NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
Site Classification Report

DATE: 5/9/2013

Site Code: 704027 **Site Name:** 93 Main Street
City: Binghamton **Town:** Binghamton
Region: 7 **County:** Broome
Current Classification: 02 **Proposed Classification:** 04
Estimated Size (acres): 0.80 **Disposal Area:** Structure
Significant Threat: Previously **Site Type:**
Priority ranking Score: 245 **Project Manager:** Michael Mason

Summary of Approvals

Originator/Supervisor: Gerard Burke **03/18/2013**

RHWRE: Harry Warner: **08/10/2012**

BEEI of NYSDOH: **03/18/2013**

CO Bureau Director: Michael Cruden, Director, Remedial Bureau E: **03/18/2013**

Assistant Division Director: Michael J. Ryan, P.E.: **04/18/2013**

Basis for Classification Change

Hazardous waste disposal at this site was addressed by implementation of the remedy identified for the site by the Record of Decision (ROD). All construction of the components of the site-wide remedy was completed no later than October 2011. The Final Engineering Report(s) (FER) (or its equivalent) confirms that the remedy has been constructed consistent with the requirements in the ROD. Management of contamination remaining at the site, including any required monitoring, is and has been controlled pursuant to a Site Management Plan (SMP) (or its equivalent). Institutional controls are required to ensure the protectiveness of the site. The required control, in the form of an Environmental Notice , is presently in place. A significant threat to public health and the environment no longer exists at the site. The site is properly remediated and requires site management, therefore, it qualifies for Class 4 status on the Registry of Inactive Hazardous Waste disposal sites.

Site Description - Last Review: 11/16/2012

Location: The 93 Main Street Site consists of two parcels of land, 89-91 and 93 Main Street , located in a commercial part of the City of Binghamton, Broome County.

Site Features: An abandoned former apartment building existed on the 93 Main Street parcel and a partially completed motel building existed on the 89-91 Main Street parcels. Both of these deteriorated structures were demolished by the City of Binghamton in September of 1999. The 93 Main Street parcel was at one time home to the McMahon Bothers Pest Control Company. The areas of contamination are centered around a dry well

located on 89-91 Main Street and two drains on 93 Main Street.

Current Zoning/Use(s): The actual site property is presently zoned C-1 (Service Commercial) as is the area immediately east and north of the site. The areas to the north and south of this area is zoned R-3 (Residential Multi-Unit Dwelling) and the area to the west is zoned R-2 (Residential One & Two Unit Dwelling). The surrounding area is a mix of residential and commercial buildings, all of which are served by the municipal water system.

Historical Use(s): From the 1950's to the 1980's the McMahon Brothers Pest Control Company operated at the 93 Main Street Site. It was reported that the site was used as a pesticide/herbicide storage and handling location for the company. There were also allegations of spills having taken place at the Site. Operations at the site ceased in the 1980s and the 93 Main Street building was reported to have been converted to an apartment building sometime following the end of site operations. In addition, a partially completed motel also occupied the site prior to 1999.

In 1995 a Phase II environmental audit on the 93 Main Street property for a financial institution. The results of the investigation revealed elevated concentrations of herbicides and pesticides in the soil, specifically 2,4,5-trichlorophenoxyacetic acid at 12,000 ug/kg; 2,4-dichlorophenoxyacetic acid at 4,030 ug/kg; and Chlordane at 15,000 ug/kg. During the investigation, it was determined that a back area of the building had been used for pesticide storage and handling. This area had since been converted to apartments, and the concrete floor covered with tile or carpet.

In 1995 the City, in response to complaints, entered into a Voluntary Cleanup Agreement with the NYSDEC in order to perform a limited investigation of the site. The results of this investigation revealed elevated concentrations of pesticides/herbicides such as chlordane, aldrin, dieldrin, and 2,4,5- trichlorophenoxyacetic acid in the Site's groundwater and/or soil.

The apartment building and motel were demolished by the City of Binghamton in 1999.

Site Geology and Hydrogeology: The Remedial Investigation (RI) revealed the following stratigraphic units from the ground surface: fill, silt with gravel and sand, gravel and sand, and till. The fill generally consists of cinders, ash, debris, and locally derived fine sand and coarse to fine gravel. The unit found immediately below the fill is comprised of red-brown silt with coarse to fine gravel, generally moist to wet, and extends from the fill layer to approximately 12 feet below ground surface. The brown to grown-grey gravel and sand unit, where present, is comprised of cobble, coarse to fine gravel, and some coarse to fine sand. The lodgement till is comprised of grey over compacted silt and clay with some fine gravel and was encountered at most drilling locations except at the northern portion of the site. The unit is very dense and relatively impermeable.

