Site Management Plan

for Hydro-Air Components, Inc.
Former Steelfields Area IV Parcel

Brownfields Cleanup Program

Hydro-Air Components
Buffalo, New York
(NYSDEC SITE #C915204)

November 2007 0092-004-200

Prepared for:

Prepared by:

726 Exchange Street, Suite 624, Buffalo, New York | phone: (716) 856-0599 | fax: (716) 856-0583

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PART I

OPERATION, MONITORING, & MAINTENANCE PLAN

OPERATION, MONITORING, & MAINTENANCE PLAN
for
HYDRO-AIR COMPONENTS, INC.

FORMER STEELFIELDS AREA IV
BUFFALO, NY
NYSDEC BCP SITE #C915204

November 2007 0092-004-200

Prepared for:

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1.0 INTRODUCTION

1.1 Background

In October, 2002 Steelfields Ltd. purchased several vacant industrial properties in South Buffalo, New York (See Figure 1-1 and Figure 1-2) out of bankruptcy from the LTV Steel Company and Hanna Furnace Corporation (a wholly owned subsidiary of the National Steel Corporation). At the same time, Steelfields entered into a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC). Pursuant to the VCA, NYSDEC approved a Work Plan for Voluntary Cleanup Program Remedial Design/Remedial Action for the Former Steel and Coke Manufacturing Site prepared by TurnKey Environmental Restoration, LLC, dated September 2002 (VCA Work Plan) on December 27, 2002.

In August of 2006, Hydro-Air Components, Inc. purchased from Steelfields approximately 30.9 acres of the property that is subject to the VCA Work Plan, the parcel known as Area IV – Former Donner-Hanna Coke Yard Parcel (Area IV or Site). Hydro-Air entered into a Brownfields Cleanup Agreement (BCA) with NYSDEC on August 21, 2006 to continue to completion the remedial program activities on Area IV that had been commenced under the VCA Work Plan. Pursuant to the BCA, NYSDEC approved a Remedial Design Work Plan for Steelfields Area IV (Hydro-Air) Site dated September 2006, as amended (BCA Work Plan).

In September, 2007, Hydro-Air will submit to NYSDEC a Final Engineering Report documenting the completion of the remedial program construction activities in accordance with the BCA Work Plan and documenting the institutional controls, engineering controls and operation, monitoring and maintenance measures that will maintain the Site as protective of the environment and human health.

1.2 Purpose and Scope

This Operation, Monitoring, & Maintenance Plan (OM&M Plan) has been prepared for inclusion in the Site Management Plan. The sole purpose of this plan and that of the Soil/Fill Management Plan is to ensure protection of both the environment and human health during redevelopment and use of the Site, subsequent to completion of Voluntary Cleanup and Brownfield Cleanup remedial program activities.

The BCA Work Plan addresses remedial program activities to be performed at the Site. Following completion of the Brownfield Cleanup construction activities, post-remediation requirements will need to be implemented by subsequent owners or developers of the Site to comply with the terms and conditions of the BCA and BCA Work Plan. This Plan summarizes those tasks and obligations.

1.3 Operation, Monitoring, and Maintenance Program Responsibility

The BCA volunteer, Hydro-Air Components, Inc., and its successors and assigns will be responsible for all monitoring, implementation, and reporting required by the OM&M Plan.

The NYSDEC will be informed of any change in ownership, redevelopment, site configuration, or subdivision of the property and the "Volunteer" information below will be revised and resubmitted. The implementation of this Plan will continue until such time as the NYSDEC determines that the long-term obligations and implementation of this OM&M Plan have been fulfilled. Components of this Plan may be amended only by a written amendment executed by a duly authorized representative of the NYSDEC.

Upon initiation of the OM&M Plan, Hydro-Air will verify that any and all persons will have received an appropriate Health and Safety Plan prior to conducting work and/or maintenance on the Site that is, or has the potential to be, subject to the provisions of the OM&M Plan. Additionally, contact information for party responsible for implementation of the OM&M Program will be supplied to the NYSDEC for their files.

Currently on file, the Volunteer for the Site is:

Hydro-Air Components, Inc.

100 Rittling Blvd.

Buffalo, New York 14220

2.0 OM&M PLAN COMPONENTS

The Operation, Maintenance, & Monitoring (OM&M) Plan for this Site consists of four major components:

- Long-Term Groundwater Monitoring (LTGWM) Plan
- Active Sub slab Depressurization System
- ORC Well Monitoring & Maintenance Plan
- Annual Inspection & Certification Program

Each of these components is described within this section in detail.

2.1 Long-Term Groundwater Monitoring (LTGWM) Plan

Attachment A4 of this document consists of the LTGWM Plan that is required at the Site to monitor the effectiveness of the source area removals and controls implemented in accordance with the Brownfield Cleanup Agreement. Groundwater quality trends shall continue to be monitored at the locations indicated therein (at Figure 1) in accordance with the schedule presented in Attachment A4, Table 1.

2.2 Active Sub Slab Depressurization System O, M & M Program

An Active Sub Slab Depressurization System (ASD) was installed within the Hydro-Air Components, Inc. facility and is registered as an engineering control for the Site. The following text explains the general workings of a depressurization system, and the operation, maintenance, and monitoring of this system. Certification and Inspection forms referenced to in this section can be found as appendices to the "Active Sub Slab Depressurization System Operations Manual" (ASD Operation Manual) included in Attachment A5 of this Plan.

