



From:
Aurubis Buffalo, Inc.
P.O. Box 981
Buffalo, NY 14240

Date: June 30, 2017

To:
New York State Department of Conservation
Attn: David Szymanski, Project Manager
270 Michigan Ave
Buffalo, NY 14203-2999

RE: Periodic Review Report for Site No. V00314 & June 2017 Inspections.

Dear Mr. Szymanski,

Enclosed are:

- Periodic Review Report for Site No. V00314, Aurubis Buffalo, Inc., located @ Military and Sayre St. Buffalo, NY 14207
- Completed site inspection logs, Table 3 & 4 for June 2017
- Complete maintenance log, Table 5
- Figures 1-7 from SMP
- Enclosure 2 certification form

Please contact me should you have any questions or require additional information.

Best Regards,

A handwritten signature in blue ink that reads "Elizabeth Zurowski".

Elizabeth Zurowski
Senior Manager – Health, Safety & Environment
Aurubis Buffalo, Inc.
e.zurowski@aurubis.com
work: (716)879-690
mobile: (716)289-4662

**Periodic Review Report for Site No. V00314, Aurubis Buffalo, Inc., located @
Military and Sayre St. Buffalo, NY 14207**

Dated June 27, 2017

I. EXECUTIVE SUMMARY

This 71-acre parcel has an active plant, which occupies approximately 1.2 million square feet. It has operated as a copper based alloy production facility since 1906. Previous site investigations suggested remedial action to be taken for heavy metals in 5 onsite areas designated as A, C, D, M and J (shown on attachments). Areas A, C, D and M have an asphalt or concrete pavement cover system. Approximately 0.75 acres of area J was covered with 12 inches of clean soil and demarcated with 8 bollards. The plant site, including Area J, is fenced to prevent unauthorized access. In addition, a Declaration of Covenants and Restrictions was recorded against the site (land deed). The restrictive covenants limit the use of the property, prohibit the use of groundwater and require adherence to a Site Management Plan (SMP). The SMP calls for periodic inspection and maintenance of the covers and fences that make up the remedy.

The covers and fences continue to be successful in meeting the goals of preventing exposure to and migration of material offsite. Limited areas of the “pre-existing paved or concrete roadways and parking areas” have limited wear and potholes areas and therefore possible potential for exposure as noted in the report. Aurubis is uncertain if the existing paved areas are included within the SMP and requires clarification from NYSDEC.

Due to a change in personnel the required bi-annual inspections could not be identified in our records. However, the most recent inspections on June 21-23 & 29, 2017 shows that the applied covers and fencing are, for the most part, intact and meeting the intent of the SMP. Minor pothole areas were identified in the “pre-existing paved or concrete roadways and parking areas”.

The fencing along the CSX tracks, the brown field fence beside the substation, and by the ball fields are periodically inspected for breach of integrity by the plant security force. If a breach is found, maintenance is notified and the fence repaired. During the June 29, 2017 inspection an area of fence north of the ball fields was found to be cut / vandalized. A work order was immediately placed to repair the fencing.

II. SITE OVERVIEW

Attached are reproductions of maps submitted with a previous Periodic Review Report. These maps show various areas and features on the site map as well as locations and description of identified areas. The remedial history of the site is as follows:

- Ecology & Environment, Inc. completed a preliminary Site Investigation in 1989.
- A Remedial Investigation of the site, which was completed by E&E in 1991.
- McLaren/ Hart completed a supplemental Remedial Investigation in 1995; they also completed a feasibility study in 1996.

Based on the metal impacted soils found to have concentrations above background in spots over a number of areas that were mostly paved over and one small-unpaved area that had samples showing arsenic above 30mg/kg, the following remedial measures were adopted:

- Areas A, C, D and M to have asphalt or concrete cover system.
- Areas J to have secure perimeter fencing to prevent unauthorized entry.
- A 0.75-acre subset of J to have construction of a vegetated soil cover system and to be delineated with bollards
- Implementation of an O & M program (Operation and Maintenance program) to maintain the integrity of the vegetated soil cover and security fence in area J.
- Deed restrictions associated with these measures to be filed with Erie County.

The Remedial Action Completion Report in regard to the paving of Areas A, C, D, M was submitted to the NYSDEC on May 30th, 2002. The area J interim Remedial measures requiring the secure fencing and soil cover was approved by the NYSDEC in March of 2005. A deed restriction associated with Areas A, C, D, M and J reflecting these measures was filed Aug 24, 2006 and refilled March 2, 2007.

III. REMEDY PERFORMANCE/ EFFECTIVENESS/ PROTECTIVENESS

Areas A, C, D, J & M:

List below are the controls are in place for Areas A, C, D, J & M. The goals of these controls are to prevent exposure to offsite migration of residual industrial contaminants.

- The deed restrictions are in place preserving caps of contaminated areas and perimeter fencing, as well as preclusion of non-industrial occupancy or use of groundwater for wells.
- The procedures for any construction activity, maintenance activity and isolation and testing of any soils from activities in these areas are understood by the plant Environmental/Safety Department. The Environmental/Safety Department is aware of the requirement to notify the New York State Department of Conservation of any activity generating soil or debris from these Areas.
- Plant site perimeter fencing has entrances only in areas that are observed by plant security. This is augmented by security cameras around the perimeter. This aids in keeping unauthorized people away from the entire plant site.
- The facility has adopted a plant wide Soil and Waste Management Plan procedures for the area covered by this Site Management Plan. The Environmental/Safety Dept. has a copy of this Site Management Plan and is the only group authorized to approve movement of soils offsite or onsite. This should prevent inadvertent offsite movement of contaminated soils.
- This facility's Environmental/Safety Department has a well-established procedure for segregation and lay down on polyethylene sheeting of any excavated soils followed by inspection and testing prior to their authorizing disposition of soil.
- Specific PPE requirements are listed in the SMP's Health and Safety section which applies to all plant personnel and contractors while working on site. Additionally,

PPE is addressed as part of the plant Shop and Safety Rules for plant personnel and Contractors rules for outside personnel.

- No changes have been made to the selected remedy since remedy selection.

Two separate inspections were conducted in June.

1. June 21-23, 2017: Paul Bodekor (Aurubis) & John Hanover (US Security) conducted an inspection of:
 - a. Area J
 - b. Areas of A & M for:
 - i. Limits of area paved in accordance with RAWP
 - ii. Limits of 6" sub-base course under asphalt pavement.
 - c. Areas of C & D for:
 - i. Limits of area paved in accordance with RAWP
2. June 29, 2017: Michele Wittman (Hazard Evaluation Inc.) & Elizabeth Zurowski (Aurubis) conducted a cursory inspections for the areas inspected by Paul Bodekor as well as the "pre-existing paved or concrete roadways & parking areas" for Areas A, C, D & M.

The asphalt and concrete covers in areas A, C, D, and M demarcated on figures 3 through 6 as "limits of areas paved in accordance with RAWP" & "limits of 6" sub-base course under asphalt pavement" are intact with just a few exceptions noted below. The potential for either wind or rain driven dispersal of soils in these areas is limited.

- Area C (west of the boiler house): The two stacks have been removed west of the boiler house. Determine when the boiler house stacks were removed, if possible. Current ground cover includes brick/gravel surface. Possible limited washout of the ground cover was observed north of the northern stack (see photo).



- Area D: The substation area is a dangerous area and the inspectors did not enter the substation for further inspection. Limited areas of asphalt wear were present within the locked fence.



Minor pothole areas and deteriorating asphalt and concrete were present in the asphalt and concrete covers in areas A, C, D, and M demarcated on figures 3 through 6 as “pre-existing paved or concrete roadways & parking areas”. However, Aurubis is unclear on whether or not these areas are part of the scope of the inspection/brownfield. NYSDEC should clarify the cover area limits. As required the areas identified during the inspections were identified on Table 3; sample pictures provided in the “supporting documentation” section; and corrective actions identified in the “recommendation” section.

Area J:

- The effectiveness of the soil cap and security measures are revealed by the complete vegetation coverage of the site with healthy cover plants that continue to prevent both wind dispersal or rain wash out.
- There is no evidence of rutting or washout of the cover that would suggest any potential breach of the cover that would foster outward migration of contaminants.
- The vegetation is very healthy.
- There are no ruts or foot print paths through the vegetation that would indicate that people or animals are entering this restricted area.
- No breaches of the security fence were observed during the June 21-23 inspection.
- During the June 29, 2017 inspection an area of fence was identified to have been recently cut near the ball fields, like to retrieve softballs. The cut fence area was reported and a work order placed for immediate repair.
- Within the bollard area:
 - There were no trees suggesting deep roots breaching the cap nor were there signs of any animal burrows
 - The eight original bollards defining the soil cap perimeter are all present and clearly visible.