Groundwater exists at depths ranging from 7 to 23 feet below ground surface, depending on location, under unconfined conditions within a thin saturation zone directly above the lodgment till across the study area. Measured groundwater elevations consistently showed flow direction to be north-northeast towards the aquifer to the north, similar to the dip of the surface of the till unit. Recharge to the water table in this area occurs as downward infiltration of precipitation. Apparently, once it reaches the relatively impermeable till unit, groundwater flow is controlled by gravity as it flows along the surface of the till into the sand and gravel

aquifer to the north.

The transmissivity calculated for the site based on a pumping test at monitoring well MW-11 was 6.404 x 10-5 ft2/S and the storativity is 0.07688. Based on an aquifer thickness of 9.13 feet, this would equate to a hydraulic conductivity of 7.015 x 106 ft/s.

Contaminants of Concern (Including Materials Disposed)	**Quantity Disposed**
OU 01	
CHOLRODANE (U036 AND K097)	0.00
GAMMA BHC / 4,4DDD+2 / 2'DDD / 4,4DDT / 4,4'DDE	0.00
BETA BHC	0.00
ALDRIN	0.00
DIELDRIN (P037)	0.00
ENDOSULFAN SULFATE	0.00
HEPTACHLOR (P059 AND K097)	0.00
ENDRINE	0.00
ENDRINE KETONE	0.00

Analytical Data Available for : Groundwater, Soil

Applicable Standards Exceeded for: Groundwater, Drinking Water

Site Environmental Assessment- Last Review: 11/16/2012

Pesticide contamination of soil and groundwater within a principal aquifer has been confirmed at this site. Contaminant levels are several orders of magnitude above the applicable standards. However, the hard till soil that is present approximately 23 feet down seems to be limiting any further downward migration of contaminants.

A Remedial Investigation/Feasibility Study (RI/FS) was completed with a Record of Decision (ROD) signed on March 31, 2000. The remedial design completed in 2009. The construction contract for remediation was awarded. Work began March 2010. Work was completed in December 2010.

As described in the RI report, many soil, groundwater and sediment samples were collected at the site to characterize the nature and extent of contamination. The main categories of contaminants which exceed their SCGs are, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and pesticides.

Prior to remediation:
Soils: Three areas of subsurface soil contamination were identified at the 93 Main Street site. One area, the drywell, was located on the 89-91 Main Street property. The other two areas, the drain and the former garage area, were located on the 93 Main Street property. An extensive survey of the remainder of the site did not identify any other areas of subsurface contamination.

The drywell area consisted of mainly shallow pesticide contamination. The area of contamination extended from four to six feet below ground surface and two feet radially. This area contained approximately 16 cubic yards of contaminated soil. In this area the predominate contaminant was chlordane which was detected at 149 parts per million (ppm). In the area of the drain on the 93 Main Street parcel, subsurface soils were contaminated with pesticides and petroleum products. Contamination extends from approximately four to

twenty three feet below ground surface, and extends 6 feet radially. The total volume of contaminated soil in this area was estimated to be 600 cubic yards.

Groundwater: Out of the five usable monitoring wells, installed during phase I of the RI, MW-1 and MW-6 were the only two contaminated. MW-6 was located directly in the area of highest contamination, associated with the drain on 93 Main Street, and exhibited levels many times higher than SCG's for VOCs, SVOCs, and pesticides. Xylene was detected at 130 parts per billion (ppb) in MW-6 along with 2,4,5-trichlorophenol at 440 ppb and dieldrin at 11 ppb. MW-1 was located downgradient and northeast of MW-6. Only pesticide contamination was detected in MW-1 at levels significantly lower than those in MW-6, such as dieldrin at 1.5 ppb.

During the Phase II investigation of the RI, contamination was also detected in two of the four newly installed monitoring wells, MW-8 and MW-10. MW-8 and MW-10 are located downgradient of MW-6, MW-8 and MW-10 were also contaminated with low levels of the same pesticides. During the last round of groundwater sampling MW-6 exhibited dieldrin contamination of 11 ppb and downgradient, MW-10 exhibited dieldrin contamination of 0.27 ppb.

The remedial action consisted of excavation and off-site disposal of contaminated soil.

Post-Remediation: Hazardous waste disposal at this site was addressed by implementation of the remedy identified by the ROD. All construction of the components of the site-wide remedy was completed in October 2011. An institutional control, in the form of an Environmental Notice, is in place. Management of contamination remaining at the site, including groundwater monitoring, is controlled pursuant to a Site Management Plan (SMP).