2.2.1 General

An ASD system creates a low-pressure zone beneath a building slab using a powered fan connected via piping to create negative pressure beneath the building foundation. The

low pressure field prevents soil gas from entering the building. Generally, essential components of an ASD include:

- a clean layer of coarse aggregate beneath the slab;
- installation of a suction pit beneath the slab for each building area separated by sub slab walls (i.e., footings);
- installation of a vent stack from the suction pit(s) under the slab to the roof;
- installation of a continuous operation fan(s) equipped with a pressure gauge to assure the system is under negative pressure; and,
- sealing all major slab and foundation penetrations, including joints, cracks and utility and pipe penetrations.

The active sub-slab depressurization (ASD) system utilized for this project was designed in accordance with the EPA design document entitled "Radon Prevention in the Design and Construction of Schools and Other Large Buildings" Third Printing with Addendum, June 1994 and the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006. The designed system consists of an 8-MIL polyethylene vapor barrier and five assemblies strategically placed within the foot print of the newly constructed building each containing one (1) of the following items; perforated pipe suction assembly, vertical piping vent stack and associated materials, exhaust fan, and magnehelic pressure gauges.

2.2.2 ASD System Operation, Maintenance, & Monitoring

2.2.2.1 ASD System Operation

This ASD System has been designed for continuous operation with minimal maintenance and/or operational oversight. It is imperative however, that the system is inspected periodically to document operation.

Near each suction point, a magnehelic gauge (refer to ASD Operation Manual, Appendix 2 for specifications) will be mounted approx. 5 feet above finished floor to the column at which the vent stack is attached. When the ASD system is operational, the magnehelic gauge will display the effective sub-slab (negative) pressure.

A "normal" operating pressure will be established upon system initiation.

2.2.2.2 Periodic Visual Inspection

On a monthly or some other periodic basis authorized by NYSDEC personnel, the pressure at each suction point will be read and recorded to document that the fan is maintaining normal operating negative pressure and system components will be visually inspected. Any large fluctuations or trends in pressure will be documented and brought to the attention of the owner or other responsible party. Visible leaks in piping and/or the concrete slab will be identified and noted for repair. Changes in use of the space, modifications to the system, building renovations, and/or significant non-running time will be documented on the Inspection Log (refer to Appendix 1 of the ASD Operations Manual (Attachment 5)).

2.2.2.3 Annual Certification/Inspection

An annual system certification inspection and report documenting that the system is performing properly and remains effective will be required by the NYSDEC and is to be submitted by a professional engineer or environmental professional. The certification report will contain the monthly logs, as well as an annual inspection checklist (refer to Appendix 1 of the ASD Operations Manual (Attachment 5)). The annual inspection will require that:

- system components to be visually inspected by a qualified person;
- the exhaust fan to be inspected for signs of abnormal operation or bearing failure (service and/or replacement if necessary);
- discharge location inspection - to verify no air intake has been located nearby vent pipe;
- HVAC system inspection to determine if it is being maintained and operated as designed; and,
- Detailed floor, wall, and slab inspection for cracks (resealing if necessary); smoke tubes may be used to check for leaks through floor joints and at suction points with the depressurization system running.

2.3 ORC Monitoring & Maintenance

In-situ treatment of chemical residual in native soil using ORC was proposed and approved for use in the general vicinity of source removal excavations designated G & E. Three in-situ treatment wells with 5-foot screens that extended to a depth of approximately 24 inches into the native soils were installed (refer to Figure 1 of the ORC Maintenance & Monitoring Plan). ORC "socks" were suspended in each of the wells to slowly release oxygen to the shallow water column and saturated soils.

Attachment A6 of this document includes the ORC Monitoring & Maintenance Plan that is required at the Site to monitor the application of ORC and document the regular maintenance.

2.4 Annual Inspection & Certification Program

The wells and other physical components of the Site shall be inspected annually by a qualified person representing the Volunteer or its successors and assigns. This qualified person shall at a minimum hold a four-year college degree in environmental sciences or engineering, and be supervised by a New York State Licensed Professional Engineer.

An Annual Certification shall be stamped and signed by a New York State Licensed Professional Engineer or such other qualified environmental professional as NYSDEC may find acceptable and must certify that the institutional controls and/or engineering controls employed at such Site have been inspected under the direction of such qualified person to confirm their effectiveness and such controls are:

- in place;
- unchanged from the previous certification:
- in the NYSDEC-approved format;
- nothing has occurred that would impair the ability of the controls to protect the public health and environment;
- the owner will continue to allow access to the Site to evaluate the continued maintenance of such controls;

- nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;
- the certification all attachments were prepared under the direction of, and reviewed by, the party making the certification;
- to the best of his/her 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.

The Annual Certification will primarily consist of a completed NYSDEC Institutional and Engineering Controls Certification Form (refer to Attachment A3 of this document) or such other form that is authorized by NYSDEC as compliant with the Brownfield Cleanup Program. In addition to the Certification, the completed checklist represented as Attachment A1 of this document or such other form that is authorized by NYSDEC as compliant with the Brownfield Cleanup Program and associated supporting documents (i.e. ASD annual certification forms, ORC Monitoring, & Maintenance Form, etc.) will be required under the same cover as supporting information and documentation.

