty; AGO referral with up front penalty
likely to cause an impact to human health and/or the environment	NOV(s); AGO referral with up front penalty
Change in protectiveness	
likely to cause an impact to human health and/or the environment	Amended Decision Document; Consensual DFFO; AGO referral

(a) Minor (continues to meet performance standards; however is not complying with other parts of the approved O&M Plan).

(i) If the inspection reveals that the PRP is out of compliance with the Orders or the approved O&M Plan, the site coordinator/inspector will draft and issue, at a minimum, a Periodic Compliance Inspection Notice of Violations (NOV) letter (Attachment IV) with an attached copy of the Periodic Compliance Inspection Form (Attachment II). The site coordinator/ inspector will issue the NOV within thirty (30) days of the date of the inspection. The letter will require that the PRP provide a schedule for returning to compliance.

(ii) Conduct a second inspection to confirm that the conditions noted have been corrected and the PRP has returned to compliance. The site coordinator/inspector will draft and issue a followup letter similar to the Periodic Compliance Inspection Notice of Findings letter (Attachment III) with a second Periodic Compliance Inspection Form (Attachment II). The site coordinator/ inspector will issue the followup letter within thirty (30) days of the date of the inspection.

(b) Major (fails to meet performance standards).

(i) If the inspection reveals that the PRP has failed to meet performance standards, the site coordinator/inspector will draft and issue, at a minimum, an NOV letter (see Attachment IV) citing the specific sections of the Orders and/or O&M Plan being violated and the corrective action required to come back into compliance, along with an attached copy of the Periodic Complaince Inspection Form (Attachment II). The site coordinator/inspector will issue the NOV within thirty (30) days of the date of the inspection. The letter will require that the PRP provide a schedule for returning to compliance.

(ii) A second inspection is required to confirm that the conditions noted have been corrected and the PRP has returned to compliance. The site coordinator/inspector will draft and issue a followup letter similar to the Periodic Compliance Inspection Notice of Findings letter (Attachment III) with a second Periodic Compliance Inspection Form (Attachment II). The site coordinator/inspector will issue the followup letter within thirty (30) days of the date of the inspection.

(iii) If the Site is not brought back into compliance, the site coordinator/inspector will recommend escalated enforcement action as appropriate.

3. Remedy Failure: New remedy required (not meeting performance standards; the design of the system can not achieve the performance standards).

(a) If the inspection, or a series of inspections, reveals that there is a remedy failure, the site coordinator/inspector will review the Decision Document to determine if there is a contingent remedy. If so, the site

coordinator/inspector will draft a letter (*i.e.*, NOV (Attachment IV)) identifying the performance standards not being met, our determination that the remedy has failed, the section of the Decision Document outlining the contingent remedy and the provisions in the Orders authorizing Ohio EPA to require implementation of the contingency. A copy of the Periodic Compliance Inspection Form (Attachment II) will be attached to the NOV letter. The site coordinator/inspector will issue the NOV within thirty (30) days of the date of the inspection.

(b) The site coordinator may develop a new remedy. Options to invoke a new remedy include the following:

(i) Determine if further work can be done under the existing Orders to issue a decision document amendment or whether new Orders are needed.

(ii) If the existing Orders allow additional work, the site coordinator/inspector will invoke the Additional Work provision.

(iii) If new Orders are needed, the site coordinator/inspector will develop and send a referral to the Enforcement Committee in accordance with http://www.epa.state.oh.us/derr/policies/DI-029.pdf

(c) If the decision document contains a contingent remedy, then the contingent remedy is triggered.

4. Change in Protectiveness: Change in operations or new remedy required.

(a) If there is a change in protectiveness, the site coordinator/inspector will develop and provide a briefing memo and convene a meeting within thirty (30) days of the date of the inspection with the district manager and the Remedial Response Program manager to evaluate 1) the extent of the impact to potential receptors and the PRP(s) from the protectiveness change, 2) the potential costs in implementing, or not implementing, the new standard, and 3) the most appropriate action based on the foregoing.

(b) If a change in the remedy to accommodate a change in protectiveness will be implemented, the site coordinator/inspector will communicate

the new performance standards to the PRP within sixty (60) days of the date of the inspection.

(c) The site coordinator/inspector will evaluate whether a change in operations under the existing Orders can meet the new performance standards (*e.g.*, operating a system for longer than the expected period of time might achieve a lower standard).

(d) The site coordinator/inspector may develop a new remedy. Options to invoke a new remedy include the following:

(i) Determine if further work can be done under the existing Orders to issue a decision document amendment or whether new Orders are needed.

(ii) If the existing Orders allow additional work, the site coordinator/inspector will invoke the Additional Work provision.

(iii) If new Orders are needed, the site coordinator/inspector will develop and send a referral to the Enforcement Committee in accordance with http://www.epa.state.oh.us/derr/policies/DI-029.pdf

5. Multi-media interaction for compliance: The site coordinator/inspector will determine if another Ohio EPA division should be contacted regarding compliance issues relating to applicable permits.

Exhibit 1
POTENTIAL SITE REMEDY COMPONENTS

SITE SECURITY/POPULATION PROTECTION
- Alternative Water Source Provided
- Fence
- Institutional Controls/Deed Restrictions
- Security Guard
- Other [define]

CONTAINMENT
- Bottom Liner
- Cap, Asphalt
- Cap, Concrete
- Hydraulic Barriers/Groundwater Extraction
- Landfill Cap, Hazardous Waste
- Landfill Cap, Municipal Waste
- Landfill Gas Management, Active
- Landfill Gas Management, Passive
- Leachate Collection & treatment or removal
- Sheet Piling
- Slurry Wall tied into Cap
- Soil Cover
- Surface Water Diversion
- Other [define]

REMOVAL
- Excavate & Remove to Approved Offsite Landfill
- Excavate & Dispose in an On-site Landfill
- Remove & Recycle
- Other [define]

TREATMENT/DEGRADATION
- Air Sparging
- Bioremediation, In Situ
- Bioventing
- Fugitive Dust Control Measure
- Incineration, Off-site
- Incineration, On-site
- Insitu Vitrification
- Land farming/Tilling
- Free Phase Product Recovery System
- Natural Attenuation
- Oxidant Injection
- Permeable Treatment Walls/Barriers
- Phytoremediation
- Pump & Treat with off-site discharge
- Pump & Treat with on-site disposal
- Soil Vapor Extraction (SVE)
- Soil Washing/Flushing
- Solidification/Stabilization
- Wetland Creation
- Other [define]

MONITORING
- Aquatic Biological Survey
- Air Quality Monitoring
- Engineering Controls Monitoring
- Groundwater Quality Monitoring
- Landfill Gas/Subsurface Monitoring
- Surface Water Quality Monitoring
- Sediment Quality Monitoring
- Other [define in character field]

OTHER REMEDY: [define]

Exhibit 2
Example Performance Standards Summary Table

List performance standards found in the Decision Document:

REMEDY COMPONENT	PERFORMANCE STANDARD(S)
1)	a) b) c)
2)	a)
3)	a) b)
4)	a) b)
5)	a)

ATTACHMENT I
PERIODIC COMPLIANCE INSPECTION GUIDANCE LIST

Ohio EPA

Division of Air Pollution Control (DAPC)- Facility Inspection Form and General Instructions: Facility Wide and Emissions Unit Information (Appendix N)

Division of Emergency & Remedial Response (DERR), Voluntary Action Program (VAP) - Ohio EPA VAP MOA Track: Guidance for Content of an Operation and Maintenance Plan, Form #17, April 15, 2002 Final http://www.epa.state.oh.us/derr/vap/moa/track.html

DERR, VAP, 5-Year Visual Inspection of Property Subject to Use Restrictions & Related Oversight, undated

DERR, Remedial Response - Statement of Work for Remedial Design / Remedial Action, DERR-00-RR-014, August 31, 1999
http://www.epa.state.oh.us/derr/policies/RR-014.pdf

Division of Hazardous Waste Management (DHWM) - Inspection Procedures Manual (Chapter 21.0 Closure Oversight Inspections), November 2002 (Checklist located in Appendix A)

Division of Solid and Infectious Waste Management (DSIWM) - Closed Municipal Solid Waste Landfill Facility Inspection Checklist
http://www.epa.state.oh.us/dsiwm/pages/documents.html

Division of Surface Water (DSW) - NPDES Compliance Inspection Report

DSW - Industrial User Inspection Form

Office of Federal Facilities Oversight (OFFO) - Checklist for Review of Effectiveness of Institutional Controls, undated (Mound)

