PROPOSED RECORD OF DECISION AMENDMENT
93 MAIN STREET SITE

Binghamton / Broome County / Registry No. 7-04-027 February 2007

Prepared by the New York State Department of Environmental Conservation
Division of Environmental Remediation

1.0 INTRODUCTION

On March 27, 2000, the New York State Department of Environmental Conservation (Department) signed a Record of Decision (ROD) which selected a remedy to cleanup the 93 Main Street Site. The ROD signed in March 2000 chose "Hydraulic Containment and Chemical Oxidation" as the remedy for the site based on the evaluating criteria presented in the Remedial Feasibility Study. However, since the remedy selection, a pilot study was implemented at the site to gather data to design the chemical oxidation remedy. The pilot study concluded that even though chemical oxidation would reduce the volatile organic compound (VOC) and semi-volatile organic compound (SVOC) contamination at the site, chemical oxidation would not remediate the pesticide contamination at the site to meet the remedial goals of the ROD.

In response, a revised cost estimate for an alternate remedy, Excavation and Off-site Disposal was developed. Based on the new and significantly lower cost estimate, the Department's is proposing to change the remedy for the 93 Main Street site to "Excavation and Off-Site Disposal" rather then Hydraulic Control and Chemical Oxidation.

A public comment period has been set for April 18, 2007 to May19, 2007 to provide an opportunity for you to comment on these proposed changes. A public meeting is scheduled for May 2 at the Binghamton State Office Building beginning at 7:00 PM.

At the meeting, a description of the original ROD and the circumstances that have led to proposed changes in the ROD will be presented. After the presentation, a question and answer period will be held, during which you can submit verbal or written comments on the proposal. We encourage you to review this summary and attend the meeting.

Written comments may also be sent to:

Kevin Sarnowicz, Project Manager
NYS Dept. of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
phone (518) 402-9774
toll free 1-888-212-9586

Comments will be summarized and responses provided in a Responsiveness Summary.

The information here is a summary of what can be found in greater detail in reports that have been placed in the Administrative Record for the site. These documents are available at the following repositories:

Broome County Public Library
185 Court St.
Binghamton, NY 13901
Attn: Pat Przybylski
(607) 778-6400

NYSDEC Region 7 Headquarters
615 Erie Boulevard West
Syracuse, NY 13204-2400
(315) 426-7551
Attn. Gregg Townsend
(By appointment only)

NYSDEC Central Office
625 Braodway, 12th Floor
Albany, NY 12233-7016
1-888-212-9586
Attn: Kevin Sarnowicz
(By appointment only)

The Department may modify or reject the proposed changes based on new information or public comments. Therefore, the public is encouraged to review and comment on this proposal.

2.0 SITE INFORMATION

2.1 Site Description

The 93 Main Street Site consists of four parcels of land, 89-91 and 93 Main Street and 27 and 29 Arthur Street, located in the City of Binghamton, Broome County (Figure 1). 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 Brothers 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. Figure 2 shows the properties described above. The surrounding area is a mix of residential and commercial buildings.

2.2 Site History

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.

In 1995 Gaynor Associates of Cortland, NY performed 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 subsurface soil, specifically 2,4,5-trichlorphenol at 12,000 parts per millon (ppm); 2,4-dichlorophenol at 4,030 ppm; and chlordane at 15,000 ppm.

During the investigation, Gaynor determined that a back area of the building had been used by McMahon for pesticide storage and handling. This area had since been converted to apartments, and the concrete floor covered with tile or carpet. During the Gaynor study, strong pesticide odors were noted in the vacant apartments, which were in serious disrepair.

In 1995 the City, in response to these and other complaints, entered into a Voluntary Cleanup Agreement (VCA) with the NYSDEC in order to perform a limited investigation of the site. This investigation focused on the rear of the 93 Main Street building and consisted of Geoprobe® sampling of the soil and groundwater. The results of this investigation revealed elevated concentrations of pesticides/herbicides such as chlordane, aldrin, dieldrin, and 2,4,5-Trichlorophenol in the Site's groundwater and/or subsurface soil which exceeded applicable standard, criteria, or guidance values (SCGs). The presence of these pesticides indicate a threat to the area's sole source aquifer and was the basis for the Site's class "2" designation on the New York State Registry of Inactive Hazardous Waste Disposal Sites.