Site Health Assessment - Last Update: 04/11/2013

Since some contaminated soils remain at the site below a two-foot cover of clean soil, people will not come in contact with contaminated soils unless they dig below the surface materials. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in the soil or groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential for soil vapor intrusion must be evaluated for any buildings developed on the Site and any actions recommended to address exposures related to soil vapor intrusion will be taken as necessary. Environmental sampling indicates soil vapor intrusion is not a concern for off-site buildings.

	Start		End	
OU 00				
Periodic Review	6/4/12	ACT	12/4/12	ACT
Site Management	10/18/11	ACT	10/18/41	PLN
OU 01				
OGC Docket - Environmental Notice	3/23/11	ACT	8/13/12	ACT
Reclass Pkg.	7/17/12	ACT	5/9/13	ACT
Remedial Action	3/31/10	ACT	10/18/11	ACT
Remedial Design	9/22/04	ACT	8/6/09	ACT

DATE: 5/9/2013

Site Code: 704027 **Site Name:** 93 Main Street

Remedial Investigation	12/1/97	ACT	3/27/00	ACT	

Remedy Description and Cost

Remedy Description for Operable Unit 01

The components ofthe remedy are as follows:
1.
A remedial design program was implemented to provide the details necessary for the construction, operation, maintenance, and monitoring ofthe remedial program.
2.
Excavation and off-site disposal of contaminated soil. Localized groundwater contamination was treated on-site by a temporary treatment system as part of the dewatering process during soil excavation.

3.
Site restoration by bringing in approved backfill free of industrial and/or other contamination, grading to insure proper drainage, placement of additional topsoil as necessary, and seeding.
4.
Implementation of a groundwater monitoring program to document the attenuation of residual groundwater contamination.
5.
Development ofa site management plan to provide the details of the groundwater monitoring plan.

6. Imposition of an institutional control.

7. Periodic certification of institutional controls,

Total Cost $1,100,000

OU 00 **Site Management Plan Approval: 10/18/2011** **Status: ACT**

DATE: 5/9/2013

Site Code: 704027 **Site Name:** 93 Main Street

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Form
5/9/2013

SITE DESCRIPTION

SITE NO. 704027

SITE NAME 93 Main Street

SITE ADDRESS: 93 Main Street ZIP CODE: 13905

CITY/TOWN: Binghamton

COUNTY: Broome

ALLOWABLE USE:

SITE MANAGEMENT DESCRIPTION

SITE MANAGEMENT PLAN INCLUDES:	YES	NO
IC/EC Certification Plan	▣	☐
Monitoring Plan	▣	☐
Operation and Maintenance (O&M) Plan	▣	☐

Periodic Review Frequency: every three years

Periodic Review Report Submittal Date:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
Site Classification Report

DATE: 5/9/2013

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Description of Institutional Control