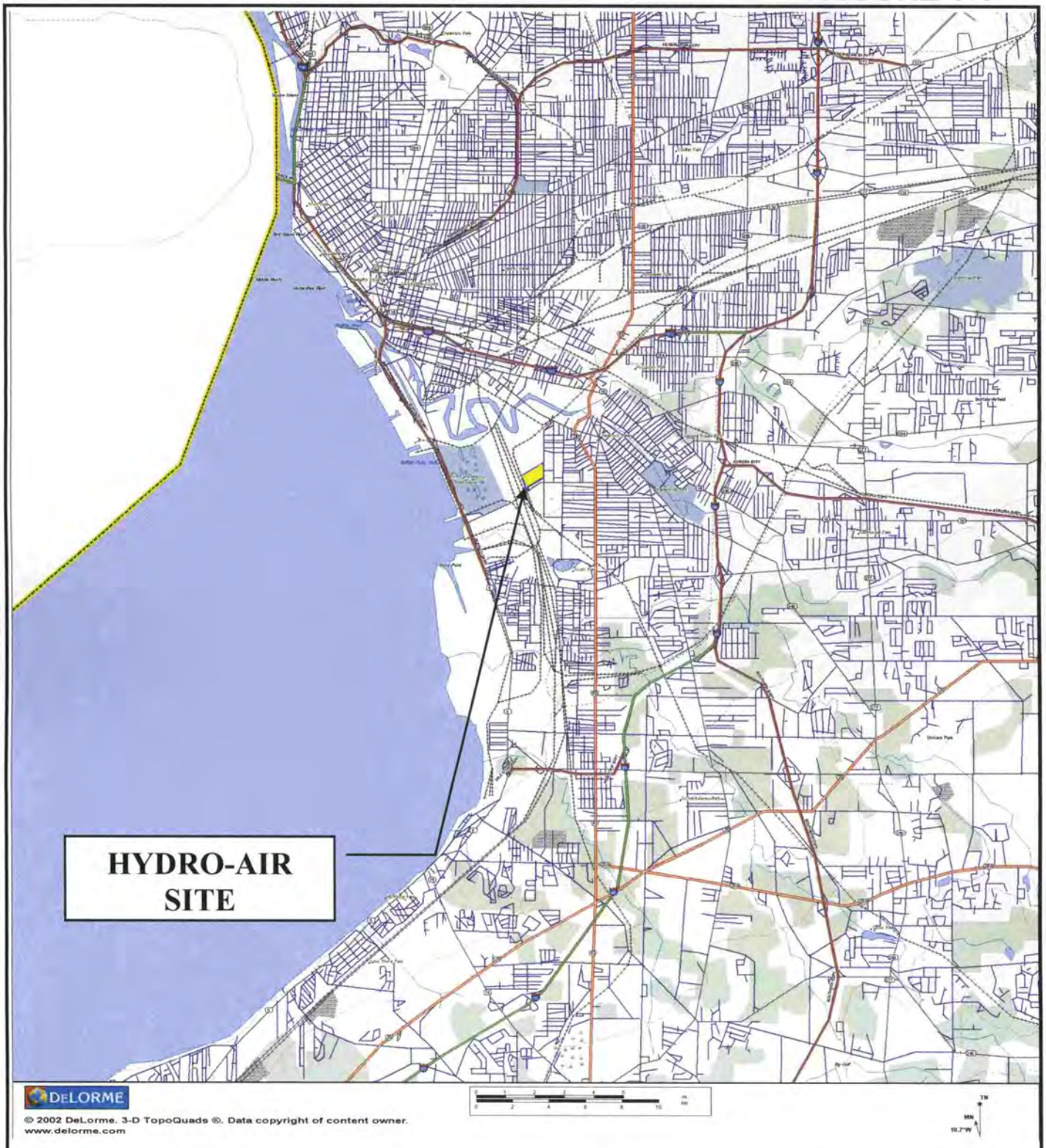
In the event that the Annual Certification cannot be provided due to a failure of one or more of the institutional or engineering controls, NYSDEC will be provided: (a) timely notification explaining the cause for such failure; (b) a work plan to implement the corrective measures necessary in order to be able to provide the certification; and (c) a schedule for those corrective measures.

In addition to the periodic reporting requirement, the remedial party shall timely notify the Department of failures of one or more of the institutional or engineering controls and shall provide a work plan to remedy the failure of the institutional or engineering control.

A certification, meeting the requirements of the Annual Certification above, shall be submitted to NYSDEC upon completion of the corrective measures. Such certification shall be in the form represented in Attachment A3 or such other form that is authorized by NYSDEC as compliant with the Brownfield Cleanup Program.