In October 1998 NYSDEC initiated a Remedial Investigation/Feasibility Study (RI/FS) at the site to define the nature and extent of the contamination and develop remedial alternatives which would be protective of human health and the environment.

The Record of Decision for the site, calling for Hydraulic Containment and Chemical Oxidation, was issued by the New York State Department of Environmental Conservation in March 2000.

2.3 Nature and Extent of Site Contamination

As described in the original ROD and other documents, many soil, groundwater and sediment samples were collected at the site to characterize the nature and extent of contamination. The primary contaminants of concern include volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and pesticides.

The VOC contaminants of concern are xylene, ethylbenzene, chlorobenzene, and 1,2-dichloroethane.

The SVOC contaminants of concern are 1,2,4-trichlorobenzene, naphthalene, 2-methylnaphthalene, 2,4,5-trichlorophenol, 2,4-dichlorophenol, pentachlorophenol, phenol, 2-chlorophenol, 1,4-dichlorobenzene, 2-methylphenol, bis(2-ethylhexyl)phthalate and 4-nitrophenol. Other SVOC contaminants of concern include the carcinogenic polycyclic aromatic hydrocarbons (PAHs), benzo(a)anthracene, benzo(k)anthracene, chrysene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h,)anthracene.

The pesticide contaminants of concern are lindane, aldrin, dieldrin, 4,4'-DDT, 4,4-DDD, 4,4'-DDE, heptachlor, heptachlor epoxide, 2,4-D, chlordane, 4,4'-DDE, endrin, endosulfan I, endosulfan II, beta-BHC, and delta-BHC. These are all listed hazardous wastes and some, such as DDT and chlordane, have been banned from use as pesticides.

Soil

Three areas of subsurface soil contamination were identified at the 93 Main Street site. One area, the drywell, is located on the 89-91 Main Street property. The other two areas, the drain and the former garage

area, are 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. Since the site was either covered by buildings or paved, limited surface soil sampling was conducted, which determined that surface soils were not contaminated. However, the buildings were demolished shortly after the RI/FS was complete. Additional soil and groundwater samples were collected during the design that redefined the limits of contamination. This sampling data gathered during the design was used to determine the area that needs to be remediated. Table 1 contains the contaminants that exceeded SCGs for soil and groundwater and their corresponding guidance values and standards.

The drywell area consists primarily of subsurface pesticide contamination. The contaminated area is approximately a 10 foot by 20 foot area of the ground surface that extends to a depth of approximately 18 feet. This area contains approximately 133 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 former drain on the 93 Main Street parcel, subsurface soils are contaminated with pesticides and petroleum products. Contamination extends from a 25 foot by 25 foot area of the ground surface to depth of 20 feet. The total volume of contaminated soil in this area is estimated to be approximately 463 cubic yards. Chlordane was detected in this area at up to 490 ppm and xylene was also detected at 100 ppm. Lindane, aldrin, 4,4-DDD, and 4,4-DDT were also detected at concentrations orders of magnitude higher than their respective SCGs.

Demolition of the 93 Main Street building revealed a floor drain in the slab of the garage floor. Subsurface soil samples taken from this area were found to be contaminated with pesticides and herbicides. The contamination extends from an area 25 feet by 25 feet surrounding the garage drain to a depth of approximately 20 feet. This area contains an estimated 463 cubic yards of contaminated soil. Chlordane was detected at 560 ppm in this area, along with silvex at 2.7 ppm and 4,4-DDT at 28 ppm.

Groundwater

Of the monitoring wells installed during Phase I of the remedial investigation, MW-1 and MW-6 were the only two which showed groundwater exceeding SCGs for VOCs, SVOCs, and pesticides. MW-6 was located directly in the area of highest contamination, associated with the drain on 93 Main Street, and exhibited levels of xylene, 2,4,5-trichlorophenol and dieldrin many times higher than their respective SCGs. 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 down gradient and northeast of MW-6. Only pesticide contamination was detected in MW-1, but at levels significantly lower than those in MW-6, such as dieldrin at 1.5 ppb.

During the Phase II investigation 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 down gradient of MW 6. MW-8 and MW-10 were also contaminated with low levels of the same pesticides as found during the Phase I in wells MW-1 and MW-6. Overall pesticide levels in the groundwater decline from MW-6 to MW-10. During the most recent round of groundwater sampling MW-6 exhibited dieldrin contamination of 11 ppb and, down gradient, MW-10 exhibited dieldrin contamination of 0.27 ppb.