Draft - Inspection Strategy for Institutional Control Compliance Inspections, Division of Hazardous Waste Management, May 16, 2002

U.S. EPA

Comprehensive Five-Year Review Guidance, OSWER 9355.7-03B-P, EPA 540-R-01-007, June 2001 http://www.epa.gov/superfund/resources/5year/guidance.pdf

Elements for Effective Management of Operating Pump and Treat Systems, OSWER 9355.4-27FS-A http://www.epa.gov/superfund/resources/gwdocs/ptfactsheet.pdf

Five-Year Review Process in the Superfund Program, OSWER 9355.7-08FS, EPA 540-F-

02-004, April 2003

Guidance Manual for Conducting Sanitary Surveys of Public Water Systems; Surface Water and Ground Water Under the Direct Influence (GWUDI), Office of Surface Water, EPA 815-R-99-016, April 1999 http://www.epa.gov/safewater/dwa/resources.html

Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties, EPA 540-G-90-001

Guidance on Expediting Remedial Design and Remedial Action, EPA 540-G-90-006

Inspector's Field Guides for Small Ground Water Systems and Small Surface Water Systems
http://www.epa.gov/safewater/dwa/resources.html

Operation and Maintenance in the Superfund Program, OSWER 9200-1-37FS, EPA 540-F-01-004, May 2001 http://www.epa.gov/superfund/resources/sheet.pdf

Remedial Design / Remedial Action Handbook, EPA 540-R-95-059, June 1995

Superfund Post Construction Completion: An Overview, OSWER 9355.0-79FS, EPA 540-F-01-009, June 2001

Draft - Institutional Controls: A Guide to Implementing, Monitoring and Enforcing Institutional Controls at Superfund, Brownfields, Federal Facility, UST and RCRA Corrective Action Cleanups, December 2002

Other

U.S. Army Corps of Engineers (ACE), Remediation System Evaluation (RSE) Checklists, June 7, 1999
http://www.environmental.usace.army.mil/library/guide/rsechk/rsechk.html

ATTACHMENT II
PERIODIC COMPLIANCE INSPECTION FORM

PERIODIC COMPLIANCE INSPECTION FORM I. GENERAL INFORMATION			
Name of Inspector:		**Inspection Date:**	
Construction Completion Date:		**Date of Last Periodic Compliance Inspection:**	
Site Name:		**Site ID**	
Operable Unit(s):			
Site Address: (attach map)		**County**	
Name and Address Current Property Owner(s):			
Name of Site Contact:		**Telephone Number**	
Address:			
Operators Name: (if applicable)		**Telephone Number**	
Persons Present During Inspection include Affiliations:			
II. CHECKLIST **(Create a site specific checklist that includes all remedy components and any special requirements identified in the O&M plan.)**			
Site Security / Population Protection (List all components that apply below)			
Findings:			
Containment (List all components that apply below)			
Findings:			
Removal (List all components that apply below)			
Findings:			
Treatment/Degradation (List all components that apply below)			
Findings:			
Monitoring (List all components that apply below)			
Findings:			

III. RECOMMENDATIONS:

ATTACHMENT III
EXAMPLE PERIODIC COMPLIANCE INSPECTION NOTICE OF FINDINGS

OhioEPA

State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
122 S. Front Street
Columbus, OH 43215-1099

TELE: (614) 644-3020

MAILING ADDRESS:

P.O. BOX 1049
Columbus, OH 43216-1049

[Date]

[Contact's/Site Coordinator's Name] **CERTIFIED LETTER**
[Title]
[Street Address]
[City, State Zip Code]

Re: Periodic Compliance Inspection Notice of Findings - [County]
[Site Name - Type of Remedy]

Dear [Contact/Site Coordinator]:

On [Date], the I conducted a Periodic Compliance Inspection at [Company Name, Site Name] located at [Street address, City], Ohio. [Contact/Site Coordinator representing the [Company Name] were present during the inspection. This inspection revealed the following: [Summarize the findings of the inspection]. The attached inspection form documents the detailed findings from the compliance inspection.

If you have any questions, please call [Ohio EPA site coordinator] at [Area code and telephone number].

Sincerely,

[Name]
Site Coordinator
Division of Emergency & Remedial Response
[District Office]

cc: [Names and Company Names including the enforcement coordinator in CO]
Attachment: Periodic Compliance Inspection Form

ATTACHMENT IV
EXAMPLE PERIODIC COMPLIANCE INSPECTION NOTICE OF VIOLATION

State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
122 S. Front Street
Columbus, OH 43215-1099

TELE: (614) 644-3020

MAILING ADDRESS:

P.O. BOX 1049
Columbus, OH 43216-1049

[Date]

[Contact's/Site Coordinator's Name]
[Title]
[Street Address]
[City, State Zip Code]

CERTIFIED LETTER

Re: Periodic Compliance Inspection Notice of Violation - [County]
[Site Name - Type of Remedy]

Dear [Contact/Site Coordinator]:

On [Date], the I conducted a Periodic Compliance Inspection at [Company Name, Site Name] located at [Street address, City], Ohio. This inspection was performed in accordance with Section/Paragraph [X] of the Director's Final Findings and Orders (F&Os) dated [DATE]; the [DATE] RI/FS OR RD/RA Work Plan and the [DATE] O&M Plan. [Contact/Site Coordinator and other representatives] were representing the [Company Name].

This inspection revealed the following: [Summarize the findings of the inspection].

The attached inspection form documents the detailed findings from the compliance inspection. In accordance with the requirements of [note the authority section under which we are requiring action], you must implement the following actions: [List Findings and Recommendations].

(Company Name) may return to compliance by taking the actions listed above within (Deadline i.e. X days) of receipt of this letter. If (Company Name) fails to take either action by (Deadline Date), Ohio EPA will consider enforcement options available to the Agency.

If you have any questions, please call [Ohio EPA site coordinator] at [Area code and telephone number].

Sincerely,

[Name]
Site Coordinator
Division of Emergency & Remedial Response
[District Office]

cc: [Names and Company Names including the enforcement coordinator in CO]

ATTACHMENT V
EXAMPLE: PRE-INSPECTION CHECKLIST

GENERAL SITE INFORMATION			
Site Name	Laskin/Poplar Site	Site ID#	OHD061722211 204-0458
Date Started:	10/29/03	Site Coordinator:	Andrew Kocher

REVIEW OF DOCUMENTS			
Task to Complete	**Yes**	**No**	**Not Applicable**
Review O&M Plan	X		
Review DFFO	X		
Monthly Reports/Quarterly Reports	X		
Inspection Reports	X		
Data	X		
Correspondence	X		
Pertinent Guidance/Rules/Laws	X		
Additional Documents: 5-Yr Review	X		

CHECK AND/OR EVALUATE THE FOLLOWING			
Task to Complete	**Yes**	**No**	**Not Required**
Data Trends (as effecting performance standards)		X	
Current Status (Other Divisions)		X	
Applicable Permits			X
Financial Assurance Submittals	X		
Deed Restrictions/Declaration of Use Restrictions (must view deed and may require research.)	X		

CONTACT AND CORRESPONDENCE			
Task to Complete	**Yes**	**No**	**Not Required**
Contact appropriate parties to schedule the site inspection			X
Send confirmation letter for access letter			X
Obtain keys to access Site/Facility (if needed)	X		

PERFORMANCE STANDARDS	
REMEDY COMPONENT	**PERFORMANCE STANDARD(S)**
Landfill cap	The cap must be maintained to protect the soil beneath which exceeds the lifetime cancer risk greater than 1 x 10-6 or a Total Hazard Index of 1.0.
Diverted ground water	Diverted ground water must maintain levels below bedrock or MCLs at the downgradient boundary.
Meet Water Quality Standards	Water in Cemetery Creek must maintain levels below Ohio Water Quality Standards.
Maintain concrete vault	The concrete vault containing asbestos/dioxin-contaminated material remains buried on the site until new technology can be used to successfully treat this waste.