FIGURES

FIGURE 1-1



BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0599

PROJECT NO.: 0062-010-100

DATE: JULY 2007

DRAFTED BY: WJM

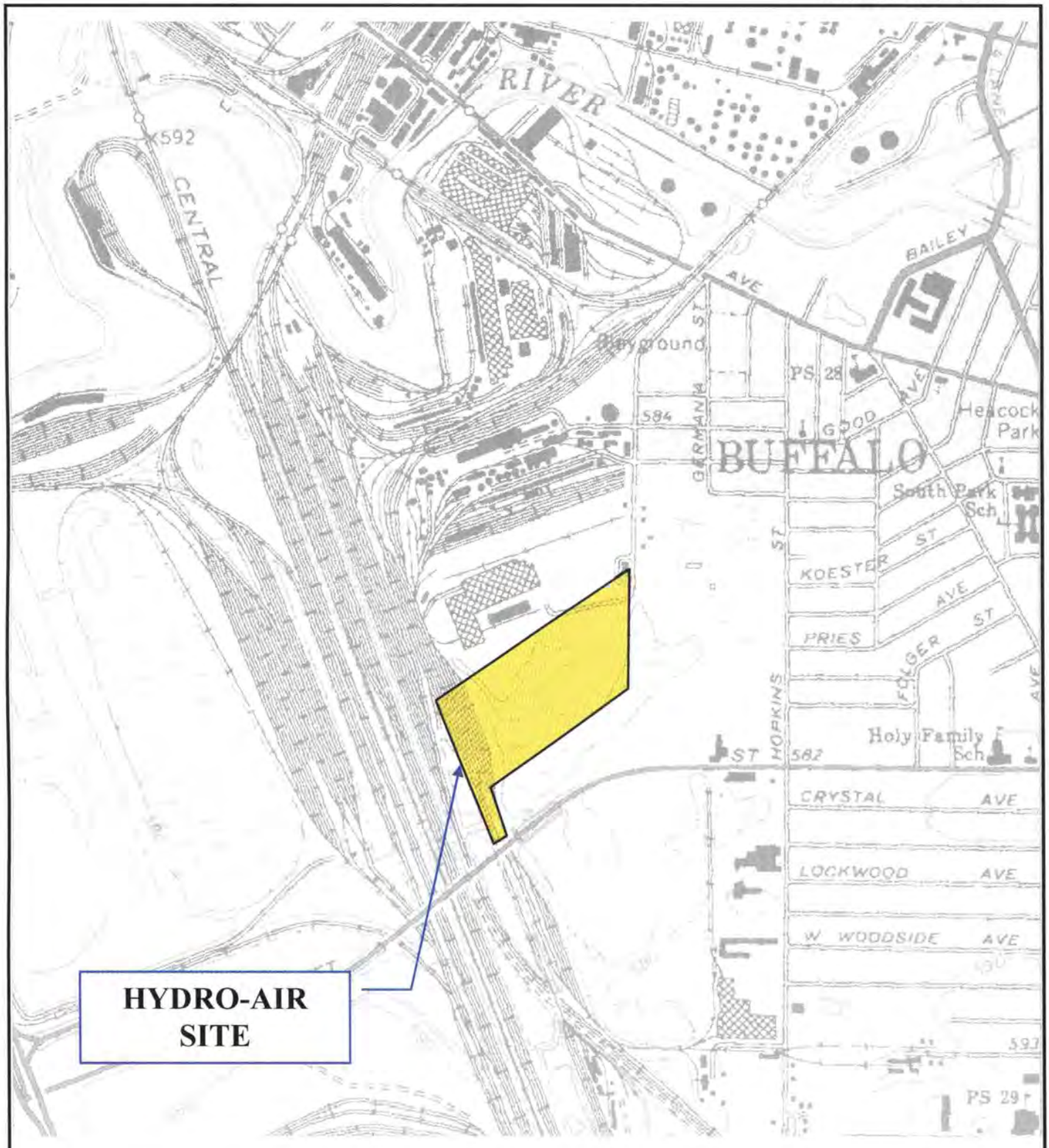
REGIONAL MAP

OPERATION, MONITORING, & MAINTENANCE PLAN

HYDRO-AIR COMPONENTS
BUFFALO, NEW YORK

PREPARED FOR
HYDRO-AIR COMPONENTS, INC.

FIGURE 1-2



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SUITE 624
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(716) 856-0599

PROJECT NO.: 0062-010-100

DATE: JULY 2007

DRAFTED BY: WJM

SITE VICINITY MAP

OPERATION, MONITORING, & MAINTENANCE PLAN

HYDRO-AIR COMPONENTS
BUFFALO, NEW YORK

PREPARED FOR
HYDRO-AIR COMPONENTS, INC.

FIGURE 1-3

BENCHMARK
ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0599

PROJECT NO.: 0062-010-100

DATE: JULY 2007

DRAFTED BY: PW / WJM

SITE MAP

OPERATION, MONITORING, & MAINTENANCE PLAN

HYDRO-AIR COMPONENTS
BUFFALO, NY

PREPARED FOR
HYDRO-AIR COMPONENTS, INC.

F:\TurnKey\Clients\Steelfields\Final Engineering Reports\Area 1V\Attachments\Site Management Plan\Part I - Operation & Maintenance Plan\Figure 1-3.dwg

ATTACHMENT A1

ENVIRONMENTAL INSPECTION FORM

Environmental Inspection Form
Operation, Monitoring, & Maintenance Work Plan

Property Name:		Project No.:	
Client:			
Property Address:		City, State:	Zip Code:
Property ID: (Tax Assessment Map)	Section:	Block:	Lot(s):
Preparer's Name:		Date/Time:	

CERTIFICATION

The results of this inspection were discussed with the owner and/or owner's representative. Any corrective actions required have been identified and noted in this report, and a supplemental Corrective Actions Form has been completed. Proper implementation of these corrective actions have been discussed with the owner, agreed upon, and scheduled.