2.4 Summary of Human Exposure Pathways

This section describes the types of potential human exposures that could present added health risks to

persons at or around the site. A more detailed discussion of the exposure can be found in Section 6.3 of the RI report, which can be found in the document repositories listed above.

An exposure pathway is the manner by which an individual may come in contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Pathways which are known to or may exist at the site include:

- Dermal contact could exist as a pathway at the site if the surface soil is removed and the contaminated subsurface soil is exposed.

- Ingestion/dermal contact could exist as a pathway at the site if a drinking water well was installed immediately down gradient of the source areas on 93 Main Street.

2.5 Summary of Environmental Assessment

This section summarizes the types of environmental exposures and ecological risks which may be presented by the site. During the RI it was determined that a Fish and Wildlife Impact Assessment was not necessary, due to its urban location and lack of any migration pathways to sensitive environmental areas. No pathways for environmental exposure and/or ecological risks have been identified other than a threat to the sole source aquifer.

2.6 Original Remedy

Upon signing the March 2000 ROD, the NYSDEC selected Alternative 5, Hydraulic Containment and Chemical Oxidation, as the remedy for the site. The elements of that remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance and monitoring of the remedial program. This would include batch and/or pilot testing of oxidizing agents.

2. The area surrounding the drywell on the 89-91 Main street property would be excavated to a depth of six feet. Confirmatory samples would be collected from the walls and floor of the excavation to insure that all contaminated soil above remedial objectives was removed. Contaminated soil would be treated on-site and/or disposed of off-site as appropriate.

3. Infiltration galleries would be constructed, in each of the remaining areas of concern, as necessary to facilitate application of the oxidizing agent to the contaminated subsurface soil. It was anticipated that injection wells would also be necessary to properly distribute the oxidizing agent to the lower portion of the contaminated subsurface soil. The infiltration galleries would consist of an excavated area directly above the area of subsurface soil which would be filled with gravel, to allow for rapid infiltration of the oxidizing agent. The injection wells would be constructed with materials amenable to the oxidizing agent to be used and would be capable of injecting the oxidizer under pressure, if necessary.

4. Groundwater extraction wells would be constructed in order to create a zone of hydraulic

containment large enough to collect any leachate produced during treatment of the contaminated soil, as well as the natural groundwater flow in the areas being treated. The extraction well(s) would also be connected to a treatment system which would allow for the removal of residual contamination by additional oxidation, carbon treatment or a combination of the two. In the event that hydraulic containment could not be achieved, alternative methods of groundwater control would be evaluated such as physical containment (i.e., slurry wall, grout curtain, etc.).

5. Since the remedy would result in the on-site treatment of hazardous waste over a period of time, a long-term monitoring program would be instituted. Impacted monitoring wells would continue to be monitored, along with the leachate collected by the hydraulic containment system. Groundwater quality outside the treatment areas was expected to attenuate once the source of contamination is treated or controlled. Monitoring of the leachate collected by the hydraulic containment system would give an indication of the effectiveness of the chemical oxidation and the volume of untreated contaminants remaining. This program would allow the effectiveness of the hydraulic containment and chemical oxidation to be monitored and would be a component of the operation and maintenance for the site.

3.0 DESCRIPTION OF PROPOSED CHANGES

3.1 New Information

A pilot study was performed in November 2005 as part of the preliminary design activities. The goal of the pilot study was to determine the parameters of implementing chemical oxidation injection as the remedy for the site. The pilot study consisted of injecting ozone into the subsurface soil and collecting the ozone and contamination by using a soil vapor extraction system. The pilot study included two sampling events, one in January 2006 and the other in July 2006. Based on the results of the two sampling events and the total mass remaining in the test area, it appears that chemical oxidation is not an effective technology to remediate the site because it will not sufficiently reduce the pesticide component of the contamination.

3.2 Proposed Changes

The excavation and off-site disposal remedy would address the VOC, SVOC, and pesticide impacted soil. The areas of concern delineated in Figure 3 would be excavated using conventional methods and equipment. The estimated removal volume is 1,059 cubic yards of soil, from the drywell and the two areas surrounding the two drains. Excavation operations would require the dewatering of the soil, requiring groundwater to be treated on-site by a temporary treatment system. Excavated soils would be transported off-site to an approved disposal facility. This differs from the original remedy that would treat the waste on-site by hydraulic containment and chemical oxidation.