IV. IC/EC PLAN COMPLIANCE REPORT

The purpose of institutional controls and Engineering Controls in this facility is to reduce direct contact with metal impacted soils, to reduce storm water contact with transport of metal impacted soils, reduce airborne transport of metal impacted soils and reduce leaching potential of metal impacted soils to perched water.

Institutional Controls are:

1. Ground water use restriction. Its performance is evaluated based on evidence of the filing of the deed of restriction and the lack of any evidence of wells in use on the property or its environs. The deed covenant filed March 2, 2009 is documented and date stamped by the Erie County Clerk’s Office. There was no evidence of ground water use observed.
2. Land use restriction to industrial use only. This is to reduce direct contact with metal impacted soils by the public or private parties through residential use. Effectiveness of this requirement is also evaluated by means of the deed restrictions and observed use of the land.
3. Soil & Waste Management Plan: The purpose of this institutional control is to assure that routine and reasonably foreseeable O&M activities and minor

construction activities that may be conducted and that could result in the disturbance of potentially contaminated soils are done in a manner consistent with the purpose of the IC/EC goals and compliance with regulatory requirements. The details of this plan are covered in Section 4.2.2. of the Site Management Plan on file with the Environmental/Safety Department and include:

- a. Repair or replacement of deteriorated asphalt pavement or concrete over 1000 sq. ft. requires NYSDEC notification 10 calendar days in advance of conducting such activity.
- b. Emergency O&M construction that could result in disturbance of contaminated site soils beneath a cover system will be conducted in a manner to disturb contaminated site soils as little as feasible and as outlined in the SWMP. Clean cover material will be kept separate from contaminated soils and contaminated soils should be returned to the excavation or sent for off-site treatment. NYSDEC is to be notified as soon as practical of the nature of the emergency work.
- c. If the surface of exposed underlying site soil is dry and the area of exposed soil relatively flat, it is to be wetted to control dust until the area is covered with clean material.
- d. In Areas A, C, D, M & J, if the volume of soil excavated exceeds 15 cubic yards (c.y.) and the excavated soil will not be returned to the excavation within a 12-hour period, the excavated soil will be covered with polyethylene sheeting at the end of the work shift. Any excess excavated site soil that cannot practically be returned to an excavation in any areas of the site will be sampled and tested as detailed in section 4.2.2.4 of the SMP.
- e. In the unlikely event that collection of potentially contaminated site soil that may have eroded or is otherwise disturbed from beneath the vegetated soil cover system at area J is required, such soil will be carefully excavated, either manually or using construction equipment, as appropriate to the circumstance. Clean cover material will be placed in advance of construction equipment covering the contaminated soil with clean soil and grading and re-vegetation will be conducted. This is detailed in section 4.2.2.3 of the SMP.

Evaluation of these measures is determined by:

- A review of maintenance activities;
- Observation for:
 - Damage to fencing;
 - Damage to covers, asphalt or concrete; and
 - Observation for bare spots in vegetation;
- Whether or not the SWMP was implemented

Interviews with the maintenance employee responsible for the maintenance activities affecting the relevant area were conducted by Paul Bodekor & Elizabeth Zurowski and no issues discovered. Additionally, Paul Bodekor confirmed that during the period of this review, no excavation work was conducted. The only known work conducted during

this reporting period was the paving of the employee parking lot, or Area A, in the late fall of 2016 as identified in Table 5.

Engineering controls are:

1. A 10-foot high chain link security fence, complete with barbed wire constructed around the boundary of Area J.
2. Cover systems at Areas A, C, D, M, and J constructed of:

Area	Cover
A, C & D	4 inch thick asphalt pavement
M	6 inch-thick crushed stone layer overlain by 4-inche of thick asphalt pavement
J (within limits of vegetated soil cover system only (bollard))	6-inch thick common fill layer overlain by 6-inch thick vegetated topsoil layer

The Institutional and Engineering Controls listed above are in place and appear effective. Paul Bodekor confirmed that during the period of this review no excavation work was conducted.

V. INSPECTION AND MAINTENANCE

The components of the inspection and maintenance plan in the SMP are:

1. Scheduled inspections of the asphalt pavement and concrete surfaces at Areas A, C, D, and M; and vegetated soil cover system and fence around Area J will be performed semi-annually. One inspection to be performed in early spring. A second inspection to be performed in September. The inspections should be conducted relevant to issues cited in Tables 1 and 2 of the SMP or other items detracting from the goals of the voluntary clean up. Inspection results are to be recorded on Tables 3 and 4. The field notes from the inspection are to be retained.
2. Minor maintenance activities relating to Areas A, C, D, M, and J as described in the SMP (section 4.2.1) are to be recorded in a Site Maintenance Log, Table 5.

There was a change of Environmental/Safety department personnel during this review period. Consequently, inspection records for the period of July 2015 through spring 2016 could not be located. The September 2016 semi-annual inspection was not completed. However, the results of the June 2017 inspection indicates that the engineering controls remain effective with minor exceptions as noted in section III above (refer to the attached inspection notes, tables 3 & 4 and the supporting documentation section). Additionally the maintenance department (yard gang) does conduct periodic facility inspections. Any fencing issues noted are fixed by either the Aurubis maintenance department or an outside fencing company. Based on an inquiry of the maintenance department personnel, for this reporting period, other than mowing Area J vegetated cover, no maintenance activities were conducted in Area J or Areas A, C, D & M where the capping systems were applied. The only maintain activity was the paving of the “pre-existing asphalt employee parking lot” of Area A and is noted on Table 5. The fencing is periodically

inspected for integrity by the security force at Aurubis and documented in the daily activity reports as “plant rounds”. Any breaches are reported and repaired.

The facility has had a long established practice that all soils facility wide that are moved from the ground have to put on an impervious surface and protected from rain washing it away until it is either returned to the original hole or undergoes testing for determination of offsite disposal in accordance with regulatory requirements and internal good management practices. In the past two years there have been no soil removal activities in the areas covered by the SMP.

VI. OVERALL PERIODIC REVIEW REPORT CONCLUSIONS AND RECOMMENDATIONS

Compliance with SMP:

Site Management Plan (SMP) Required Inspection & Maintenance Activities Compliance list

Section	Area	Requirement	Comments
4.1.1	A, C, D & M	As a minimum, soil exposed beneath the asphalt or concrete over an area greater than 1 square foot would require repair of the asphalt or concrete.	<ul style="list-style-type: none"> • Minor potholes & deteriorating asphalt in the “pre-existing paved or concrete roadways & parking areas” of Areas A, C & D. • Area C: Behind the boiler house where the stacks used to exist & have since been removed • Area D: Possibly inside the substation
4.1.2	J	Mow vegetated soil cover system to a height of approximately 6 inches at least once per year in late summer or early fall, to prevent the establishment of deep rooted woody vegetation.	Maintenance department (Yard gang) mows the area in the fall.
4.1.2	J	Vegetated soil cover <i>may</i> be fertilized every several years with a maintenance fertilizer, if the soil cover inspections indicate the grass may benefit	No fertilizing done in the past two years
4.1.2	J	As a guideline, the vegetated soil cover system will be repaired if an area of the 6-inch topsoil layer is eroded or otherwise disturbed to a depth of 6 inches.	N/A
4.1.3	J	The fence will be repaired if it is	A work order to repair the

		damaged or deteriorated to the extent that potential trespassers or other unauthorized personnel could pass through, over, or under the fence without significant effort.	new hole in area J fence has been submitted.
4.1.3	J	A demarcation bollard will be repaired / replaced if it is damaged or deteriorated to the extent that visual reference to the limits of the vegetated soil cover system would be lost without re-establishment by survey.	N/A
4.2.1	A, C, D, M & J	Semi-annual inspections, early spring & September. A comprehensive walk-over & visual inspection of the asphalt pavement & concrete surfaces at Areas A, C, D & M (Log table 3) and the vegetated soil cover system & security fence at Area J (Log table 4). Comply with H&S requirements (section 4.2.2.5)	See inspection tables 3 & 4 for June 21-23, & 29, 2017
4.2.1	A, C, D, M & J	Minor repairs: less < 1000 sq. ft. of asphalt or concrete or vegetated soil cover < 12 inches of imported soil cover layer. (Log Table 5).	To be determined. See recommendations.
5.1	A, C, D, M & J	Completed site inspection logs & site maintenance logs (sec 4.2) will be submitted to NYSDEC within 2 weeks of completion of the scheduled field inspection. Logs will be submitted to NYSDEC electronically or by e-mail.	See inspection tables 3 & 4 for June 21-23, & 29, 2017. Prior inspection reports could not be found.
5.1	A, C, D, M & J	OAB (Aurubis) will maintain an electronic copy of the completed Site Inspection Log & Site Maintenance Log on file for future reference.	Filed electronically on Safety drive
5.2	A, C, D, M & J	Bi-annual project evaluations will be conducted to document that all institutional & engineering controls at the site are in place & effective, and confirm the remedy continues to be protective of	See inspection tables 3 & 4 for June 21-23, & 29, 2017. Prior inspection reports could not be found. No O&M activities took place for this reporting period other than

	public health & the environment.	noted in Table 5.
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1. IE/EC controls:

IE/EC controls were generally compliant during this two year period with the exception of the semi-annual inspections as listed in the table above. The capping systems applied at this location are doing the job that was intended. The public is protected from wind and water dispersal of contaminants and all persons; public, contractors and employees in the facility are responsibly protected. It needs to be determined if the pre-existing asphalt & concrete paving area are part of the scope of the brownfield. There is some limited potential for exposure in this area as noted in the report.