ATTACHMENT VI
EXAMPLE: PERIODIC COMPLIANCE INSPECTION FORM

PERIODIC COMPLIANCE INSPECTION FORM I. GENERAL INFORMATION			
Name of Inspector:	Andrew Kocher	**Inspection Date:**	10/3/03
Construction Completion Date:	September 23, 1993	**Date of Last Periodic Compliance Inspection:**	5/11/99 (5-Yr Review)
Site Name:	Laskin Poplar	**Site ID**	OHD061722211 204-0458
Operable Unit(s):	None		
Site Address: (attach map)	717 North Poplar Street Jefferson, Ohio	**County**	Ashtabula
Name and Address Current Property Owner(s):	Formerly Mr. Alvin F. Laskin (recently deceased, likely Mildred Laskin is current owner) 2331 State Route 46 South Jefferson, OH 44047 250180000800 250180000700		
Name of Site Contact:	Jim Campbell / Diane McCausland Engineering Management, Inc. 1500 Ardmore Blvd., Suite 502, Pittsburgh, Pennsylvania 15221-4468 Email: jrc@e-emi.com Mr. Patrick Hamblin (SR-6J) U.S. EPA, Region 5 77 West Jackson Blvd., Chicago, IL 60604 Hamblin.Patrick@epamail.epa.gov	**Telephone Number**	**(412) 244-0917** **(312) 886-6312**
Address:	see above		
Operators Name: (if applicable)	None for site	**Telephone Number**	
Persons Present During Inspection include Affiliations:			
II. CHECKLIST **(Create a site specific checklist that includes all remedy components and any special requirements identified in the O&M plan.)**			
Site Security / Population Protection (List all components that apply below) **ACCESS AND INSTITUTIONAL CONTROLS** **Photo ID#**			

Condition of Fence/Gates:

Condition of Warning Signs:

Evidence of unauthorized access:

Are Instututional Controls being properly implemented/enforced(1):

ADDITIONAL COMMENTS: (1) During a Site Inspection, Institutional Controls (ICs) may be hard to recognize. For example: If the deed restriction or declaration of use restrictions prohibits the extraction of ground water for any potable use - look for any evidence of recently installed wells or ground water use. Another example: If the use restriction limits the property to commercial use - look for daycare centers and other uses of the property that may not constitute commercial use.

Findings:

GENERAL SITE CONDITIONS
Photo ID#

Evidence of Subsidence of Cap:

Evidence of Burrowing Animals:

Presence of Erosion Rills:

Vegetation Conditions:

Condition of Drainage System:

Evidence of Slope Instability:

ADDITIONAL COMMENTS:

Findings:

ENGINEERING CONTROLS
Photo ID#

Treatment Collection System Conditions:

Treatment System Conditions:

Effluent System Conditions:

Building Conditions:

ADDITIONAL COMMENTS:

Findings:

GROUND WATER MONITORING NETWORK INSPECTION
Photo ID#

Condition of Wells and Piezometers:

Condition of Well Identification Markers:

Condition of Diversion Trenches/Barriers:

ADDITIONAL COMMENTS:

Findings:
OFF-SITE INSPECTION **Photo ID#**
Changes in Property Usage: Evidence of Nearby Contamination: ADDITIONAL COMMENTS:
Findings:
ON-SITE DOCUMENTS AND RECORDS VERIFIED **Photo ID#**
O&M Manual: Safety Plan: Contingency Plan: Permits and Service Agreements: ADDITIONAL COMMENTS:
Findings:
O&M MAINTENANCE SUMMARY **Photo ID#**
Maintenance Operator/s: Maintenance Logs: Activities Conducted Since Last Inspection: 1) 2) 3) 4) Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy:
Findings:
III. RECOMMENDATIONS:

 Attachment 4

VIDEO: Elyria firefighters rescue distressed quarry swimmer

Filed by **Steve Fogarty** August 8th, 2012 in **Top Stories.**

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ELYRIA — Moments before he jumped off a ledge into the old Republic Steel quarry around 2:25 p.m. Tuesday, Amir Elkhatib told two Elyria teens, "If I drown, call 911."

A few minutes later, Elkhatib, who jumped into the quarry with three buddies, was in trouble.

"Halfway across, he said he couldn't do it," Isaac Jones said. "We said, 'We're coming,' and jumped in."

The 13-year-old Elyria teen was at the quarry's edge with a friend, Delmar Board, also 13, when he said Elkhatib, 21, of Westlake; Adam Abukhater, 21, of Rocky River; Mohammed Salieman, 21; and Mahmoud Sulieman, 20, both of North Olmsted, walked up to the quarry to swim. The quarry is between Riverside Drive and West River Road S. near West 11th Street.

Jones and Board talked about the incident as they gazed across the quarry as Elkhatib was tended to by Elyria firefighters who had rappelled down a rock ledge to reach him. Firefighters Robert Atkinson, Nick Bezbatchenko and John Vencl were the main firefighters involved in the rescue, according to fire Capt. James Cawley. The men were later charged with trespassing, according to police.

Isaac said he swam to the foursome to help Elkhatib.

"He was coughing and spitting out water," said Isaac, a student at Northwood Junior High School.

Elkhatib appeared to recover and continued on for a few moments before he began struggling again in the water.

"He went back under," Isaac said. "He kept sinking three or four times. He was breathing real hard."
Isaac and one of Elkhatib's friends pulled him by the hands while Elkhatib's other companions pushed him from behind.

Delmar, who is home-schooled, called 911 after the group shouted to him to get help. Once they swam to the other side of the five-acre quarry and got out of the water, one of Elkhatib's friends held up his head as firefighters tended to him from a rock ledge a few feet above the waterline.

Cawley said Elkhatib appeared exhausted and possibly dehydrated when firefighters treated him. Elkhatib was treated and released from MetroHealth Medical Center in Cleveland, according to Sulieman.

The ledge is in the southwest corner of the quarry and is about 2 to 3 feet wide, according to police Officer Jacob Webber's report.

Isaac, who described himself as a confident swimmer, said he and Delmar don't frequent the quarry very often.

The fact that the quarry acts as a magnet for local teens and children was borne out by the appearance of three teenaged boys in swim trunks who appeared atop the same rock ledge about a half-hour after the other teens jumped into the water.

"You kids have five minutes to get the hell out of the quarry or go to jail like these four who thought it was a good idea," a firefighter shouted at them as rescuers worked to get Elkhatib up the rock face.

The three North Olmsted teens quickly walked off the ledge a few moments later and were charged with trespassing.

Nearby residents who walked to the riverbank near the quarry confirmed its popularity with kids.

"There's 50 to 60 kids who swim there all day long," Betty Stull said. "I tell them all the time someone is going to drown."

The quarry is surrounded by seven acres of fenced land, according to a news release from Region 5 of the U.S. Environmental Protection Agency on cleanup at the site.

The steel plant discharged waste pickle liquor and rinse water comprised of sulfuric acid and dissolved metal oxides into the quarry on a daily basis in 1950 to 1975. A third five-year review of the facility completed by the EPA in 2008 concluded the cleanup effort "protects human health and the environment."

The statement also noted that "fencing and warning signs need to be improved to discourage trespassing."
Cawley said he hopes would-be swimmers at the quarry will think better of it in the future.

"The bottom line is — this is an area that is fenced and clearly marked as a no-swim area," Cawley said.

Reporter Evan Goodenow contributed to this story. Contact Steve Fogarty at 329-7146 or ***sfogarty@chroniclet.com****.*

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In order to comment, you must agree to our user agreement and discussion guidelines.
Read our user agreement and discussion guidelines ..

Need help? Email Us.

Attachment 5

In death, Facebook photos could fade away

TIPS TO PROTECT DIGITAL MEMORIES

The Associated Press

Estate planning attorney James Lamm who writes the blog "Digital Passing" advises people to plan ahead for their virtual afterlives. Your best bet is to make sure valuable memories and intellectual property are stored somewhere besides a social media account, so back up your photos on a USB flash drive.

Still, given the prevalence of social media in today's world, Lamm advises these four steps as a sort of digital estate planning guide to help ensure your wishes are carried out — even though, he said, with the law as it stands, there are no guarantees.

KEEP A LIST

Make a list of all your digital accounts, including social media, email, online banking, investment, gaming and any other virtual profile you can think of. Include your login information, such as usernames and passwords and encryption data.

PUT SOMEONE IN CHARGE

Tell your estate planner where to find that list and give that person explicit instructions for how you want the information handled. Do they hit the delete button? Or do they notify the company to memorialize your site?

Don't ask this decision-maker to commit a crime by logging in to your accounts; but if the law changes in the future, this step could make it more likely your wishes are fulfilled.

WILL POWER

If you have a will, it's best to include your digital assets there. Some online information has real financial value, and it's good to cover all your assets. A McAffee survey found that, on average, Americans believe the financial and emotional value of their digital assets are worth about $55,000.