4.0 EVALUATION OF PROPOSED CHANGES

4.1 Remedial Goals

Goals for the cleanup of the site were established in the original ROD. The goals selected for this site are:

- Eliminate, to the extent practicable, off-site migration of groundwater that does not attain NYSDEC

Class GA Ambient Water Quality Criteria.

- Reduce, control, or eliminate to the extent practicable the contamination present within the soils/waste on site.

- Eliminate the threat to the sole source aquifer by removing or treating the source of contamination and curtailing, to the extent possible, migration of contaminated groundwater off the site.

- Eliminate the potential for direct human or animal contact with the contaminated soils or groundwater at the site.

- Attain groundwater standards to the extent practicable.

4.2 Evaluation Criteria

The criteria used to compare the remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste disposal sites in New York State (6 NYCRR Part 375). For each criterion, a brief description is provided.

The first two evaluation criteria are called threshold criteria and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

Excavation and Off-Site Disposal would be protective of human health and the environment since contaminated soil would be removed from the site. However, the pilot test showed that the on-site treatment alternative chosen in the March 2000 Record of Decision, "Hydraulic Containment/Chemical Oxidation", is not feasible because chemical oxidation will not completely destroy the pesticide component of the waste and will not be protective of human health and the environment.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

The primary SCGs to be attained are soil SCGs based on the Department's Cleanup Objectives (Technical and Administrative Guidance Memorandum [TAGM] 4046; Determination of Soil Cleanup Objectives and Cleanup Levels." and 6 NYCRR Subpart 375-6 - Remedial Program Soil Cleanup Objectives). Excavation and off-site disposal would achieve soil SCGs. However, the pilot test performed at the site shows that hydraulic containment and chemical oxidation would not meet SCGs for the pesticides in soil.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated.

Both alternatives would involve some degree of excavation, although the excavation and handling of

contaminated media is relatively minor for Hydraulic Containment/Chemical Oxidation. These actions could potentially impact worker health and safety, the environment, and the local community.

The Excavation and Off-site Disposal alternative would involve hauling contaminated materials offsite. This would involve a short-term risk due to possible spilling of contaminated media offsite. This could be mitigated by properly covering contaminated media and by establishing proper emergency spill response measures.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

Excavation and Off-site Disposal would be effective in the long-term since all likely exposure pathways would be eliminated. This would be achieved by removing the contaminated soil.

It has been demonstrated by the pilot test that Hydraulic Containment/Chemical Oxidation would not be effective in the long-term since all likely exposure pathways would not be eliminated.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Excavation and Off-site Disposal would reduce the toxicity, mobility and volume of the soil contaminated with pesticides, VOCs and SVOCs by removing it from the site. Hydraulic Containment/Chemical Oxidation may reduce the toxicity, mobility and volume of the VOCs and SVOCs by treating them in place, but as demonstrated by the pilot study, not sufficiently to meet NYS soil cleanup guidance values.

6. Implementability. The technical feasibility and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

Hydraulic Containment/Chemical Oxidation would be more difficult to implement then Excavation and Off-site Disposal because it is a more complex remedy that involves an injection and treatment system. Furthermore, the pilot test showed that this on-site treatment alternative chosen in the March 2000 Record of Decision, is not feasible because chemical oxidation will not completely destroy the pesticide component of the waste and will not be protective of human health and the environment. Excavation and Off-site Disposal would be easy to implement using conventional excavation techniques.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis.

Excavation and Off-site Disposal has an estimated present worth cost of $528,000, which is very close to the original remedy's present worth cost of $451,000.

Although Excavation and Off-site Disposal has a greater estimated capital cost of $500,000, it is a

permanent remedy. The capital cost to implement Hydraulic Containment/Chemical Oxidation is estimated to be $231,000.

Excavation and Off-site Disposal would not leave a source of contamination on-site, which would greatly reduce operation and maintenance (O&M) costs. O&M for Hydraulic Containment/Chemical Oxidation is estimated for a 5 year period and would cost $28,600 per year. O&M for Excavation and Off-site Disposal, consisting of groundwater sampling, is also estimated for a 5 year period, but would cost only $6,500 per year.