2. Inspections & Maintenance:

- Not all formal inspection/recording requirements were met during this review period, however the June 21-23, & 29, 2017 inspection demonstrated that the soil & paving barrier & fencing are intact. See attached inspection reports, tables 3 & 4 from the SMP.
- The Environmental/Safety department has developed an environmental compliance calendar. The semi-annual inspections & reporting requirement have been added to the plant environmental compliance calendar and reminder notices scheduled on the electronic Lotus notes calendar for Elizabeth Zurowski.
- The only maintenance activity during this reporting period is listed in table 5.

3. SWMP: No excavations were conducted during the past two years.

Recommendations:

Elizabeth Zurowski is the responsible party for the recommendations listed below:

Item #	Recommendation	Target Date
1	Verify with NYSDEC the scope of each area to be inspected. Are the “pre-existing paved or concrete roadways and parking areas” part of the scope? Document the scope in the SMP.	7/15/17
2	Once the scope of each area has been verified: a) If necessary complete a follow up inspection prior to September. If necessary have a QEP assist with inspection. (7/31/17) b) Determine which surface irregularities fall within the scope of the inspection/brownfield. (7/31/17) c) If necessary have those areas evaluated by a QEP or PE to determine the appropriate corrective action/repair required. (8/31/17) d) Identify a priority list for repair of the surface irregularities & time frames for completion. (10/31/17) e) Submit the plan to NYSDEC. (10/31/17)	10/31/17
3	Review & revise the SMP to:	8/31/17

	<ul style="list-style-type: none"> a) Specify the correct scope of areas to be inspected b) Correct company name c) Update Table 6 to reflect the correct list of emergency contacts d) Include a copy of the “deed restrictions” 	
4	Repair the hole in Area J’s fence and submit documentation to NYSDEC.	7/31/17
5	Ensure all inspections are recorded on tables 3 and 4.	As inspections are completed
6	Ensure all maintenance activities are recorded on table 5.	On going
7	Send copies of all inspections to NYSDEC.	Within 2 weeks of inspection completion
8	Work with NYSDEC to determine future PRR submittal timeframe.	7/31/17

Performance and Effectiveness of the Remedy

Based on the June 2017 inspection the IE and EC generally appear to be effective in achieving the remedial objectives for the site except as noted in the report above.

Future PRR submittals

Recommend that a discussion be held with NYSDEC to clarify the scope of the areas covered and based on the outcome of that discussion, work with NYSDEC to determine the appropriate frequency of the PRR submittals. The engineering controls generally appear to be working; however some improvements in the area where there was “pre-existing paved or concrete roadways and parking areas” may be recommended.

SUPPORTING DOCUMENTATION

Area A

Asphalt covering Area A in good condition.



Issues found in Area A: The “pre-existing paved or concrete roadways and parking lots” of the east most employee parking lot had potholes and grass growing. The surface underneath appeared hard, but not sure if soil was exposed.



Area C
Asphalt covering Area C in good condition



Issues found in Area C (west of the boiler house): Determine when the boiler house stacks were removed (if possible) and if the associated ground cover is appropriate. There appears to be washout of the ground cover towards where the cogeneration plant used to be.



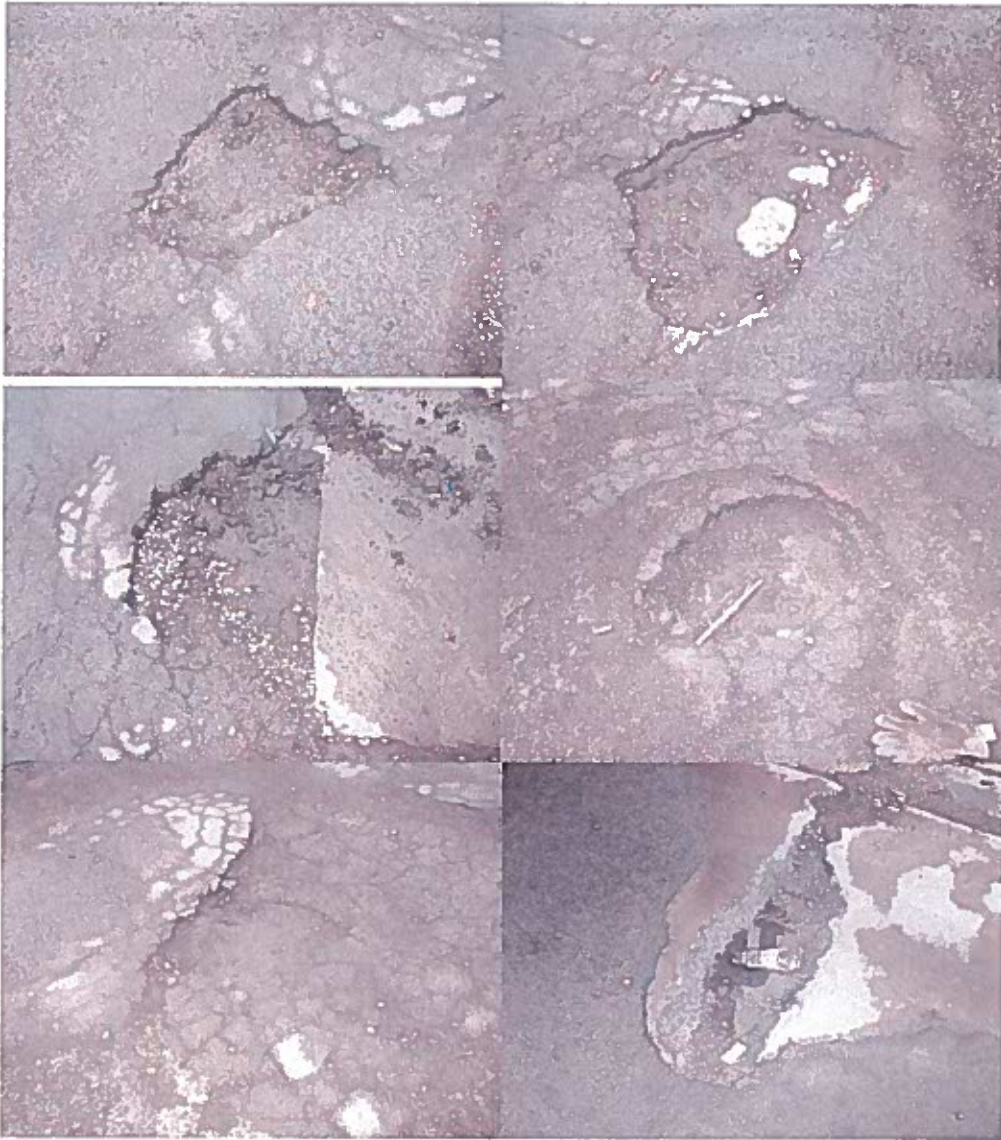
Area D

Asphalt & concrete covering Area D in good condition



Issues found in Area D:

There were large pot holes in the “pre-existing paved or concrete roadways and parking areas”. Soil appears to potential be exposed in some of these pot holes.



Within the substation there appears to be some potential for soil exposure.