HOPE FOR THE BEST

Sometimes, you can do everything right and still not get the results you want. Until there is more legal clarification, you just have to do everything you can and hope that it works out.

Lauren Gambino
The Associated Press

BEAVERTON, Ore. — A grieving Oregon mother who battled Facebook for full access to her deceased son's account has been pushing for years for something that would prevent others from losing photos, messages and other memories — as she did.

"Everybody's going to face this kind of a situation at some point in their lives," said Karen Williams, whose 22-year-old son died in a 2005 motorcycle accident.

The Oregon Legislature responded and took up the cause recently with a proposal that would have made it easier for loved ones to access the "digital assets" of the deceased, only to be turned back by pressure from the tech industry, which argued that both a 1986 federal law and voluntary terms of service agreements prohibit companies from sharing a person's information — even if such a request were included in a last will and testament.

Lobbyists agree the Stored Communications Act is woefully out of date but say that until it's changed, laws passed at the state level could be unconstitutional.

"Everybody wants to do the right thing, but the hard legal reality is the federal communications act," said Jim Hawley, a vice president at TechNet, an industry group that represents companies including Google and Microsoft.

Oregon lawmakers moved ahead anyway with a proposal that would have given "digital assets" — everything from photos and messages stored online to intellectual property and banking information — the same treatment as material property for estate purposes.

"I think it's time for us to really look at what we can do now," said Democratic Sen. Floyd Prozanski after hearing Williams testify about her loss last month.

"This law is a real need as we have moved into a digital world."

Lane Shetterly,
an Oregon attorney

Two weeks later, however, language in the bill that would have covered social media accounts, from Facebook to Flickr, was stripped as tech lobbyists said the federal law and company privacy policies trumped anything that the bill would have included.

"I recognize the emotional toll these types of decisions can have on a family who's lost a loved one," Prozanski said Thursday. "But some of these issues may have to be addressed when we have more information than we currently have."

Still, the problem persists and discussions on the issue are gaining momentum. As unlikely as such a case might be, even if a person willingly gives login and password information to someone whom they authorize to access a given digital account, it would violate most terms-of-service agreements and both people could be charged with cybercrimes and face civil action from Internet companies under current law.

Currently, five states have digital assets laws, which vary. This group includes Oklahoma, which passed a law two years ago allowing estate lawyers to access digital assets, even social media accounts. That measure did not face the opposition that has emerged in Oregon.

"There is some question if laws like the one we passed in Oklahoma, would stand up to a challenge by Facebook and Gmail saying their terms of service agreements supersede laws like this one and the one being discussed in Oregon," said Ryan Kiesel, a former Oklahoma legislator who wrote the law.

"That's a question that remains to be answered," he added.

Several other states, including Nebraska — guided in part by the story of Williams' 22-year-old son, Loren — are also considering proposals. And the Uniform Law Commission, a non-profit, non-partisan group that writes model legislation for states to help standardize laws around the nation, is examining the issue.

"This law is a real need as we have moved into a digital world," said Lane Shetterly, an Oregon attorney and a representative on the commission's drafting committee. The group is responsible for standardizing a range of legislation, including commercial transaction regulations and child custody laws.

Proponents say the need is clear. Without clarity or direction, the digital information left behind by a deceased person can spark emotional legal battles, pitting big business against devastated families. And as more and more memories are being stored online, new tools are necessary to make sure loved ones can easily access personal details that could be lost forever.

"If this were a box of letters under his bed, no one would have thought twice," Williams said.

Months after the death of her first-born son, who was away at college in Arizona, Williams found comfort in his Facebook page. There, she was able to click through photos and letters that helped ease the pain of her loss — for two hours.

She learned of the page from his friends and wanted access to his memories to keep them from being deleted, which was Facebook's policy at the time. Unaware of Internet privacy regulations, she reached out to Facebook for help. As she waited for a response, one of his friends provided a tip that helped her discover his password. "It was like a gift," she said.

Shortly after, however, the site's administrators changed the password, citing company policy in denying her. Williams sued and won, but she never received the full access she sought. Eventually the account was taken down. In the end, she gained little more than a symbolic victory and a role as champion of a cause that didn't exist before the digital age.

Kiesel, the former Oklahoma lawmaker, said the various attempts at legislation have sparked a long-overdue conversation about estate planning for digital assets.

"I think that, because of the wide prevalence of online accounts and digital property, the federal government will ultimately need to pass some legislation that provides greater uniformity," he said.

Congress, however, has no current plans to take up the matter. U.S. Sen. Mark Pryor, an Arkansas Democrat who heads the Senate Commerce Subcommittee on Communications and Technology, is not planning to introduce any digital assets proposals and has not heard any come up, his press secretary said. Also, a bill aimed at modernizing the Stored Communications Act failed in the House Judiciary Committee last year.

EPA Begins Review
Republic Steel Quarry Superfund Site
Elyria, Ohio

U.S. Environmental Protection Agency is conducting a five-year review of the Republic Steel Quarry Superfund site located within the boundaries of Mainey Avenue to the south, West River Road to the west and the Black River to the east. The Superfund law requires regular checkups of sites that have been cleaned up – with waste managed on-site – to make sure the cleanup continues to protect people and the environment. This is the fifth five-year review of this site.

EPA's cleanup removed contaminated sediment (mud) and soil from a drainage ditch and in pollution hot spots around the edge of the quarry, monitored ground water, and performed a fish study to determine health risks. As a result of the first five-year review completed in 1998, the cleanup was expanded to include fixing and inspecting the site fence, posting signs, restricting land use and monitoring ground water on a regular basis.

More information is available at the Elyria Public Library, 320 Washington Ave., and at www.epa.gov/region5/cleanup/republicsteel. The review will be completed by March 2013.

The five-year review is an opportunity to tell EPA about site conditions and any concerns you have. Contact:

Patricia Krause
Community Involvement Coordinator
312-886-9506
krause.patricia@epa.gov

Sheila Sullivan
Remedial Project Manager
312-886-5251
sullivan.sheila@epa.gov

You may also call EPA toll-free at 800-621-8431, 9:30 a.m. to 5:30 p.m., weekdays.

about $55,000.

HOPE FOR THE BEST

Sometimes, you can do everything right and still not get the results you want. Until there is more legal clarification, you just have to do everything you can and hope that it works out.

EPA Begins Review
Republic Steel Quarry Superfund Site
Elyria, Ohio

U.S. Environmental Protection Agency is conducting a five year review of the Republic Steel Quarry Superfund site located within the boundaries of Murray Avenue to the south, West River Road to the west and the Black River to the east. The Superfund law requires regular checkups of sites that have been cleaned up with waste managed on site to make sure the cleanup continues to protect people and the environment. This is the fifth five year review of this site.

EPA's cleanup removed contaminated sediment (mud) and soil from a drainage ditch and in pollution hot spots around the edge of the quarry, monitored ground water, and performed a fish study to determine health risks. As a result of the first five year review completed in 1998, the cleanup was expanded to include fixing and inspecting the site fence, posting signs, restricting land use and monitoring ground water on a regular basis.

More information is available at the Elyria Public Library, 320 Washington Ave., and at www.epa.gov/region5/cleanup/republicsteel. The review will be completed by March 2013.

The five year review is an opportunity to tell EPA about site conditions and any concerns you have. Contact:

Patricia Krause
Community Involvement Coordinator
312 886 9506
krause.patricia@epa.gov

Sheila Sullivan
Remedial Project Manager
312 886 5251
sullivan.sheila@epa.gov

You may also call EPA toll free at 800 621 8431, 9:30 a.m. to 5:30 p.m., weekdays.


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Attachment 6

List of Documents Reviewed

CH2M Hill. 1988. Final Phase I Remedial Investigation Report for Republic Steel Quarry, Elyria, Ohio. REMIV, Zone II. August 26, 1988.

CH2MHill. 1990. Final Supplemental Report for Republic Steel Quarry, Elyria, Ohio. REM IV, Zone II. September26, 1990.

City of Elyria. Declaration of Restrictions (Ordinance # 2002-119) for land use and controls at the Republic Steel Quarry Superfund Site (July 25, 2002).

Ohio Environmental Protection Agency (OEPA), Division of Surface Water Fish Consumption Advisory Update, Feb. 28, 2013. http://www.epa.state.oh.us/dsw/fishadvisory/index.aspx

Ohio Environmental Protection Agency (OEPA). March 2010. Ohio EPA Division of Surface Water Lake Erie Basin Aquatic Life and Human Health Criteria. OAC, Chapter 3745-1.