The cost of Excavation and Off-site Disposal was the evaluation criterion that originally disqualified this alternative from being selected in the March 2000 ROD. The original present worth cost for Excavation and Off-site Disposal was $1,849,000. However, the revised estimate is $528,000. The original cost estimate was based on disposal fees at landfills through out New York State that were permitted to receive this type of hazardous waste. The significant decrease in cost is associated with a lower estimated disposal fees and considering other disposal options outside of New York State. Disposal of the contaminated soil at a facility in Canada was found to be the cheapest option and reason for the significant cost savings from the original estimate. The estimated present worth to complete the original remedy is $451,000.

With the revised cost estimate, Excavation and Off-Site Disposal appears to be most cost effective alternative of the other alternatives discussed in the March 2000 ROD.

Record of Decision - March 2000 Cost Estimates

Remedial Alternative	Capital Cost	Annual OM&M	Total Present Worth
Hydraulic Containment w/ Chemical Oxidation (March 2000 estimate)	$231,000	$28,600	$451,000
Excavation and Off-Site Disposal (March 2000 original estimate)	$1,829,000	$4,600	$1,849,000

Record of Decision Amendment - August 2006 Cost Estimates

Remedial Alternative	Capital Cost	Annual OM&M	Total Present Worth
Excavation and Off-Site Disposal (August 2006 revised estimate)	$500,000	$6,500	$528,000

This final criterion is considered a modifying criterion and is considered after evaluating those above. It is focused upon after public comments on the proposed ROD amendment have been received.

8. Community Acceptance. Concerns of the community regarding the proposed changes are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the final remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

5.0 SUMMARY OF PROPOSED CHANGES

The Department is proposing to amend the Record of Decision (ROD) for the 93 Main Street Site.

The elements of the proposed amended remedy are as follow:

1. A remedial design program would be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program.

2. Excavation and off-site disposal of approximately 1059 cubic yards of contaminated soil (Figure 3). Localized groundwater contamination would be 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 observe the attenuation of residual groundwater contamination.

5. Development of a site management plan to provide the details of the groundwater monitoring plan.

6. Imposition of an institutional control in the form of an environmental easement that would require (a) compliance with the approved site management plan; (b) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; (c) the property owner to complete and submit to the Department a periodic certification of institutional controls; (d) the property owner to complete, prior to the development of any occupied structures or buildings on the site, an evaluation of the potential for soil vapor intrusion to occur, including a provision for mitigation of any impacts identified; and (e) restricting the future of the property to a use no less restrictive than "restricted-residential use" as defined by 6NYCRR Part 375.

7. The property owner would provide a periodic certification of institutional controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed. This submittal would: (a) contain certification that the institutional controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; (b) allow the Department access to the site; and (c) state that nothing has occurred that would impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

6.0 NEXT STEPS

As described above, the public comment period on the proposed changes to the selected remedy will be from April 18, 2007 to May 19, 2007. A public meeting will be held on May 2 at 7:00 PM at the Binghamton State Office Building. At the close of the comment period, the Department will evaluate the comments received and prepare a responsiveness summary which will be made available to the public. A notice describing the Department's final decision will be sent to all persons on the site mailing list.

If you have questions or need additional information you may contact any of the following:

Kevin Sarnowicz
NYSDEC Central Office
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233-7014
1-888-212-9586

Gregg Townsend
NYSDEC Region 7 Office
615 Erie Blvd. West
Syracuse, NY 13204
(315) 426-7403

For Site Related Health Concerns:

Mark Sergott, Public Health Specialist
New York State Department of Health
Bureau of Environmental Exposure Investigation
Flanigan Square, 547 River St.
Troy, NY 12180-2216
(518) 402-7860 or toll-free 1-800-458-1158, extension 27860