Area M
Asphalt covering Area M



No Issues found in Area M

Area J

Area J: Fence in good condition

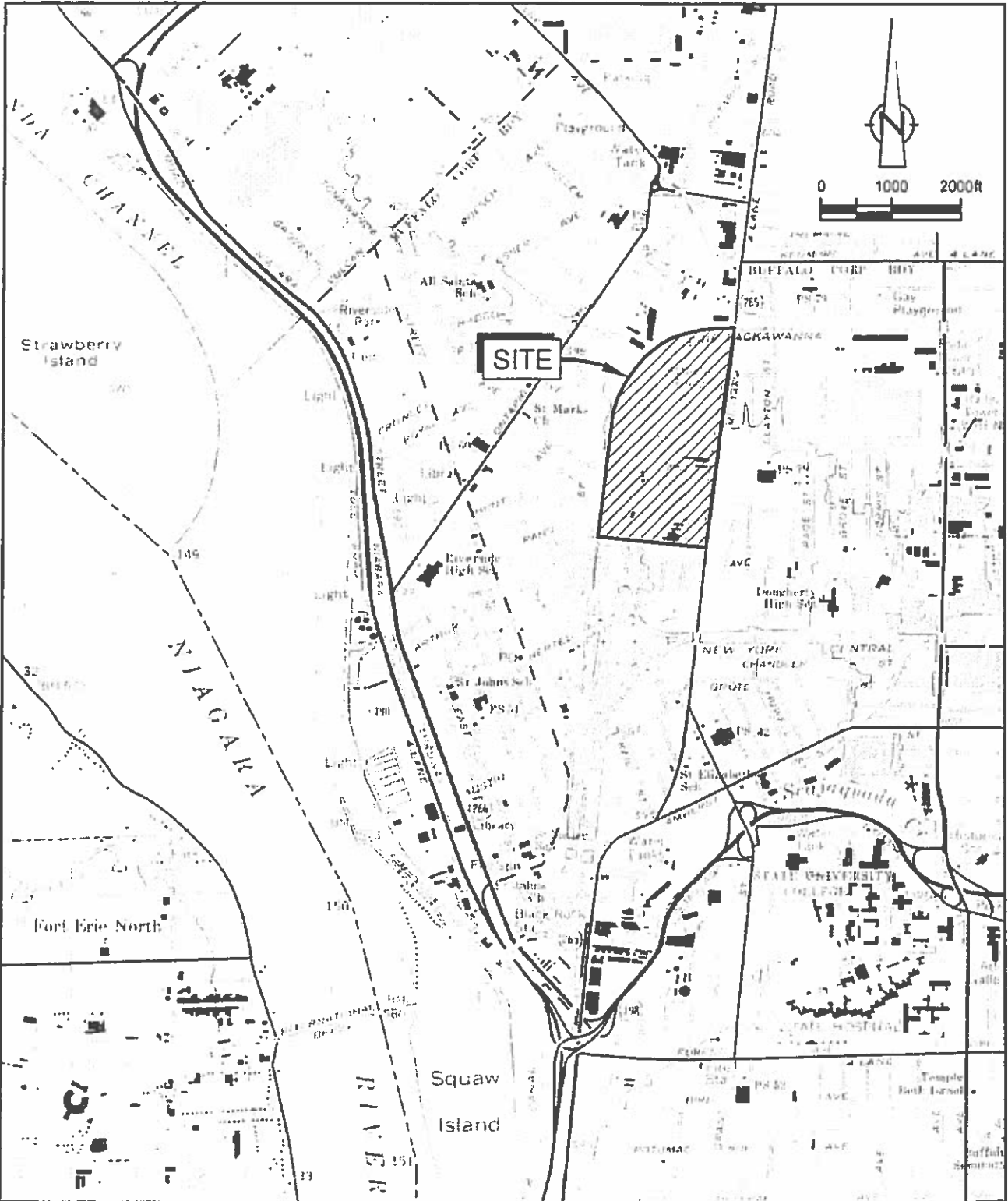


Area J: Vegetation healthy and abundant with no evidence of paths from people or animals.



Issue found in Area J: New hole in fence observed June 29, 2017 (It was not there on June 23). It looked like someone had entered just a short way past the opening.





SOURCE: USGS QUADRANGLE MAP,
BUFFALO NW, NEW YORK



figure 1
SITE LOCATION
OUTOKUMPU AMERICAN BRASS
Buffalo, New York

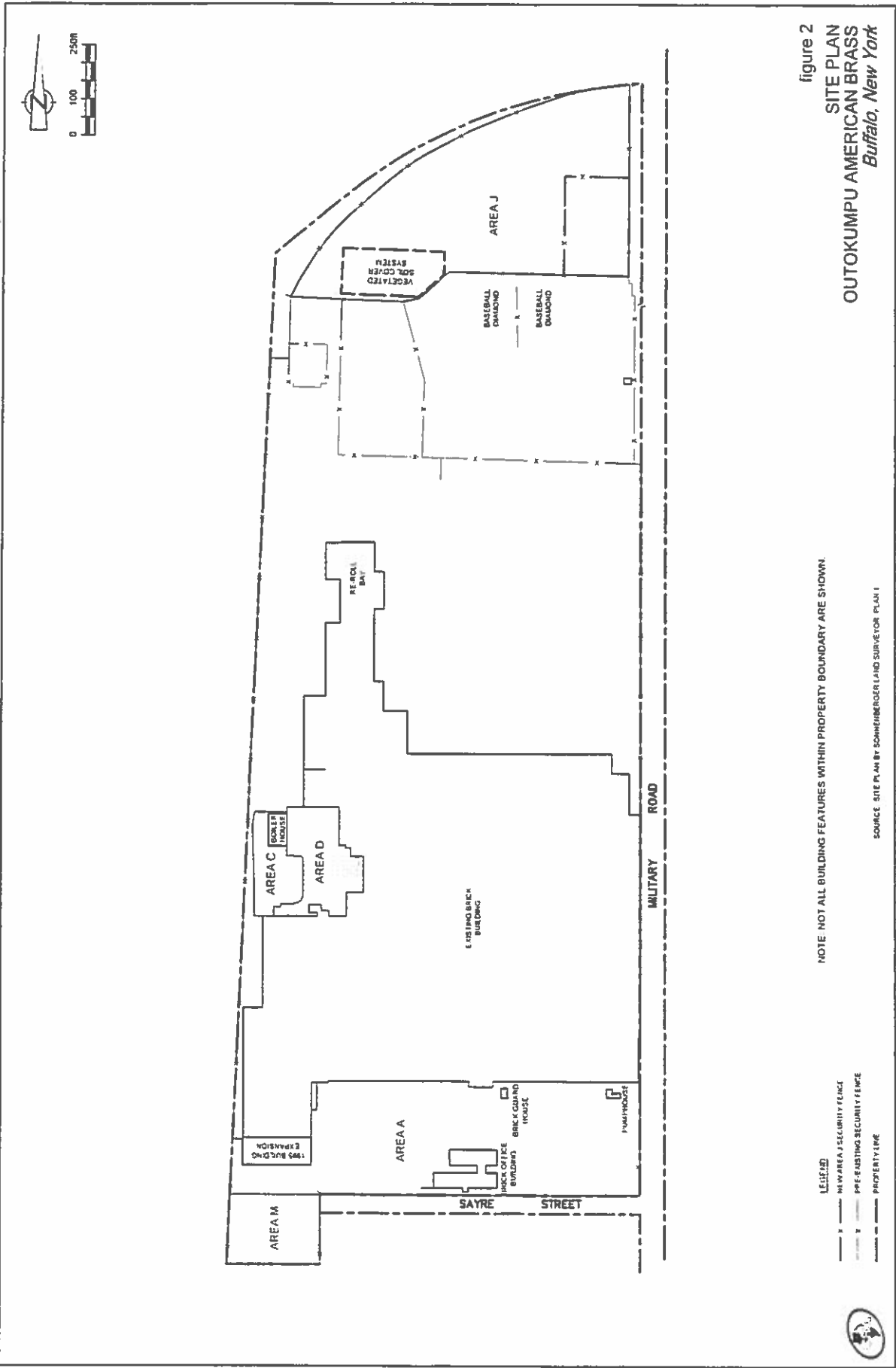
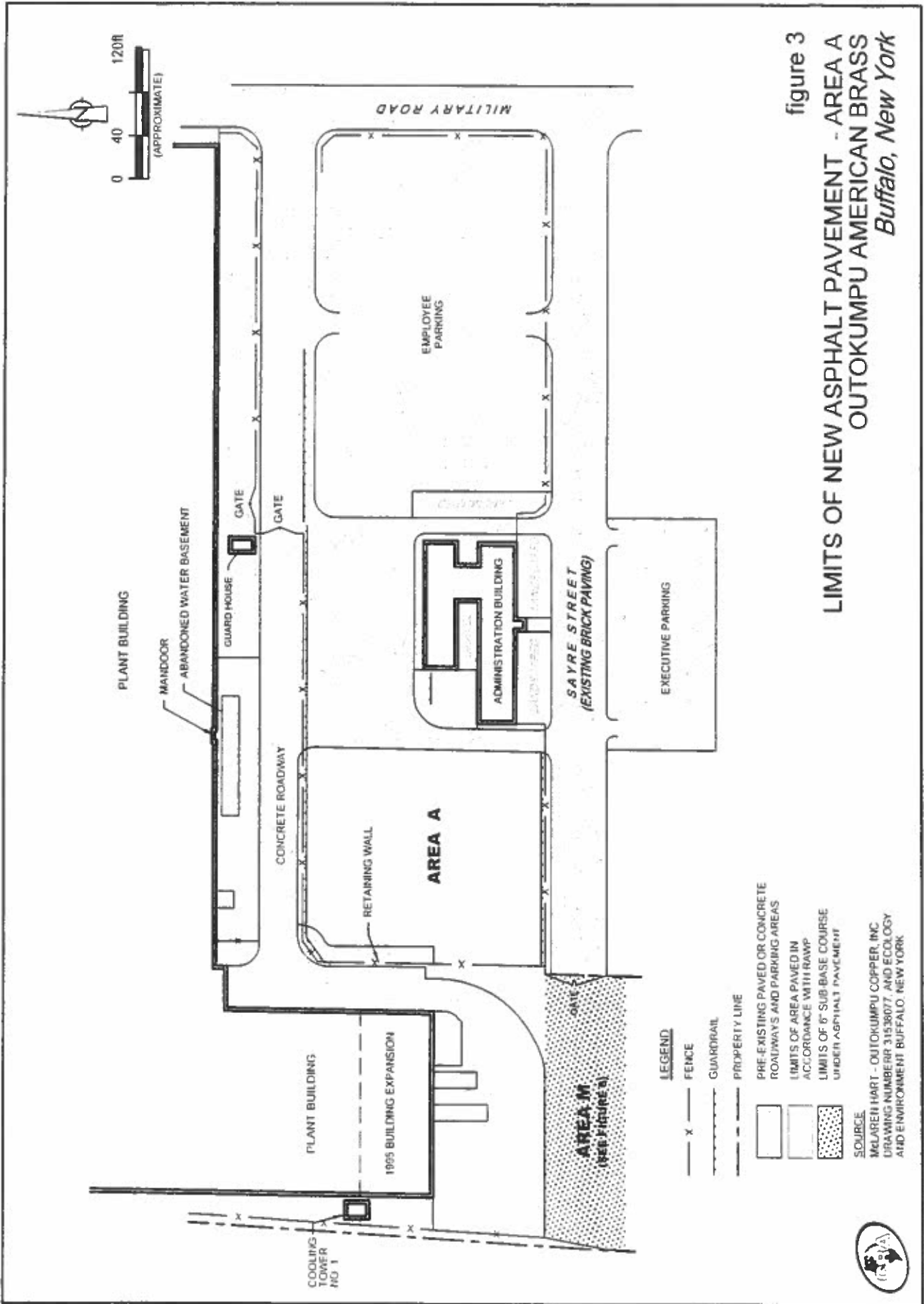
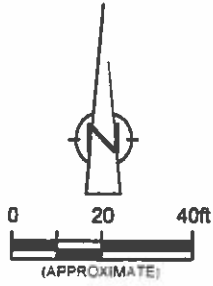