Preparer / Inspector: **Date:**

Signature:

Next Scheduled Inspection (date):

Final Surface Cover / Vegetation

In accordance with the Soil/Fill Management Plan, vegetative or other (eg. Asphalt, buildings, concrete) surface coverage over the entire redeveloped parcel is required by the developer or owner as a pre-condition of occupancy. The following documents the condition of the above.

1. Final Cover is in Place and in good condition?	☐ yes	☐ no	☐ N/A
Cover consists of (mainly):			
2. Evidence of erosion?	☐ yes	☐ no	☐ N/A
3. Cracks visible in pavement?	☐ yes	☐ no	☐ N/A
4. Evidence of distressed vegetation/turf?	☐ yes	☐ no	☐ N/A
5. Evidence of unintended traffic and/or rutting?	☐ yes	☐ no	☐ N/A
6. Evidence of uneven settlement and/or ponding?	☐ yes	☐ no	☐ N/A
7. Damage to any surface coverage?	☐ yes	☐ no	☐ N/A

If yes to any question above, please provide more information below.

Property Security & Access

In accordance with the Soil/Fill Management Plan, fencing is required to restrict access in all undeveloped areas and as necessary in redeveloped areas. In addition, all fencing around undeveloped areas will be posted with "No Trespassing" signs.

1. Is access controlled by perimeter fencing?	☐ yes	☐ no	☐ N/A
If not, please note: _____			
2. Is fencing in need of repair?	☐ yes	☐ no	☐ N/A
3. Area access gates in working order?	☐ yes	☐ no	☐ N/A
4. Sufficient signage posted (No Trespassing)?	☐ yes	☐ no	☐ N/A
5. Has there been any noted or reported trespassing?	☐ yes	☐ no	☐ N/A

Please note any irregularities/ changes in site access and security: _____

Property Use Changes / Site Development

Has the property usage changed, or site been redeveloped since the last inspection?

☐ yes ☐ no ☐ N/A

If so, please list with date: _____

Active Sub-Slab Depressurization System (ASD)

Is there an ASD present on-site?

☐ yes ☐ no ☐ N/A

If yes, is it currently operating?

☐ yes ☐ no ☐ N/A

Is the ASD annual inspection checklist completed and enclosed?

☐ yes ☐ no ☐ N/A

Environmental Inspection Form
Operation, Monitoring, & Maintenance Work Plan

ORC Well Monitoring and Maintenance

Is there ORC mitigation present on-site?

☐ yes ☐ no ☐ N/A

Are the wells currently intact and operational?

☐ yes ☐ no ☐ N/A

Has regular maintenance and monitoring been documented and enclosed or referenced?

☐ yes ☐ no ☐ N/A

Long-Term Ground Water Monitoring

Is there a plan in place and currently being followed?

☐ yes ☐ no ☐ N/A

Are the wells currently intact and operational?

☐ yes ☐ no ☐ N/A

When was the most recent sampling event report and submittal? Date: _____

When is the next projected sampling event? Date: _____

New Information

Has any new information been brought to the owner/engineer's attention regarding any and/or all engineering and institutional controls and their operation and effectiveness?

☐ yes ☐ no ☐ N/A

Comments: _____

This space for Notes and Comments

Please include the following Attachments:

1. Site Sketch
2. Photographs

ATTACHMENT A2

CORRECTIVE ACTION CERTIFICATION

Manufactured Gas Plant Projects: Applicable program guidance (including non-registry listed MGPs).

WHERE to mail the signed Certification Form by Thursday, May 24, 2007 (45 days of the date of the notice):

New York State Department of Environmental Conservation
Division of Environmental Remediation

Attn: , Project Manager

Please note that extra postage may be required.

Corrective Action Certification
Operation, Monitoring, & Maintenance Work Plan

Property Name:		Project No.:	
Client:			
Property Address:		City, State:	Zip Code:
Property ID: (Tax Assessment Map)	Section:	Block:	Lot(s):
Preparer's Name:		Date/Time:	

Issue Addressed

The environmental Inspection of the above property determined the need for corrective action. This form has been completed to document the required corrective action and it's implementation.

Description of site Issue identified during Environmental Inspection (include sketch & photographs):

Corrective Action Taken

Date Completed:

Describe Action Taken (include sketch & photographs):

Certification of Implementation

The signatory hereby certifies that the corrective action as described in this form has been completed in accordance with all relevant requirements of the Soil/Fill Management Plan and other applicable documents.

Preparer / Inspector: **Date:**

Signature:

Please verify inclusion of the following Attachments:

1. Site Sketch
2. Photographs

ATTACHMENT A3

NYSDEC INSTITUTIONAL AND ENGINEERING CONTROLS CERTIFICATION FORM

Enclosure 1
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. **C-915204**	
Site Name **Hydro-Air Components, Inc.**	
Site Address:	Zip Code: 14210
City/Town: Buffalo	
County: Erie, County	
Current Use: Hydro-Air Manufacturing Facility	
Intended Use: Commercial / Industrial Redevelopment	

Verification of Site Details	**Box 2** YES	NO
1. Are the Site Details above, correct?	☐	☐
If NO, are changes handwritten above or included on a separate sheet?	☐	
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment since the initial/last certification?	☐	☐
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	☐
3. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property since the initial/last certification?	☐	☐
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	☐
4. Has a change-of-use occurred since the initial/last certification?	☐	
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	
5. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), has any new information revealed that assumptions made in the Qualitative Exposure Assessment for offsite contamination are no longer valid?	☐	☐
If YES, is the new information or evidence that new information has been previously submitted included with this Certification?	☐	
6. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), are the assumptions in the Qualitative Exposure Assessment still valid (must be certified every five years) ?	☐	☐

SITE NO. V00619-9 Box 3

Description of Institutional Control

YES NO

Description of Engineering Control

YES NO

Control Certification Statement

For each Institutional or Engineering control listed above, I certify by checking "Yes" that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control 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) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(d) 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.