Ohio Environmental Protection Agency (OEPA). March 2010. Water Use Designations and Statewide Criteria, OAC Chapter 3745-1-07.

Ohio Environmental Protection Agency (OEPA). April 2012. Generic Numerical Standards 3745-300-08.

United States Environmental Protection Agency (U.S. EPA). Update- Spring 2013. Drinking Water Regulations and Health Advisories. Office of Water. Washington, D.C.

United States Environmental Protection Agency (U.S. EPA). 1988. Record of Decision for Republic Steel Quarry, Elyria, Ohio. September 1988.

United States Environmental Protection Agency (U.S. EPA). 2009. National Recommended Water Quality Criteria For Priority Pollutant. Office of Science and Technology (4304T).

United States Environmental Protection Agency (U.S. EPA). Comprehensive Five-year Review Guidance, June 2001.0ffice of Solid Waste and Emergency Response. OSWER Directive 9355.7-03B-P.

United States Environmental Protection Agency (U.S. EPA). Institutional Controls: A Site Managers Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups ", September 2000. Office of Solid Waste and Emergency Response. OSWER Directive 9355.0-74FS-P. EPA 540-F-00-005.

United States Environmental Protection Agency (U.S. EPA) Region 5. Chicago, Illinois. Explanation of Significant Differences for the Republic Steel Quarry Superfund Site, Elyria Ohio. September 28, 2001

United States Environmental Protection Agency (U.S. EPA) Region 5, 5-Year Review Report, Republic Steel Quarry Site, Elyria, Ohio. 1998, Prepared by Roy F. Weston, Inc. U.S. EPA Contract # 68-W8-0089.

Five-Year Review Site Inspection Checklist

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

I. SITE INFORMATION

Site name: Republic Steel Quarry	**Date of inspection:** 08-22-2012
Location and Region: Elyria, Ohio	**EPA ID:** OHD980903447
Agency, office, or company leading the five-year review: U.S. EPA - Region 5	**Weather/temperature:** Sunny, Clear temp ~ 75-80°F

Remedy Includes: (Check all that apply)

- Landfill cover/containment
- ⊗ Access controls
- ⊗ Institutional controls
- Groundwater pump and treatment
- Surface water collection and treatment
- ⊗ Other Soil/Sediment removal, groundwater monitoring as needed.
- Monitored natural attenuation
- Groundwater containment
- Vertical barrier walls

Attachments: Inspection team roster attached Site map attached

II. INTERVIEWS (Check all that apply)

1. **O&M site manager** Aaron Klein, P.E. (Name) City Engineer (Title) 8-22-12 (Date)
   Interviewed ⊗ at site ⊗ at office ⊗ by phone Phone no. 440-326-1435
   Problems, suggestions; Report attached _____

2. **O&M staff** _____ (Name) _____ (Title) _____ (Date)
   Interviewed at site at office by phone Phone no. _____
   Problems, suggestions; Report attached _____

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

Agency City of Elyria
Contact Scott F. Srazin — Law Director — 8/22/12 — 440-326-1464
Name — Title — Date — Phone no.
Problems; suggestions; Report attached See attached

Agency Elyria Police Dept.
Contact ____ — ____ — 8/22/12 — 440-322-2241
Name — Title — Date — Phone no.
Problems; suggestions; Report attached ____

Agency City of Elyria
Contact Tim Ujvari — City engineer — 8/22/12 — 440-326-1346
Name — Title — Date — Phone no.
Problems; suggestions; Report attached See Attached

Agency Ohio EPA
Contact Andrew Kocher — Site Coordinator — 8/22/12 — 330-963-1249
Name — Title — Date — Phone no.
Problems; suggestions; Report attached See attached

4. **Other interviews** (optional) Report attached.

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

1. **O&M Documents**
   - O&M manual — Readily available — Up to date — (N/A)
   - As-built drawings — Readily available — Up to date — (N/A)
   - Maintenance logs — Readily available — Up to date — (N/A)

   Remarks: No operating remedy in place. O+M not specified under RD/RA. Compliance inspection logs by OEPA are kept by city.

2. **Site-Specific Health and Safety Plan** — Readily available — Up to date — (N/A)
   - Contingency plan/emergency response plan — Readily available — Up to date — (N/A)

   Remarks:

3. **O&M and OSHA Training Records** — Readily available — Up to date — (N/A)

   Remarks: City maintains its OSHA records; but this is not related to O+M activities

4. **Permits and Service Agreements**
   - Air discharge permit — Readily available — Up to date — (N/A)
   - Effluent discharge — Readily available — Up to date — (N/A)
   - Waste disposal, POTW — Readily available — Up to date — (N/A)
   - Other permits — Readily available — Up to date — (N/A)

   Remarks:

5. **Gas Generation Records** — Readily available — Up to date — (N/A)

   Remarks:

6. **Settlement Monument Records** — Readily available — Up to date — (N/A)

   Remarks:

7. **Groundwater Monitoring Records** — (Readily available) — Up to date — N/A

   Remarks: U.S. EPA has historical records. No ongoing groundwater monitoring conducted

8. **Leachate Extraction Records** — Readily available — Up to date — (N/A)

   Remarks:

9. **Discharge Compliance Records**
   - Air — Readily available — Up to date — (N/A)
   - Water (effluent) — Readily available — Up to date — (N/A)

   Remarks:

10. **Daily Access/Security Logs** — Readily available — Up to date — (N/A)

    Remarks: Not maintained on regular basis. Adjacent facility maintains security logs which carry over to Site access

IV. O&M COSTS

1. **O&M Organization**
   (State in-house) Contractor for State
   (PRP in-house) Contractor for PRP
   Federal Facility in-house Contractor for Federal Facility
   Other_____

2. **O&M Cost Records** Not available
   Readily available Up to date
   Funding mechanism/agreement in place
   Original O&M cost estimate_____ Breakdown attached

   Total annual cost by year for review period if available

   From_____ To_____ _____ Breakdown attached
   Date Date Total cost
   From_____ To_____ _____ Breakdown attached
   Date Date Total cost
   From_____ To_____ _____ Breakdown attached
   Date Date Total cost
   From_____ To_____ _____ Breakdown attached
   Date Date Total cost
   From_____ To_____ _____ Breakdown attached
   Date Date Total cost

3. **Unanticipated or Unusually High O&M Costs During Review Period**
   Describe costs and reasons: No records available documenting unusually high costs. The City has spent as much as $3,000-$3,500 during a one-year period since the last Five-Year Review.

V. ACCESS AND INSTITUTIONAL CONTROLS (Applicable) N/A

A. Fencing

1. **Fencing damaged** Yes Location shown on site map (X Gates secured) N/A
   Remarks The fencing is damaged in 3 areas noticeable during site inspection. Most of the large stretches of damage are along the eastern perimeter near River

B. Other Access Restrictions

1. **Signs and other security measures** Location shown on site map N/A
   Remarks Signs are posted, but too sporsely. Some signs are not fully visible and often get vandalized.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented (Yes) No N/A
Site conditions imply ICs not being fully enforced (Yes) No N/A

Type of monitoring (e.g., self-reporting, drive by) City of Elyria inspects site access controls as needed
Frequency Full compliance inspection conducted annually by OhioEPA;
Responsible party/agency City of Elyria accompanies OEPA on inspection.
Contact Aaron Klein, City of Elyria — City Engineer — 8/22/13 — 440-326-1435
Name — Title — Date — Phone no.

Reporting is up-to-date Yes (No) N/A
Reports are verified by the lead agency Yes (No) N/A

Specific requirements in deed or decision documents have been met Yes (No) N/A
Violations have been reported (Yes) No N/A
Other problems or suggestions: (Report attached)
The ICs have been implemented, but have not been fully enforced due to time and budget constraints. The main concern is site access controls need to be maintained

2. **Adequacy** (ICs are adequate) ICs are inadequate N/A
Remarks
Under current land use, ICs are adequate if maintained/enforced

D. General

1. **Vandalism/trespassing** (Location shown on site map) No vandalism evident
Remarks Vandalism and trespassing occur frequently in hot/warm weather & Most trespassing involves recreating in quarry

2. **Land use changes on site** (N/A)
Remarks None

3. **Land use changes off site** (N/A)
Remarks None since the 2008 Five-Year Review reporting

VI. GENERAL SITE CONDITIONS

A. Roads Applicable (N/A)

1. **Roads damaged** Location shown on site map Roads adequate (N/A)
Remarks

B. Other Site Conditions

Remarks The site and fence perimeters are overgrown with dense foliage and brush which obscures the breeches in fence. Erosion in some areas along South and East undercuts the fenceline causing access gaps.