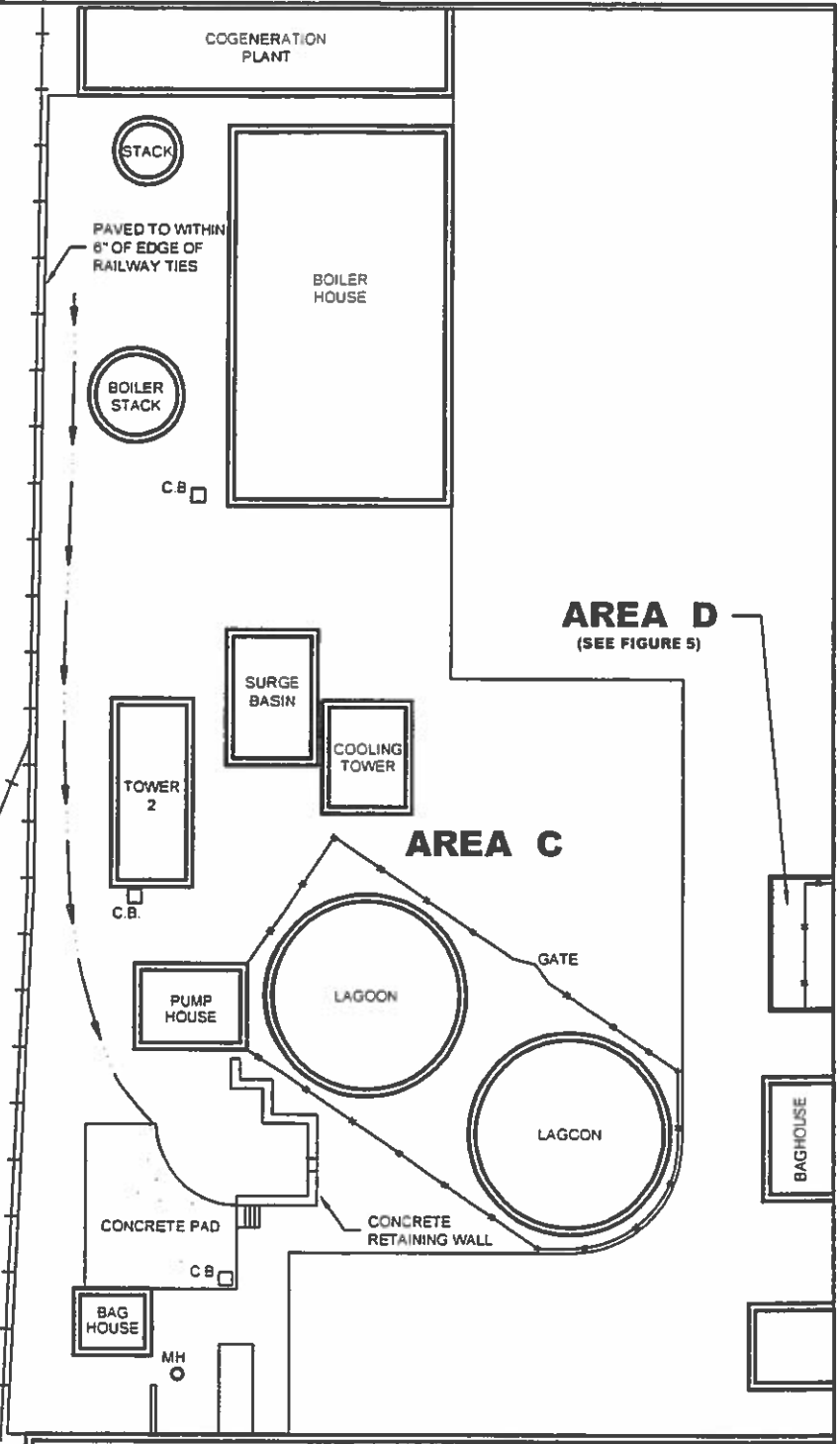
figure 2
 SITE PLAN
 OUTOKUMPU AMERICAN BRASS
 Buffalo, New York





SOURCE
 McLAREN HART - OUTOKUMPU COPPER INC
 DRAWING NUMBER 31538011 AND
 ECOLOGY AND ENVIRONMENT
 BUFFALO, NEW YORK

- LEGEND**
- FENCE
 - PROPERTY LINE
 - RAILROAD
 - CONSTRUCTED DRAINAGE SWALE
 - CATCHBASIN
 - PRE-EXISTING PAVED OR CONCRETE ROADWAYS AND PARKING AREAS
 - LIMITS OF AREA PAVED IN ACCORDANCE WITH RAWP



AREA D
 (SEE FIGURE 5)

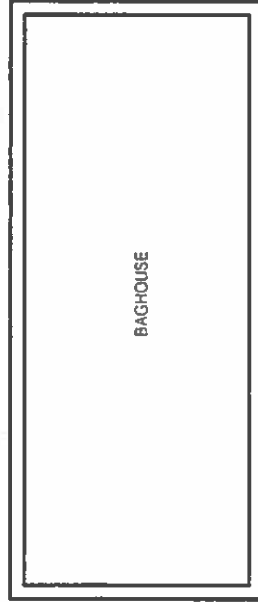
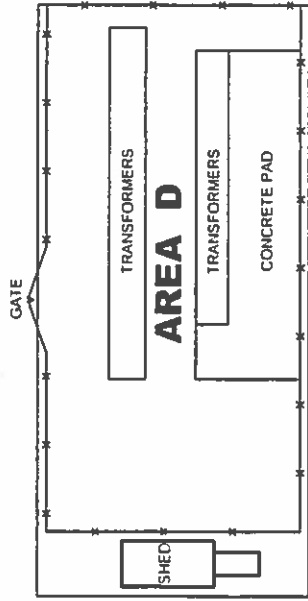
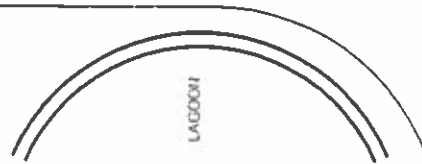
AREA C

PLANT BUILDING

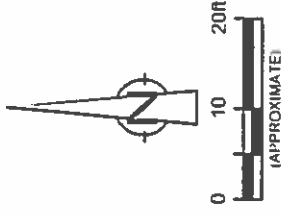
LIMITS OF NEW ASPHALT PAVEMENT - AREA C
OUTOKUMPU AMERICAN BRASS
Buffalo, New York