(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.

IC/EC CERTIFICATIONS
SITE NO.

Box 5

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 2 & 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 _____ at _____,
print name print business address

am certifying as _____(Owner or Remedial Party)

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

_____ _____
Signature of Owner or Remedial Party Rendering Certification Date

Box 6

QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE

I certify that all information and statements in Box 4 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 _____ at _____,
print name print business address

am certifying as a Qualified Environmental Professional for the _____

(Owner or Remedial Party) for the Site named in the SIte Details Section of this form.

_____ _____ _____
Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification Stamp (if Required) Date

Enclosure 2

Certification of Institutional Controls/ Engineering Controls (ICs/ECs)
Step-by-Step Instructions, Certification Requirements and Definitions

The Owner, or Remedial Party, and when necessary, a Professional Engineer (P.E.), or the Qualified Environmental Professional (QEP), must review and complete the IC/EC Certification Form, sign the IC/EC Certifications Signature Page, and return it, along with the Periodic Review Report (PRR), within 45 days of the date of this notice.

Please use the following instructions to complete the IC/EC Certification.

I. Verification of Site Details (Box 1 and Box 2):

Answer the six questions in the Verification of Site Details Section. Questions 5 and 6 refer to only sites in the Brownfield Cleanup Program. ECL Section 27-1415-7(c) is included in **IV. IC/EC Certification Requirements**. The Owner and/or your P.E. or QEP may include handwritten changes and/or other supporting documentation, as necessary.

II. Verification of Institutional / Engineering Controls (Box 3 and Box 4)

Review the listed Institutional / Engineering Controls, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party is to petition the Department requesting approval to remove the control.

2. Select "YES" or "NO" for **Control Certification** for each IC/EC, based on Sections (a)-(e) of the **Control Certification Statement**.

   If the Department concurs with the explanation, the corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Project Manager. If the Department has any questions or concerns regarding the completion of the certification, the Project Manager will contact you.

3. If you cannot certify "Yes" for each Control, please continue to complete the remainder of this **Control Certification** form. Attach supporting documentation that explains why the **Control Certification** cannot be rendered, as well as a statement of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Control Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is conducted.

   If the Department concurs with the explanation, the corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Project Manager. Once the corrective measures are complete a new Periodic Review Report (with IC/EC Certification) is to be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 5 and Box 6):

1. If you certified "Yes" for each Control, please complete and sign the IC/EC Certifications page. To determine WHO signs the **IC/EC Certification,** please use Table 1. Signature Requirements for the IC/EC Certification, which follows.

Table 1. Signature Requirements for Control Certification Page

Type of Control	Example of IC/EC	Required Signatures
IC only	Environmental Easement Deed Restriction.	A site or property owner or remedial party.
IC with an EC which does not include a treatment system or engineered caps.	Fence, Clean Soil Cover, Individual House Water Treatment System, Vapor Mitigation System	A site or property owner or remedial party, and a QEP. (P.E. license not required)
IC with an EC that includes treatment system or an engineered cap.	Pump & Treat System providing hydraulic control of a plume, Part 360 Cap.	A site or property owner or remedial party, and a QEP with a P.E. license.

IV. IC/EC Certification Requirements:

Division of Environmental Remediation Program Policy requires periodic certification of IC(s) and EC(s) as follows:

For Environmental Restoration Projects: N.Y. Envtl Conserv.Law Section 56-0503 (Environmental restoration projects; state assistance)

For State Superfund Projects: Envtl Conserv.Law Section 27-1318. (Institutional and engineering controls)

For Brownfields Cleanup Program Projects: Envtl Conserv.Law Section 27-1415. (Remedial program requirements)

Envtl Conserv.Law Section 27-1415-7(c) states:

(c) At non-significant threat sites where contaminants in groundwater at the site boundary contravene drinking water standards, such certification shall also certify that no new information has come to the owner's attention, including groundwater monitoring data from wells located at the site boundary, if any, to indicate that the assumptions made in the qualitative exposure assessment of offsite contamination are no longer valid. Every five years the owner at such sites shall certify that the assumptions made in the qualitative exposure assessment remain valid. The requirement to provide such certifications may be terminated by a written determination by the Commissioner in consultation with the Commissioner of Health, after notice to the parties on the brownfield site contact list and a public comment period of thirty days.

Voluntary Cleanup Program: Applicable program guidance.

Petroleum Remediation Program: Applicable program guidance.

Federal Brownfields: Applicable program guidance.

V. Definitions

"Engineering Control" (EC), means any physical barrier or method employed to actively or passively contain, stabilize, or monitor contamination, restrict the movement of contamination to ensure the long-term effectiveness of a remedial program, or eliminate potential exposure pathways to contamination. Engineering controls include, but are not limited to, pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls, building ventilation systems, fences, access controls, provision of alternative water supplies via connection to an existing public water supply, adding treatment technologies to such water supplies, and installing filtration devices on private water supplies.