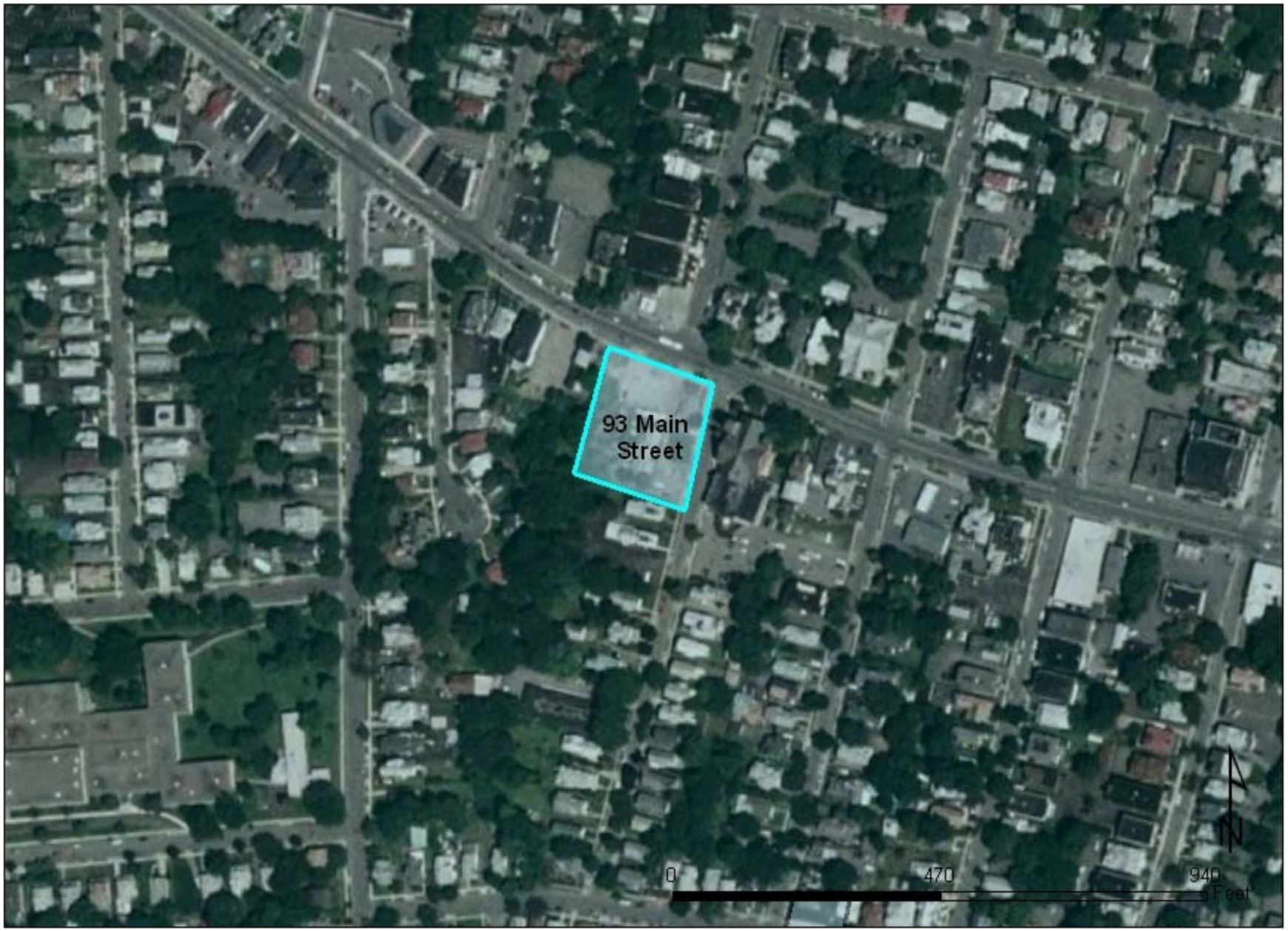
Robert J. McMahon Estate & Mary McMahon
11 Elfred Street
89 Main Street
Environmental Notice
Block: 38
Lot: 2
Sublot: 33
Section: 160
Subsection:
S_B_L Image: 160.38-2-33
IC/EC Plan
Monitoring Plan
O&M Plan

Robert J. McMahon Estate & Mary McMahon
11 Elfred Street
93 Main Street
Environmental Notice
Block: 2
Lot: 32
Sublot:
Section: 160
Subsection: 38
S_B_L Image: 160.38-2-32
IC/EC Plan
Monitoring Plan
O&M Plan

Description of Engineering Control

Not Applicable/No EC's

Site Number: 704027
Site Name: 93 Main Street



NEW YORK
state department of
HEALTH

Nirav R. Shah, M.D., M.P.H.
Commissioner

Sue Kelly
Executive Deputy Commissioner

March 18, 2013

Mr. Michael Mason
Division of Environmental Remediation
New York State Dep.of Environmental Conservation
625 Broadway – 12th Floor
Albany, NY 12233-7017

Re: Site Management Plan
93 Main Street
Site #704027
Binghamton (C), Broome County

Dear Mr. Mason,

I have reviewed the February 2013 Final Site Management Plan (SMP) for the above-referenced site. Based on that review, I understand that the SMP for the site includes institutional and engineering controls necessary to address residual contamination that remains in site soils and groundwater and will provide for proper management of the site to ensure the protection of public health.

Engineering controls in the form of a site cover system and groundwater monitoring wells are in place to minimize the potential for contact with residual contaminants in soil and assess the continued natural attenuation of contaminants in site groundwater. Institutional controls in the form of an environmental easement on the property will ensure that the engineering controls are maintained. Use and development of the site will be restricted to restricted residential/active recreation use. In addition, the potential for soil vapor intrusion must be evaluated for any buildings developed on the Site and include a provision for implementing actions recommended to address exposures related to soil vapor intrusion, if necessary. Use of groundwater as a source of potable or process water is restricted without necessary treatment. Finally, the property owner will be required to comply with the approved site management plan and provide periodic certification to the New York State Department of Environmental Conservation that the controls remain in place and continue to be effective.