AREA C
(SEE FIGURE 4)



PLANT BUILDING



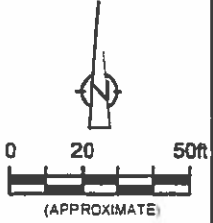
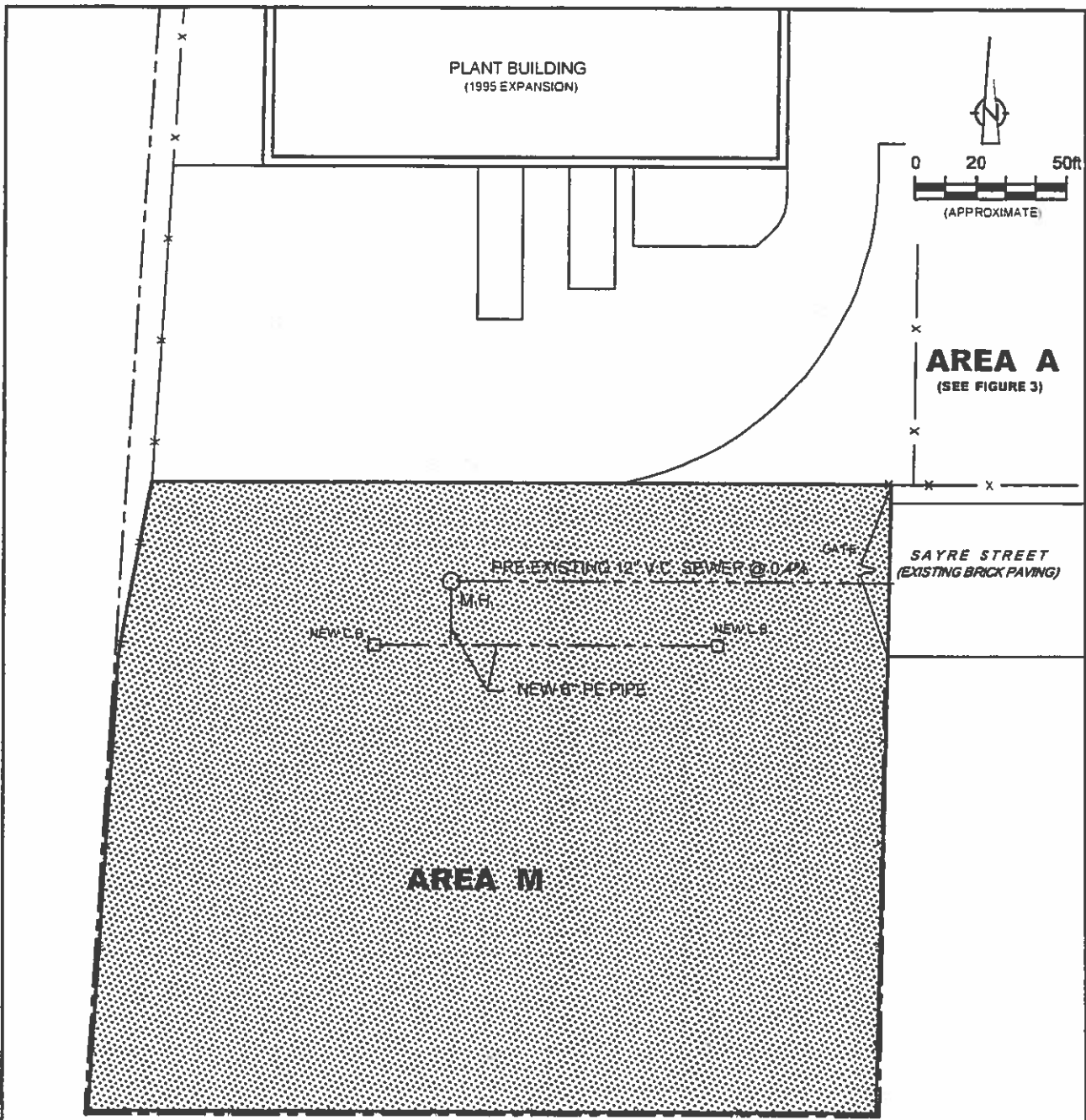
LEGEND

-  FENCE
-  PRE-EXISTING PAVED OR CONCRETE ROADWAYS AND PARKING AREAS
-  LIMITS OF AREA PAVED IN ACCORDANCE WITH RAMP

SOURCE
MCLAREN PART - OUTOKUMPU COPPER, INC.
DRAWING NUMBER 31538011 AND ECOLOGY
AND ENVIRONMENT BUFFALO, NEW YORK



figure 5
LIMITS OF NEW ASPHALT PAVEMENT - AREA D
OUTOKUMPU AMERICAN BRASS
Buffalo, New York



LEGEND




— x —	FENCE		PRE-EXISTING PAVED OR CONCRETE ROADWAYS AND PARKING AREAS
— — —	PROPERTY LINE		LIMITS OF AREA PAVED IN ACCORDANCE WITH RAWP
— — — —	SEWER		LIMITS OF 8" SUB BASE COURSE UNDER ASPHALT PAVEMENT
M.H. ○	PRE-EXISTING MANHOLE		
C.B. □	CATCHBASIN		

figure 6

LIMITS OF NEW ASPHALT PAVEMENT - AREA M
OUTOKUMPU AMERICAN BRASS
Buffalo, New York



SOURCE
 McLAREN HART - OUTOKUMPU COPPER INC
 DRAWING NUMBER 3152807 AND ECOLOGY
 AND ENVIRONMENT BUFFALO, NEW YORK

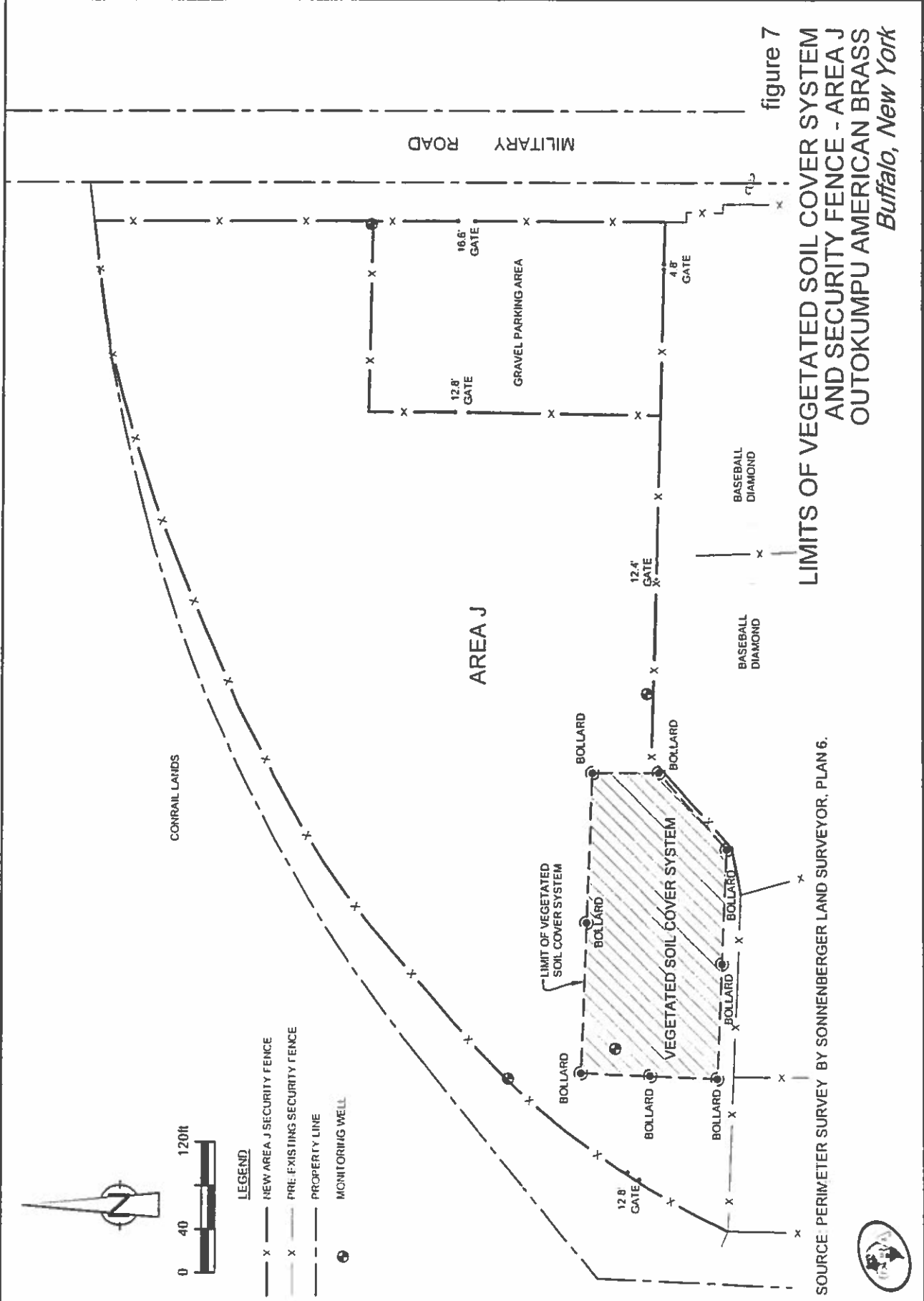


figure 7
**LIMITS OF VEGETATED SOIL COVER SYSTEM
 AND SECURITY FENCE - AREA J
 OUTOKUMPU AMERICAN BRASS
 Buffalo, New York**