VII. LANDFILL COVERS Applicable (N/A)

A. Landfill Surface

1. **Settlement** (Low spots) Location shown on site map Settlement not evident
   Areal extent____ Depth____
   Remarks____

2. **Cracks** Location shown on site map Cracking not evident
   Lengths____ Widths____ Depths____
   Remarks____

3. **Erosion** Location shown on site map Erosion not evident
   Areal extent____ Depth____
   Remarks____

4. **Holes** Location shown on site map Holes not evident
   Areal extent____ Depth____
   Remarks____

5. **Vegetative Cover** Grass Cover properly established No signs of stress
   Trees/Shrubs (indicate size and locations on a diagram)
   Remarks____

6. **Alternative Cover (armored rock, concrete, etc.)** N/A
   Remarks____

7. **Bulges** Location shown on site map Bulges not evident
   Areal extent____ Height____
   Remarks____

8.	**Wet Areas/Water Damage**	Wet areas/water damage not evident	
	Wet areas	Location shown on site map	Areal extent_____
	Ponding	Location shown on site map	Areal extent_____
	Seeps	Location shown on site map	Areal extent_____
	Soft subgrade	Location shown on site map	Areal extent_____
	Remarks_____		
9.	**Slope Instability**	Slides	Location shown on site map / No evidence of slope instability
	Areal extent_____		
	Remarks_____		

B. Benches Applicable (N/A)

(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

1.	**Flows Bypass Bench**	Location shown on site map	N/A or okay
	Remarks_____		
2.	**Bench Breached**	Location shown on site map	N/A or okay
	Remarks_____		
3.	**Bench Overtopped**	Location shown on site map	N/A or okay
	Remarks_____		

C. Letdown Channels Applicable (N/A)

(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

1.	**Settlement**	Location shown on site map	No evidence of settlement
	Areal extent_____	Depth_____	
	Remarks_____		
2.	**Material Degradation**	Location shown on site map	No evidence of degradation
	Material type_____	Areal extent_____	
	Remarks_____		
3.	**Erosion**	Location shown on site map	No evidence of erosion
	Areal extent_____	Depth_____	
	Remarks_____		

4. **Undercutting** Location shown on site map No evidence of undercutting
Areal extent_____ Depth _____
Remarks_____

5. **Obstructions** Type_____ No obstructions
Location shown on site map Areal extent
Size_____
Remarks_____

6. **Excessive Vegetative Growth** Type_____
No evidence of excessive growth
Vegetation in channels does not obstruct flow
Location shown on site map Areal extent_____
Remarks_____

D. Cover Penetrations Applicable (N/A)

1. **Gas Vents** Active Passive
Properly secured/locked Functioning Routinely sampled Good condition
Evidence of leakage at penetration Needs Maintenance
N/A
Remarks_____

2. **Gas Monitoring Probes**
Properly secured/locked Functioning Routinely sampled Good condition
Evidence of leakage at penetration Needs Maintenance N/A
Remarks_____

3. **Monitoring Wells** (within surface area of landfill)
Properly secured/locked Functioning Routinely sampled Good condition
Evidence of leakage at penetration Needs Maintenance N/A
Remarks_____

4. **Leachate Extraction Wells**
Properly secured/locked Functioning Routinely sampled Good condition
Evidence of leakage at penetration Needs Maintenance N/A
Remarks_____

5. **Settlement Monuments** Located Routinely surveyed N/A
Remarks

E. Gas Collection and Treatment Applicable (N/A)

1. **Gas Treatment Facilities**
   Flaring Thermal destruction Collection for reuse
   Good condition Needs Maintenance
   Remarks_____

2. **Gas Collection Wells, Manifolds and Piping**
   Good condition Needs Maintenance
   Remarks_____

3. **Gas Monitoring Facilities** (*e.g.*, gas monitoring of adjacent homes or buildings)
   Good condition Needs Maintenance N/A
   Remarks_____

F. Cover Drainage Layer Applicable (N/A)

1. **Outlet Pipes Inspected** Functioning N/A
   Remarks_____

2. **Outlet Rock Inspected** Functioning N/A
   Remarks_____

G. Detention/Sedimentation Ponds Applicable (N/A)

1. **Siltation** Areal extent_____ Depth_____ N/A
   Siltation not evident
   Remarks_____

2. **Erosion** Areal extent_____ Depth_____
   Erosion not evident
   Remarks_____

3. **Outlet Works** Functioning N/A
   Remarks_____

4. **Dam** Functioning N/A
   Remarks_____

H. Retaining Walls Applicable (N/A)

1. **Deformations** Location shown on site map Deformation not evident
   Horizontal displacement_____ Vertical displacement_____
   Rotational displacement_____
   Remarks_____

2. **Degradation** Location shown on site map Degradation not evident
   Remarks_____

I. Perimeter Ditches/Off-Site Discharge Applicable (N/A)

1. **Siltation** Location shown on site map Siltation not evident
   Areal extent_____ Depth_____
   Remarks_____

2. **Vegetative Growth** Location shown on site map N/A
   Vegetation does not impede flow
   Areal extent_____ Type_____
   Remarks_____

3. **Erosion** Location shown on site map Erosion not evident
   Areal extent_____ Depth_____
   Remarks_____

4. **Discharge Structure** Functioning N/A
   Remarks_____

VIII. VERTICAL BARRIER WALLS Applicable (N/A)

1. **Settlement** Location shown on site map Settlement not evident
   Areal extent_____ Depth_____
   Remarks_____

2. **Performance Monitoring** Type of monitoring_____
   Performance not monitored
   Frequency_____ Evidence of breaching
   Head differential_____
   Remarks_____

Shaded boxes for 2003 sampling event indicate MCL and/or SMCL exceedances.

ND - Analyzed for but not detected
NA - Not analyzed
NR - Not relevant (chemical was detected in only one sample and is shown as the maximum)
a - Based on AWQC
b - The new MCL value for arsenic of 10 ug/L took effect on January 23, 2006
c - A second groundwater monitoring was performed in March 1988 and October 1988 to verify the presence of VOCs, specifically methylene chloride and acetone. These results confirmed that there was no VOC contamination in the downgradient monitoring wells. These reports are reported in the Supplemental Investigation Report (Sept. 1990).
(s) - Indicates the value is a Secondary MCL based on aesthetic qualities and not health effects.
(TT) -Indicates the standard is not numerical but is based on a treatment technique, which is a required process to reduce the level of this contaminant in drinking water. The TT is required when the Action Level is exceeded. The Action Level is a health-based limit.
(J) - Estimated concentration

Table 8: Groundwater Data Summary for Republic Steel Quarry Site

CHEMICAL	MCL (ug/L)	Range of Detected Concentrations from RI Sampling (Mar/Oct 1988)		Range of Detected Concentrations: 1st Five-Year Review (November 1996)		Range of Detected Concentrations: 2nd Five-Year Review (February 2003)	
		Minimum (ug/L)	Maximum (ug/L)	Minimum (ug/L)	Maximum (ug/L)	Minimum (ug/L)	Maximum (ug/L)
Organics							
Acetone [a]		NR	55	NA	NA	NA	NA
Benzoic Acid		NR	42	NA	NA	NA	NA
Bis (2-ethylhexyl) phthalate	6	7.1	11	0.7	1	10	55
Caprolactam						2.	78
Di-n-butylphthalate		NR	3.9	ND	ND	ND	ND
Methylene Chloride [c]	5	3	140	NA	NA	NA	NA
Pentachlorophenol	1	NR	5	ND	ND	ND	ND
Phenol	1 [a]	NR	10	ND	ND	0.6 (J)	2
Inorganics							
Aluminum	50-200 (s)	482	11,600	52.1	334	69.1	2,050
Antimony	6			NR	8.9	9.7	40.6
Arsenic	10 [b]	13	21	NR	28.8	13.4	22.1 (J)
Barium	2,000	20	114	3.6	78.9	11.4	73.2
Beryllium	4	1	2.1	NR	1.2	0.10	1.7
Cadmium	5	2.8	6.4	1.1	5.2	NR	0.84
Calcium	--	69,700	477,000	36,500	381,000	39,900	160,000
Chromium	100	8.5	20	1.8	3.7	2.5	40.4
Cobalt	--	9.4	18	1.4	14.9	7.8	16.6
Copper	1,300 (TT)	6.5	28	2.4	2.6	NR	10.8
Iron	300 (s)	283	571,000	286	568,000	43.6	105,000
Lead	15 (TT)	NR	19	ND	ND	1.5	8.2 (J)
Magnesium	---	16,900	88,000	10,200	52,600	11,500	39,400
Manganese	50 (s)	145	11,600	36.3	7,870	7.0	2,460
Mercury	2			ND	ND	NR	0.16
Nickel	100	24	131	2.4	13.4	2.9	14.5
Potassium	---	3,250	37,200	840	10,000	1000	10,800
Selenium	50			NR	13.7	3.2	4.2
Silver	100 (s)	NR	4.1	ND	ND	0.83	6.7
Sodium	---	29,700	324,000	16,500	398,000	5,240	297,000
Thallium	2			2.4	43.6	NR	13.9 (J)
Vanadium	—	8.7	57	ND	ND	1.8	10.8
Zinc	5,000 (s)	7.7	106	2.5	17.7	19.7	109
Cyanide	200			2.1	3.3	5.1	102