"Institutional Control" (IC), means any non-physical means of enforcing a restriction on the use of real property that limits human and environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or members of the public, or prevents actions that would interfere with the effectiveness of a remedial program or with the effectiveness and/or integrity of operation, maintenance, or monitoring activities at or pertaining to a remedial site.

"Professional Engineer" (P.E.) means an individual or firm licensed or otherwise authorized under article 145 of the Education Law of the State of New York to practice engineering.

"Property Owner" means, for purposes of an IC/EC certification, the actual owner of a property. If the site has multiple properties with different owners, the Department requires that the owners be represented by a single representative to sign the certification.

"Oversight Document" means any document the Department issues pursuant to each Remedial Program (see below) to define the role of a person participating in the investigation and/or remediation of a site or area(s) of concern. Examples for the various programs are as follows:

BCP (after approval of the BCP application by DEC) - Brownfield Site Cleanup Agreement.
ERP (after approval of the ERP application by DEC) - State Assistance Contract.
Federal Superfund Sites - Federal Consent Decrees, Administrative Orders on Consent or Unilateral Orders issued pursuant to CERCLA.
Oil Spill Program - Order on Consent, or Stipulation pursuant to Article 12 of the Navigation Law (and the New York Environmental Conservation Law).
State Superfund Program - Administrative Consent Order, Record of Decision.
VCP (after approval of the VCP application by DEC) - Voluntary Cleanup Agreement.
RCRA Corrective Action Sites- Federal Consent Decrees, Administrative Orders on Consent or permit conditions issued pursuant to RCRA.

"Qualified Environmental Professional" (QEP), means a person who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding the presence of releases or threatened releases to the surface or subsurface of a property or off-site areas, sufficient to meet the objectives and performance factors for the areas of practice identified by this Part. Such a person must:

(1) hold a current professional engineer's or a professional geologist's license or registration issued by the State or another state, and have the equivalent of three years of full-time relevant experience in site investigation and remediation of the type detailed in this Part; or

(2) be a site remediation professional licensed or certified by the federal government, a state or a recognized accrediting agency, to perform investigation or remediation tasks consistent with Department guidance, and have the equivalent of three years of full-time relevant experience.

"Qualitative Exposure Assessment" means a qualitative assessment to determine the route, intensity, frequency, and duration of actual or potential exposures of humans and/or fish and wildlife to contaminants.

"Remedial Party" means a person implementing a remedial program at a remedial site pursuant to an order, agreement or State assistance contract with the Department.

"Site Management" (SM) means the activities undertaken as the last phase of the remedial program at a site, which continue after a Certificate of Completion is issued. Site management is conducted in accordance with a site management plan, which identifies and implements the institutional and engineering controls required for a site, as well as any necessary monitoring and/or operation and maintenance of the remedy.

"Site Management Plan" (SMP) means a document which details the steps necessary to assure that the institutional and engineering controls required for a site are in-place, and any physical components of the remedy are operated, maintained and monitored to assure their continued effectiveness, developed pursuant to Section 6 (DER10 Technical Guide).

"Site Owner" means the actual owner of a site. If the site has multiple owners of multiple properties with ICs and/or ECs, the Department requires that the owners designate a single representative for IC/EC Certification activities.

ATTACHMENT A4

LONG-TERM GROUNDWATER MONITORING WORK PLAN

WORK PLAN
for
LONG-TERM GROUNDWATER MONITORING

HYDRO-AIR COMPONENTS, INC. SITE
BUFFALO, NY

November 2007 0092-004-200

Prepared for:

Hydro-Air Components, Inc.

WORK PLAN FOR LONGTERM GROUNDWATER MONITORING

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WORK PLAN FOR LONGTERM GROUNDWATER MONITORING

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1.0 INTRODUCTION

This groundwater monitoring program has been designed to monitor the effectiveness of the source area removal, treatment, and controls to be implemented at the Steelfields Area IV (Hydro-Air) Site in accordance with the Brownfield Cleanup Agreement. Groundwater quality trends will be monitored along the perimeter of the Site.

2.0 GROUNDWATER MONITORING PROGRAM

2.1 Monitoring Network

The long-term groundwater monitoring network and monitoring frequency for this program is presented in Table 1. Figure 1 presents the monitoring well locations. As shown on Table 1 and Figure 1, the monitoring network for Area IV includes five monitoring wells, of which three were destroyed during construction.

Monitoring wells (A4-MW-5, A4-MW-7, A4-MW-8, A4-MW-9, A4-MW-10) will be installed within 30 days of remedial work completion to avoid damage to the wells from heavy equipment. Construction of wells A4-MW-5, A4-MW-7, A4-MW-8, A4-MW-9 and A4-MW-10 will be similar to the existing well (i.e., 2-inch diameter PVC with 5 to 10-foot slotted screen) and will be screened within the shallow water-bearing unit. After installation, new monitoring wells will be properly developed in accordance with NYSDEC and Benchmark standard operating procedures. Protective casings and surface seals will be installed on all new wells and on existing wells of the monitoring network that do not already have them. If any existing wells identified to be in the Groundwater Monitoring Program become damaged or unusable during remedial construction, those wells will be replaced within 30 days of completion of remedial construction.