TABLE 3

SITE INSPECTION LOG

ASPHALT PAVEMENT AND CONCRETE SURFACES AT AREAS A, G, D, AND M in pre-existing paved or concrete roadways & parking area
 OUTOKUMPU AMERICAN BRASS PLANT
 BUFFALO, NEW YORK

NYSDEC SITE NO.: 915007

VCP AGREEMENT NO.: V00314-9

INSPECTION DATE: 5/22/17

INSPECTED BY: E. Zrudowski & M. Withman (ITEL)

Inspector For	Inspection Item Identified		Action Required		Comments
	Yes	No	Yes	No	
Deterioration	Yes	No	Yes	No	The were observations of asphalt deterioration & pot holes. Grass growing by and light poles - see photos
Obstruction/Debris	Yes	No	Yes	No	see photo
Potholes	Yes	No	Yes	No	see photos
Drainage/Puddles	Yes	No	Yes	No	
Tie-in at Buildings, Stormwater Structures, Other	Yes	No	Yes	No	
Other	Yes	No	Yes	No	

TABLE 3

SITE INSPECTION LOG
 ASPHALT PAVEMENT AND CONCRETE SURFACES AT AREAS A, C, B, AND M
 OUTOKUMPU AMERICAN BRASS PLANT
 BUFFALO, NEW YORK
 NYSDEC SITE NO.: 915007
 VCP AGREEMENT NO.: V00314-9

INSPECTION DATE: 6/22/17
 INSPECTED BY: E. Furduski & M. Withman

Inspect For	Inspection Item Identified		Action Required		Comments
	Yes	No	Yes	No	
Deterioration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	appears to be some wash out of the "fill" where boiler house stack was
Obstruction/Debris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	"
Potholes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Drainage/Puddles Tie-in at Buildings, Stormwater Structures, Other	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Other	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	are the areas where the boiler house stacks removed acceptable? When were the stacks removed & what needs to be done

TABLE 3

SITE INSPECTION LOG
ASPHALT PAVEMENT AND CONCRETE SURFACES AT AREAS A, C, D, AND M
OUTOKUMPU AMERICAN BRASS PLANT
BUFFALO, NEW YORK
NYSDEC SITE NO.: 915007
VCP AGREEMENT NO.: V00314-9

INSPECTION DATE: 6/22/17
 INSPECTED BY: E. Zwickel & M. Wittman (HEI)

Inspect For	Inspection Item Identified		Action Required		Comments
	Yes	No	Yes	No	
Deterioration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Within Substation there appears to be some deterioration of asphalt. Potholes in the areas "pre-existing paved & concrete road way + parking area."
Obstruction/ Debris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Potholes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Drainage/Puddles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Tie-in at Buildings, Stormwater Structures, Other	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Other	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

TABLE 3

SITE INSPECTION LOG
 ASPHALT PAVEMENT AND CONCRETE SURFACES AT AREAS A, C, D, AND (M)
 OUTOKUMPU AMERICAN BRASS PLANT
 BUFFALO, NEW YORK

NYSDEC SITE NO.: 915007
 VCP AGREEMENT NO.: V00314-9

INSPECTION DATE: 6/29/17
 INSPECTED BY: E. Zwardzki & M. Withman

Inspect For	Inspection Item Identified		Action Required		Comments
	Yes	No	Yes	No	
Deterioration	Yes	<u>No</u>	Yes	<u>No</u>	
Obstruction/Debris	Yes	<u>No</u>	Yes	<u>No</u>	
Potholes	Yes	<u>No</u>	Yes	<u>No</u>	
Drainage/Puddles Tie-in at Buildings, Stormwater Structures, Other	Yes	<u>No</u>	Yes	<u>No</u>	
Other	Yes	<u>No</u>	Yes	<u>No</u>	

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TABLE 3

SITE INSPECTION LOG
 ASPHALT PAVEMENT AND CONCRETE SURFACES AT AREAS A, C, D, AND M
 OUTOKUMPU AMERICAN BRASS PLANT
 BUFFALO, NEW YORK
 NYSDEC SITE NO.: 915007
 VCP AGREEMENT NO.: V00314-9

INSPECTION DATE: 6/21/17
 INSPECTED BY: Paul J. Bodekar

Inspect For	Inspection Item Identified		Action Required		Comments
	Yes	No	Yes	No	
Deterioration	Yes	No	Yes	No	No major deterioration of asphalt or concrete in Areas A, C, D & M.
Obstruction/Debris	Yes	No	Yes	No	No obstructions observed in Areas A, C, D & M
Potholes	Yes	No	Yes	No	Safety Service Order will be written to fill in several minor potholes in Area C. No soil exposed, potholes just in asphalt Drainage appears fine with just minor puddles in Area A
Drainage/Puddles Tie-in at Buildings, Stormwater Structures, Other	Yes	No	Yes	No	No problems observed in any area
Other	Yes	No	Yes	No	Asphalt and concrete are in good shape, no issues noted other than several small potholes in Area C

TABLE 4

SITE INSPECTION LOG
 AREA J VEGETATED SOIL COVER SYSTEM AND SECURITY FENCE
 OUTOKUMPU AMERICAN BRASS PLANT
 BUFFALO, NEW YORK
 NYSDEC SITE NO.: 915007
 VCP AGREEMENT NO.: V00314-9

INSPECTION DATE: 6/23/17
 INSPECTED BY: Paul J. Bodokor

Inspect For	Inspection Item Identified		Action Required		Comments
	Yes	No	Yes	No	
Erosion	Yes	No	Yes	No	No erosion noted
Bare Areas	Yes	No	Yes	No	No bare areas observed
Ponding	Yes	No	Yes	No	No ponding observed
Distressed Vegetation	Yes	No	Yes	No	Vegetation appears healthy in all areas within Area J
Animal Holes/Burrows	Yes	No	Yes	No	No animal holes or burrows observed or discovered
Woody Vegetation Present	Yes	No	Yes	No	No woody vegetation observed within the area demarcated by bollards
Damage to Bollards	Yes	No	Yes	No	Bollards are all in good condition and readily observable
Damage to Fence Around Area J	Yes	No	Yes	No	No damage to fence around Area J. All gates securely locked
Other	Yes	No	Yes	No	Area appears in good shape with no evidence of paths or recent human activity

TABLE 4

SITE INSPECTION LOG
AREA J VEGETATED SOIL COVER SYSTEM AND SECURITY FENCE
OUTOKUMPU AMERICAN BRASS PLANT
BUFFALO, NEW YORK
NYSDEC SITE NO.: 915007
VCP AGREEMENT NO.: V00314-9

INSPECTION DATE: 6/29/17
 INSPECTED BY: E. Zrudzki + Michele Wiltman (HEI)

Inspect For	Inspection Item Identified		Action Required		Comments
	Yes	No	Yes	No	
Erosion	Yes	No	Yes	No	
Bare Areas	Yes	No	Yes	No	
Ponding	Yes	No	Yes	No	
Distressed Vegetation	Yes	No	Yes	No	
Animal Holes/Burrows	Yes	No	Yes	No	
Woody Vegetation Present	Yes	No	Yes	No	
Damage to Bollards	Yes	No	Yes	No	
Damage to Fence Around Area J	Yes	No	Yes	No	The was a new hole in the fence that was not observed the week before a work order to correct will be submitted.
Other	Yes	No	Yes	No	

TABLE 5

SITE MAINTENANCE LOG
 AREAS A, C, D, M, AND J
 OUTOKUMPU AMERICAN BRASS PLANT
 BUFFALO, NEW YORK
 NYSDEC SITE NO.: 915007
 VCP AGREEMENT NO.: V00314-9

DATE LOG COMPLETED: 6/22/17
 COMPLETED BY: E. ZIMONICKI

Date	Maintenance Performed and Location	Performed By	Comments
late fall 2016	1) Resurfacing of blacktop in area A as marked. No soil was removed (see highlighted area in pink)	Outside vendor	Arranged for by Maint. department.
	2) No known other maintenance activities performed based on conversations with Ron Kuta (Maintenance Dept) & Paul Badetkov (ETS Dept)		