IX. GROUNDWATER/SURFACE WATER REMEDIES Applicable (N/A)

A. Groundwater Extraction Wells, Pumps, and Pipelines Applicable N/A

1. **Pumps, Wellhead Plumbing, and Electrical**
   Good condition All required wells properly operating Needs Maintenance N/A
   Remarks _____

2. **Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances**
   Good condition Needs Maintenance
   Remarks _____

3. **Spare Parts and Equipment**
   Readily available Good condition Requires upgrade Needs to be provided
   Remarks _____

B. Surface Water Collection Structures, Pumps, and Pipelines Applicable (N/A)

1. **Collection Structures, Pumps, and Electrical**
   Good condition Needs Maintenance
   Remarks _____

2. **Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances**
   Good condition Needs Maintenance
   Remarks _____

3. **Spare Parts and Equipment**
   Readily available Good condition Requires upgrade Needs to be provided
   Remarks _____

C. Treatment System Applicable (N/A)

1. **Treatment Train** (Check components that apply)
   - Metals removal — Oil/water separation — Bioremediation
   - Air stripping — Carbon adsorbers
   - Filters
   - Additive (e.g., chelation agent, flocculent)
   - Others
   - Good condition — Needs Maintenance
   - Sampling ports properly marked and functional
   - Sampling/maintenance log displayed and up to date
   - Equipment properly identified
   - Quantity of groundwater treated annually
   - Quantity of surface water treated annually
   - Remarks

2. **Electrical Enclosures and Panels** (properly rated and functional)
   - N/A — Good condition — Needs Maintenance
   - Remarks

3. **Tanks, Vaults, Storage Vessels**
   - N/A — Good condition — Proper secondary containment — Needs Maintenance
   - Remarks

4. **Discharge Structure and Appurtenances**
   - N/A — Good condition — Needs Maintenance
   - Remarks

5. **Treatment Building(s)**
   - N/A — Good condition (esp. roof and doorways) — Needs repair
   - Chemicals and equipment properly stored
   - Remarks

6. **Monitoring Wells** (pump and treatment remedy)
   - Properly secured/locked — Functioning — Routinely sampled — Good condition
   - All required wells located — Needs Maintenance — (N/A)
   - Remarks

D. Monitoring Data Groundwater is no longer monitored, but wells are intact

1. Monitoring Data
   - Is routinely submitted on time — Is of acceptable quality

2. Monitoring data suggests: ~ adq 2003 (last monitoring)
   - ☒ Groundwater plume is effectively contained — ☒ Contaminant concentrations are declining Generally

C. Early Indicators of Potential Remedy Problems

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

The city's budget has decreased over the years necessitating the closing of some of the city pools in the Slemmer. This could contribute to the attractiveness of the quarry as a swimming area. The fence is vandalized often with a short time the city repairs. There has been no new solutions to this problem, especially since the city cannot afford to increase security patrols to apprehend violators.

D. Opportunities for Optimization

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

The city does apprehend violators of the ordinance. It is not clear how frequently and successfully the violators are prosecuted.

There are really no site-related exposure issues when trespassing occurs. The biggest risk is the physical hazard the quarry poses.

D. Monitored Natural Attenuation Not part of Remedy

1. **Monitoring Wells** (natural attenuation remedy)
(X) Properly secured/locked Functioning Routinely sampled Good condition
(X) All required wells located Needs Maintenance (N/A)
Remarks The wells are located and secured. They are rusted and 1-2 of the concrete pads are cracked.

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

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

The remedy included excavation of soils exceeding 300 ppb cPAHs; fencing the site, placing signs, and groundwater monitoring as needed. The ESD required ICs. The ICs were implemented as a Declaration of Restrictions codified in the city ordinance and specify zoning the property as "Heavy Industrial"; prohibiting all groundwater use; requiring use of the Slyud Supply for potable water; prohibiting all uses of the quarry, and requiring site access controls and security.

Presently, the site access controls are not fully effective as the fence is frequently vandalized and the quarry is trespassed upon.

B. Adequacy of O&M

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

The Site RD/RA did not prescribe or require O&M procedures. The present procedures involve accompanying the DEPA on the annual compliance inspection and noting any violations of the city ordinance. When violations (usually involving security breaches) are noted -- as such as vandalism of site access controls, the city attempts to repair/restore the controls if the operating budget allows. The fence and sign repair need to occur on a more frequent basis, if possible.

Attachment 8

Republic Steel Quarry Site - Five Year Review Inspection
August 22, 2013

Photo 1: Elyria Fire Department in yard near security area of the former Maverick Tube Steel facility

Photo 2: Approach to front gate of quarry property from the Maverick Tube yard. Note that the posted sign cannot be read from outside of the gate. Text of the sign reads the same as that in Photo 16.

Republic Steel Quarry Site - Five Year Review Inspection
August 22, 2013

Photo 3: A view from inside the fence line of the RSQ Site. The photo was taken from inside the former pickle liquor ditch looking southeast upgradient toward plant discharge point.

Photo 4: A view from the southeast edge of the quarry pond looking southwest. The former boat launch area is in the bottom left corner of the photo. The island is visible in the mid-ground.

Republic Steel Quarry Site - Five Year Review Inspection
August 22, 2013

Photo 5: A view from the southeast edge of quarry near the outlet structure looking to the northwest. The right mid-ground shows the opening into the northern end of the quarry pond.

Photo 6: A view along southeast perimeter of RSQ Site looking northward. The Black River is immediately to the east (right) of the photo edge. The quarry bank is just left of the fence line. The photo shows a large breach where the fence was cut and rolled to enable access.

Republic Steel Quarry Site - Five Year Review Inspection
August 22, 2013

Photo 7: A view southward from same approximate area as the previous photo shows three fence poles where the fencing has been removed. The middle fence pole is visible in the mid-ground. The breach spans about 20 feet of perimeter length. The remains of a camp fire are visible in the foreground.

Photo 8: A view from outside of the RSQ Site eastern perimeter fence near the quarry outlet structure looking eastward across the Black River toward the subdivision. The homes are just beyond the trees in the background. The low level of the river makes it easily fordable.

Republic Steel Quarry Site - Five Year Review Inspection
August 22, 2013

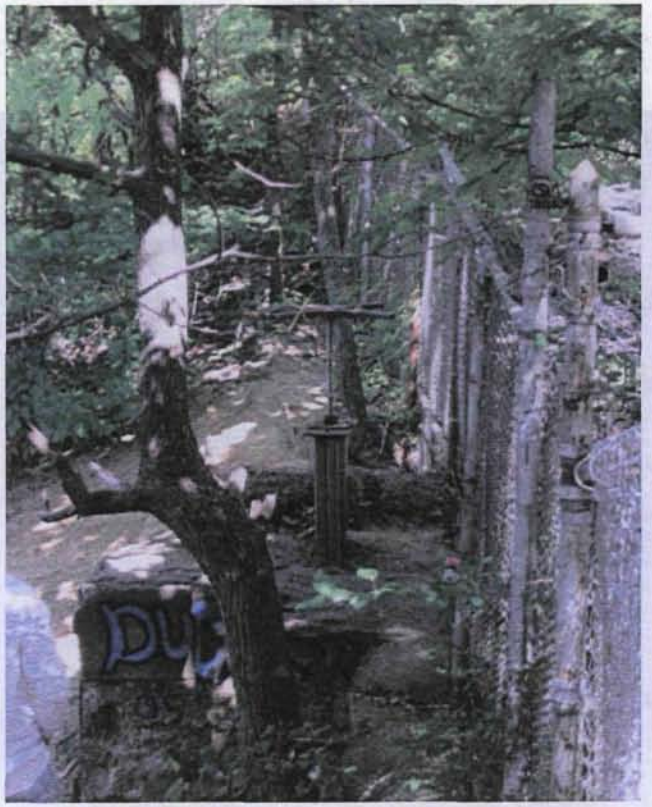

Photo 9: view of outlet structure from inside the RSQ Site eastern perimeter fence looking northward. Graffiti and evidence of trespassing and vandalism are present.