Based on this information, I believe that the Site Management Plan is protective of human health. If you have any questions, please contact me at (607) 432-3911.

Sincerely,

Kristin Kulow

Kristin Kulow
Public Health Specialist II
Bureau of Environmental Exposure Investigation

ec: K. Anders, Ph.D./J. Deming/File
C. Coddington – BCHD
M. Ryan/M. Cruden – NYSDEC, Albany

	A	B	C	D	E	F	G	H	I	J
1	Current Occupant	Name, Title	Address 1	Address 2	Address 3	Street Address	City	State	Zip	Site Name (County)
2	**Site Contact List**									
3	**Instructions:** **1.** Enter Site ID No. and Name in cells A4 and A5 and the date of the list in C5. **2.** Each contact list **must** include the site property owner(s), adjacent property owner(s)/resident(s), the municipal/county CEO and zoning board, public water supplier for the area, administrator of any school or day care facility located on the site, and any other parties who have requested to be placed on the site contact list. To determine if additional parties should be included in the contact list, consult DER-23 / Citizen Participation Handbook for Remedial Programs @ http://www.dec.ny.gov/docs/remediation_hudson_pdf/der23.pdf (copy and paste this link into your browser). **3.** Residents and businesses adjacent to the site should be identified in Column A as "Current Occupant". Leave Column B blank. For all other categories of individuals and organizations, identify the name and title (if known) in Column B and leave Column A blank. "Titles" are typically for elected officials (e.g., "Senator," "Assemblyperson," "Mayor," "Supervisor"). **4.** To enter date, it is convenient to select the Excel option where keying "Enter" moves the cell one to the right (Office Button, Excel Options, Advanced, Direction, select "right"). Alternatively, using the tab key will move the cell to the right.									
4	**Site #: 704027**									
5	**Site Name: 93 Main Street**			**List Last Updated: 08/06/12**						
6	Current Occupant	Name, Title	Address 1	Address 2	Address 3	Street Address	City	State	Zip	Site Name (County)
7	Current Occupant					93 Main Street	Binghamton	NY	13905-2813	93 Main Street (Broome)
8	Current Occupant					9 Main Street	Binghamton	NY	13905-2813	93 Main Street (Broome)
9	Current Occupant					58 Liberty Street	Owego	NY	13827	93 Main Street (Broome)
10	Current Occupant					87 Main Street	Binghamton	NY	13905-2813	93 Main Street (Broome)
11	Current Occupant					28 Virginia Avenue	Binghamton	NY	13905-4306	93 Main Street (Broome)
12	Current Occupant					92 Main Street	Binghamton	NY	13905	93 Main Street (Broome)
13	Current Occupant					23 Arthur Street	Binghamton	NY	13905-3605	93 Main Street (Broome)
14	Current Occupant			P.O. Box 1606			Binghamton	NY	13902	93 Main Street (Broome)
15	Current Occupant					622 W. State Street	Ithaca	NY	14850	93 Main Street (Broome)
16	Current Occupant					86 Main Street	Binghamton	NY	13905	93 Main Street (Broome)
17	Current Occupant					103 Main Street	Binghamton	NY	13905	93 Main Street (Broome)
18	Current Occupant					232 Main Street	Binghamton	NY	13905	93 Main Street (Broome)
19		Hon. Matthew T. Ryan, Mayor				38 Hawley Street, 4th Floor	Binghamton	NY	13901	93 Main Street (Broome)
20		Angela Fagerstrom, City Clerk				38 Hawley Street, 1st Floor	Binghamton	NY	13901	93 Main Street (Broome)
21		Tarik Abdelazim, Director of Planning, Housing & Community Development				38 Hawley Street, 4th Floor	Binghamton	NY	13901	93 Main Street (Broome)
22		Joseph Yannuzzi	Water Department			38 Hawley Street	Binghamton	NY	13901	93 Main Street (Broome)
23		Richard R. Blythe, County Clerk	Edwin L. Crawford County Office Building, 3rd Floor	P.O. Box 2062			Binghamton	NY	13902	93 Main Street (Broome)
24		Elaine Miller, County Planning Commissioner	Broome County Office Building, 5th Floor	P.O. Box 1766		60 Hawley Street	Binghamton	NY	13902	93 Main Street (Broome)
25		Claudia A. Edwards	County Health Department			225 Front Street	Binghamton	NY	13905	93 Main Street (Broome)
26		Press & Sun Bulletin		P.O. Box 1270			Binghamton	NY	13902-1270	93 Main Street (Broome)
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