Table 1
Nature and Extent of Contamination

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	DETECTED CONCENTRATION RANGE (ppb)	FREQUENCY of EXCEEDING SCGs	SCG (ppb)
Groundwater	Volatile Organic Compounds (VOCs)	Benzene	ND to 72	3 of 24	1
		Tetrachloroethene	ND to 34	3 of 24	5
		Chlorobenzene	ND to 120	3 of 24	5
		Ethylbenzene	ND to 120	3 of 24	5
		1,2-Dichloroethane	ND to 83	4 of 24	0.6
		Toluene	ND to 89	3 of 24	5
		Xylene	ND to 650	3 of 24	5
Groundwater	Semivolatile Organic Compounds (SVOCs)	2,4-Dichlorophenol	ND to 1,400	4 of 24	5
		Naphthalene	ND to 140	2 of 24	10
		2,4,5-Trichlorophenol	ND to 1,500	4 of 24	1
		Pentachlorophenol	ND to 25	2 of 24	1
		Phenol	ND to 2	1 of 24	1
		2-Chlorophenol	ND to 5	1 of 24	1
		1,4-Dichlorobenzene	ND to 4	1 of 24	3
		2-Methylphenol	ND to 2	1 of 24	1
		4 - Methylphenol	ND to 4	1 of 24	1
		benzo(a)anthracene	ND to 1	1 of 24	0.002
		Chrysene	ND to 1	1 of 24	0.002
		Bis(2-Ethylhexyl)-phthalate	ND to 7	1 of 24	5
		Benzo(b)fluoranthene	ND to 2	1 of 24	0.002
		Benzo(a)pyrene	ND to 1	1 of 24	ND
Groundwater	Pesticides	Endrin	ND to 0.15	2 of 24	ND
		Beta-BHC	ND to 0.89	5 of 24	0.04
		Lindane	ND to 91	3 of 24	0.05
		Aplha-BHC	ND to 1.5	1 of 24	0.01

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	DETECTED CONCENTRATION RANGE (ppb)	FREQUENCY of EXCEEDING SCGs	SCG (ppb)

Groundwater	Pesticides	Delta-BHC	ND to 1.2	4 of 24	0.04
		Heptachlor Epoxide	ND to 0.11	3 of 24	0.03
		Dieldrin	ND to 13	7 of 24	0.004
		Chlordane	ND to 1	3 of 24	0.05
Groundwater	Herbicides	Dicamba	ND to 3	3 of 24	0.44
Groundwater	Metals	Sodium	ND to 60,200	4 of 24	20,000

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	DETECTED CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING SCGs	SCG (ppm)
Soil	Volatile Organic Compounds (VOCs)	Chlorobenzene	ND to 3.2	1 of 16	1.7
		Ethylbenzene	ND to 17	1 of 16	5.5
		Xylene	ND to 100	2 of 16	1.2
Soil	Semivolatile Organic Compounds (SVOCs)	1,2,4-Trichlorobenzene	ND to 24	2 of 16	3.4
		Naphthalene	ND to 30	2 of 16	13
		2-Methylnaphthalene	ND to 190	1 of 16	36
		2,4,5-Trichlorophenol	ND to 7	1 of 16	0.1
		4-Nitrophenol	ND to 2.6	1 of 16	0.1
		Benzo(a)anthracene	ND to 0.7	2 of 16	0.224
		Chrysene	ND to 0.57	3 of 16	0.4
		Benzo(b)fluoranthene	ND to 0.88	5 of 16	0.224
		Benzo(k)fluoranthene	ND to 0.45	3 of 16	0.224
		Benzo(a)pyrene	ND to 0.54	6 of 16	0.061
		Dibenz(a,h)anthracene	ND to 0.28	3 of 16	0.014

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	DETECTED CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING SCGs	SCG (ppm)
Soil	Pesticides	Heptachlor	ND to 22	5 of 16	0.1

		Heptachlor Epoxide	ND to 8.3	5 of 16	0.02
		Dieldrin	ND to 97	4 of 16	0.044
		4,4'-DDE	ND to 24	6 of 16	2.1
		Endrin	ND to 37	5 of 16	0.1
		Endosulfan II	ND to 1	1 of 16	0.90
		Endosulfan I	ND to 8.2	1 of 16	0.90
		Alpha-BHC	ND to 5.6	5 of 16	0.11
		Beta-BHC	ND to 5.6	3 of 16	0.2
		Delta-BHC	ND to 12	6 of 16	0.3
		Lindane	ND to 44	8 of 16	0.06
		Aldrin	ND to 46	6 of 16	0.041
		4,4'-DDT	ND to 150	9 of 16	2.1
		Chlordane	ND to 560	8 of 16	0.54
Soil	Metals	Arsenic	ND to 39	4 of 16	7.5
		Beryllium	ND to 0.5	7 of 16	0.16
		Copper	ND to 81	5 of 16	25
		Iron	ND to 34,200	7 of 16	2,000
		Mercury	ND to 1.1	4 of 16	0.1
		Zinc	ND to 416	7 of 16	20
		Nickel	ND to 20	3 of 16	13