Photo 10: Area of fence line along the eastern perimeter where the city of Elyria was able to block access through the gap beneath fence line.

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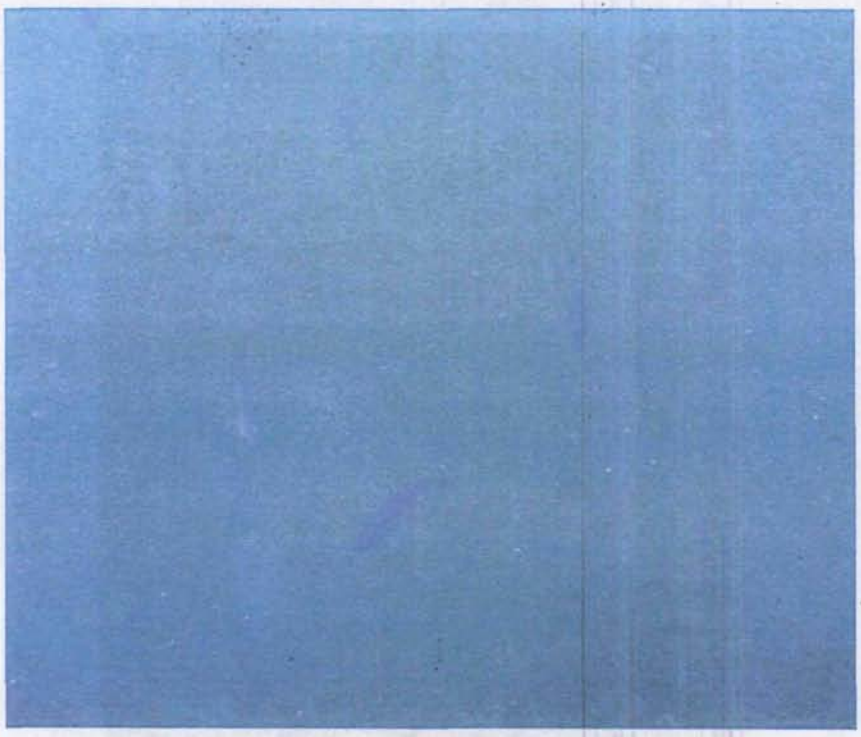

Photo 11: From the eastern bluff of the quarry pond, several species of fish were observed.

Photo 12: View of more vandalism to a large area of the RSQ Site perimeter fence.

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Photo 13: Remnants of a makeshift camp in the western yard of the RSQ Site property. The photo shows the deciduous tree growth and sparser foliage in the Western Yard, as compared to the eastern portion of the property.

Photo 14 : Monitoring Well (MW) B4 located in the southeast corner of the property along West River Road. The well is rusted shut and has a cracked concrete pad.

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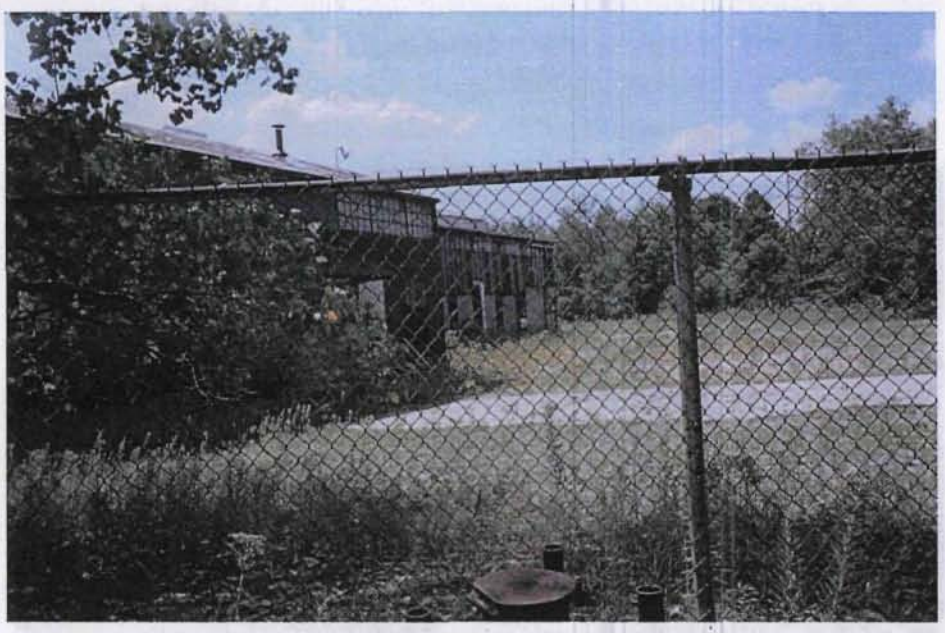

Photo 15: Southern perimeter fence line which separates the RSQ Site property from the former Maverick Tube facility property. The view is from inside the RSQ property looking southward. The top of MW B-6 is in the immediate foreground.

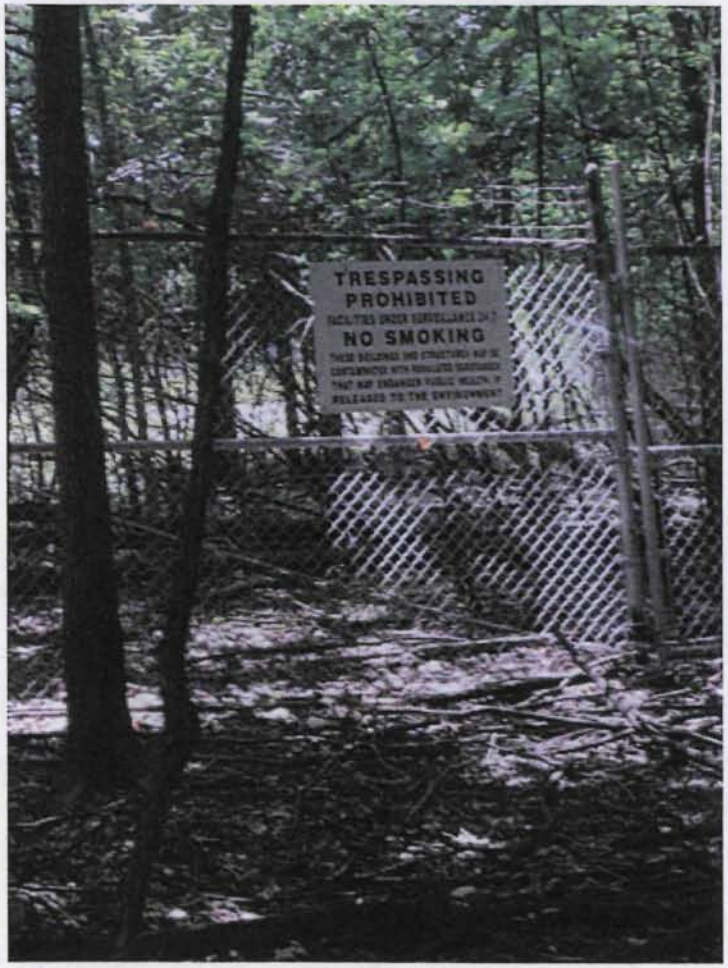

Photo 16: A view from inside the RSQ Site property at the south perimeter fence line. The sign posted on the gate separating the quarry site property from the adjacent Maverick Tube facility was posted by the steel mill security staff.

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Photo 17: A view looking eastward toward MW B-2 located in the backyard of a resident of the New Riverbend Homes subdivision along West River Road. The residential lot is immediately adjacent to the RSQ Site northern property line. MW B-2 is representative of the condition of the other MWs.

Photo 18: Warning sign posted by the city of Elyria along the western perimeter fence line which runs alongside West River Road. The sign reads: "No Trespassing by Order of City of Elyria Ord. 541.05." The dense foliage on the fence is evident.