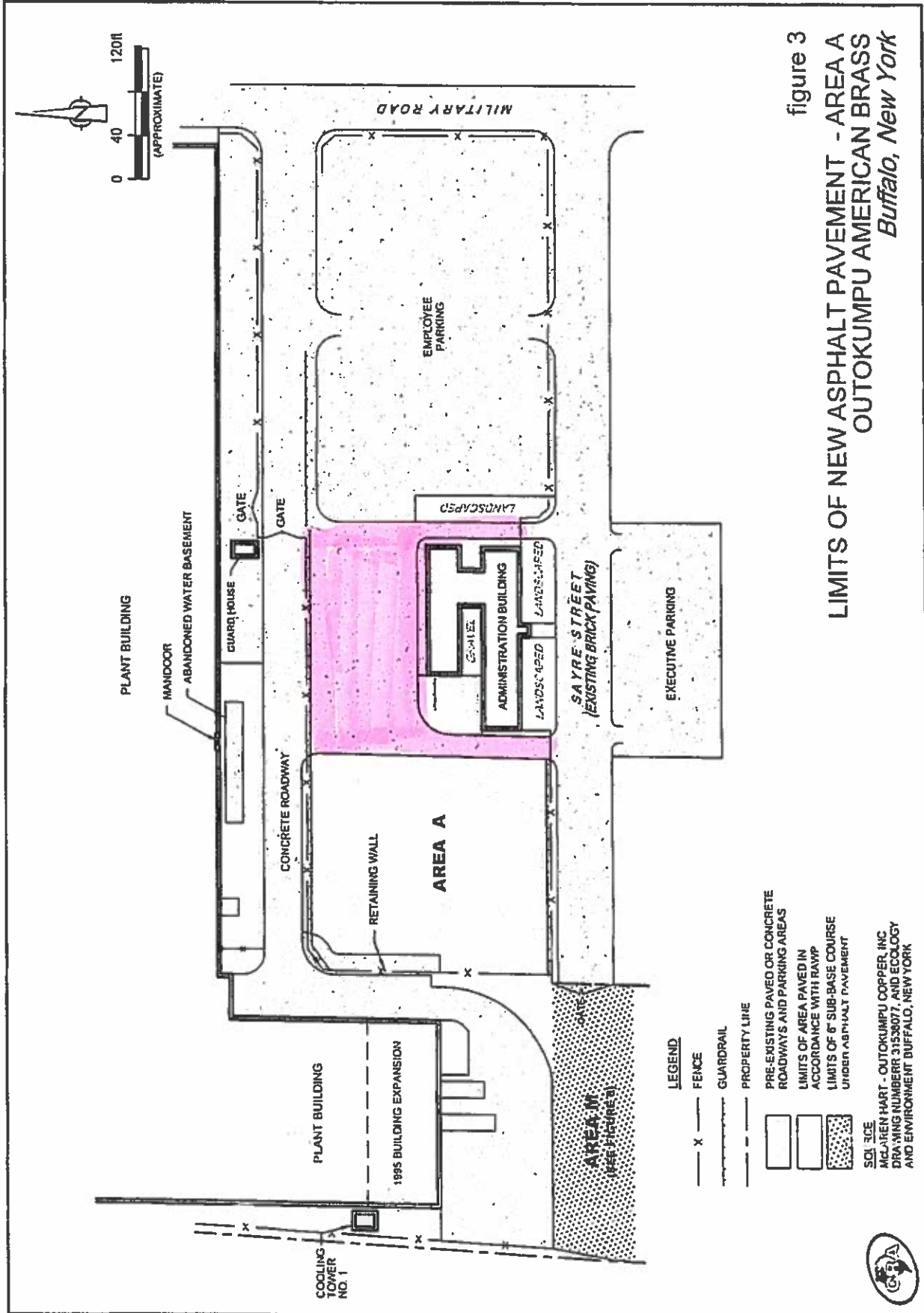


figure 3
 LIMITS OF NEW ASPHALT PAVEMENT - AREA A
 OUTOKUMPU AMERICAN BRASS
 Buffalo, New York



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 Site Management Periodic Review Report Notice
 Institutional and Engineering Controls Certification Form



	Site Details	Box 1
Site No. V00314		
Site Name Aurubis Buffalo, Inc.		
Site Address: Military Road and Sayre Street	Zip Code: 14207	
City/Town: Buffalo		
County: Erie		
Site Acreage: 71.0		
Reporting Period: June 03, 2015 to June 03, 2017		
		YES NO
1. Is the information above correct?		<input checked="" type="checkbox"/> <input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Box 2
		YES NO
6. Is the current site use consistent with the use(s) listed below? Industrial	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.		
A Corrective Measures Work Plan must be submitted along with this form to address these issues.		
<i>Refer to Periodic Review Report</i>		
<u><i>Clayton J. Jurewski</i></u>		<u><i>6/27/2017</i></u>
Signature of Owner, Remedial Party or Designated Representative		Date

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
77.59-6-1.1	Aurubis Buffalo, Inc.	Ground Water Use Restriction Soil Management Plan Landuse Restriction

This parcel is the largest of several parcels at the site and portions contains Areas A, C, D and J.

Areas A (7.16 acres), C (0.71 acres), and D (1.06 acres) were paved with asphalt and concrete covers. Area J consists of 7.78 acres. Only a 0.91 acre portion of Area J was regraded and covered with a vegetated soil cover. All remediation areas are enclosed within the industrial plant security fencing.

A Site Management Plan was included with the FER and consists of periodic inspection of remediation areas, periodic maintenance of remediation areas, and a soils management plan during intrusive activities in remediation areas.

Periodic inspections and reviews are scheduled on a bi-annual basis.

77.66-2-4	Aurubis Buffalo, Inc.	Ground Water Use Restriction Soil Management Plan Landuse Restriction
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The parcel constitutes a portion of Area A.

Area A (7.16 acres) was paved with asphalt and concrete covers. All remediation areas are enclosed within the industrial plant security fencing.

A Site Management Plan was included with the FER and consists of periodic inspection of remediation areas, periodic maintenance of remediation areas, and a soils management plan during intrusive activities in remediation areas.

Periodic inspections and reviews are scheduled on a bi-annual basis.

77.74-4-1	Aurubis Buffalo, Inc.	Ground Water Use Restriction Soil Management Plan Landuse Restriction
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The control for this parcel applies to Area M (1.11 acres) which is paved with asphalt and concrete covers. All remediation areas are enclosed within the industrial plant security fencing.

A Site Management Plan was included with the FER and consists of periodic inspection of remediation areas, periodic maintenance of remediation areas, and a soils management plan during intrusive activities in remediation areas.

Periodic inspections and reviews are scheduled on a bi-annual basis.

77.74-4-2	Aurubis Buffalo, Inc.	Ground Water Use Restriction Soil Management Plan Landuse Restriction
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The parcel constitutes a portion of Area M.

Area M (1.11 acres) was paved with an asphalt cover. All remediation areas are enclosed within the industrial plant security fencing.

A Site Management Plan was included with the FER and consists of periodic inspection of remediation areas, periodic maintenance of remediation areas, and a soils management plan during intrusive activities in remediation areas.

Periodic inspections and reviews are scheduled on a bi-annual basis.
77.74-4-24 Aurubis Buffalo, Inc.

Ground Water Use Restriction
Soil Management Plan
Landuse Restriction

The parcel constitutes a portion of Area M (1.11 acres) and was paved with an asphalt cover.

A Site Management Plan was included with the FER and consists of periodic inspection of remediation areas, periodic maintenance of remediation areas, and a soils management plan during intrusive activities in remediation areas.

Periodic inspections and reviews are scheduled on a bi-annual basis.

Box 4

Description of Engineering Controls

<u>Parcel</u>	<u>Engineering Control</u>
77.59-6-1.1	Cover System Fencing/Access Control
77.66-2-4	Cover System Fencing/Access Control
77.74-4-1	Fencing/Access Control Cover System
77.74-4-2	Cover System Fencing/Access Control
77.74-4-24	Fencing/Access Control Cover System

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

- a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;
- b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

- (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
- (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;
- (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
- (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

 Signature of Owner, Remedial Party or Designated Representative

 Date

IC CERTIFICATIONS
SITE NO. V00314

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1, 2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Elizabeth Zurowski at 70 Sayre St., Buffalo NY 14207
print name print business address

am certifying as Designated Representative (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Elizabeth Zurowski
Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

June 27, 2017
Date

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I, Michele Wittman at Hazard Evaluations, Inc.
print name print business address

am certifying as a Qualified Environmental Professional for the Aurobis Buffalo, Inc.
(Owner or Remedial Party)

Michele M. Wittman

Stamp
(Required for PE)

Date

6/30/17

Signature of Qualified Environmental Professional, for
the Owner or Remedial Party, Rendering Certification