The potential need to install additional wells or adjust the location of new wells will be determined during the remedial activities as additional field information is gathered.

2.2 Groundwater Flow and Hydrodynamics

New well installations will be surveyed to accurately determine their location and elevation. Groundwater elevation data will be collected during each sampling event and an isopotential map prepared annually.

2.3 Groundwater Sampling

2.3.1 Sampling Frequency

Each newly installed well in the Groundwater Monitoring Program will be sampled semi-annually for three consecutive events. Following semi-annual sampling events, all

Monitoring Program wells will continue to be sampled annually thereafter or at the frequency identified on Table 1 until the NYSDEC determines continued sampling is unnecessary.

2.3.2 Sampling Method

The monitoring wells in the program will be sampled using USEPA Region II Low Stress (i.e. low-flow) Purging and Sampling technique. The low flow method produces samples with lower turbidity and smaller volumes of purge water than using conventional bailer techniques. Low-flow sampling also produces less agitation of the groundwater. As a result, the low-flow method provides a more representative sample, in relation to actual groundwater conditions, by not drastically altering the chemistry of the groundwater while withdrawing the sample. Benchmark's Field Operating Procedure (FOP) for the low-flow technique is provided as Attachment 1.

2.3.3 Analyses

For the first year, groundwater samples will be analyzed for the parameters and analytical methods presented in Table 2. After the first year, the parameter list will be reviewed for each monitoring well to determine whether the parameter list can be reduced based on the analytical results as well as the proposed activities for the site.

2.4 Statistical Evaluations

2.4.1 Parameters of Interest

Based upon the groundwater test results to date, the following parameters of interest will be statistically evaluated for all water quality monitoring wells in the program:

- Benzene, lead, cyanide and
- Any parameters exceeding the groundwater quality standard for two (2) consecutive events.

For each "parameter of interest", statistical tables in spreadsheet form will be generated that include parameter concentration for each sampling event number, laboratory

detection limit, moving average, standard deviation, and mean. The moving average will involve averaging four sequential concentrations in succession for analytical data.

2.4.2 Data Evaluation

For each monitoring location, a graph will then be generated which has the individual sample results and moving average concentration versus sampling event (i.e. time). A trend line will be plotted of the moving average, and evaluated to assess an increasing, decreasing, or neutral trend (neutral is having no significant increasing or decreasing trend).

The results will be interpreted in the following manner:

- If an increasing trend occurs for two consecutive monitoring events and the concentrations of each of the monitoring events are above New York State Groundwater Quality Standards/Guidance Values (GWQS/GV), an evaluation will be made to determine the potential cause. The type of evaluation will depend on which parameter(s) has the increasing trend.
- If there is a neutral trend in a monitoring well for four consecutive monitoring events (after source removal or implementation of remedial measure), an evaluation will be made to determine the potential cause. The type of evaluation will depend on which parameter(s) has the neutral trend.
- If, based on the evaluation of potential cause provided for under either of the two preceding bullet points, NYSDEC determines that the neutral or increasing trend is indicative of either 1) a potential source area originating in on-site soil/fill, or 2) conditions that have the potential to significantly contribute to the degradation of groundwater quality off-site, then an assessment of additional soil/fill and/or groundwater remedial program alternatives will be conducted for implementation at the Site.
- If there is a decreasing long-term trend in a monitoring well for all parameters for eight consecutive monitoring events, that location will be considered for elimination from further monitoring subject to NYSDEC approval.

3.0 REPORTING

During the first two years of semi-annual monitoring described in Section 2.3.1, two reports per year will be provided to the NYSDEC. A semi-annual report summarizing the first semi-annual event that includes graphs with trend lines, sampling data, discussion of results, isopotential map, and analytical data presented as tables and maps and an annual report presenting a summary of all semi-annual analytical data collected during the calendar year as well as an engineering and geologic evaluation of all of the data. After the first two years of semi-annual monitoring described above, one annual report will be provided to the NYSDEC, Region 9 Office, by March 1 of each calendar year that includes the information listed above.

Any and all changes to the Monitoring Program will be approved by the NYSDEC prior to implementation.

TABLES

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 1

GROUNDWATER MONITORING NETWORK AND SAMPLE FREQUENCY

Steelfields Area IV (Hydro-Air) Site
Hydro-Air Components, Inc.
Buffalo, New York

Well Designation	Type of Well		Former Well Designation	Monitoring Event				
				Year 1		Year 2		Year 3
	New	Existing		1 SA	2SA	1 SA	2SA	Annually[2]
AREA IV - Monitoring Wells								
A4-MW-5 [1]	x		--	x	x	x		x
A4-MW-7 [1]	x		--	x	x	x		x
A4-MW-8 [1]	x		--	x	x	x		x
A4-MW-9	x		--	x	x	x		x
A4-MW-10	x		--	x	x	x		x

Notes:

1. These wells were previously installed, however they were destroyed due to construction activities. As such, the wells will be replaced and are identified as "new".
2. Sampling and reporting will continue annually until such time as the NYSDEC modifies or terminates the monitoring requirements as set forth in Sections 2.3.1 and 2.4.2 of this Long-Term Groundwater Monitoring Report.

TABLE 2

ANALYTICAL PARAMETERS

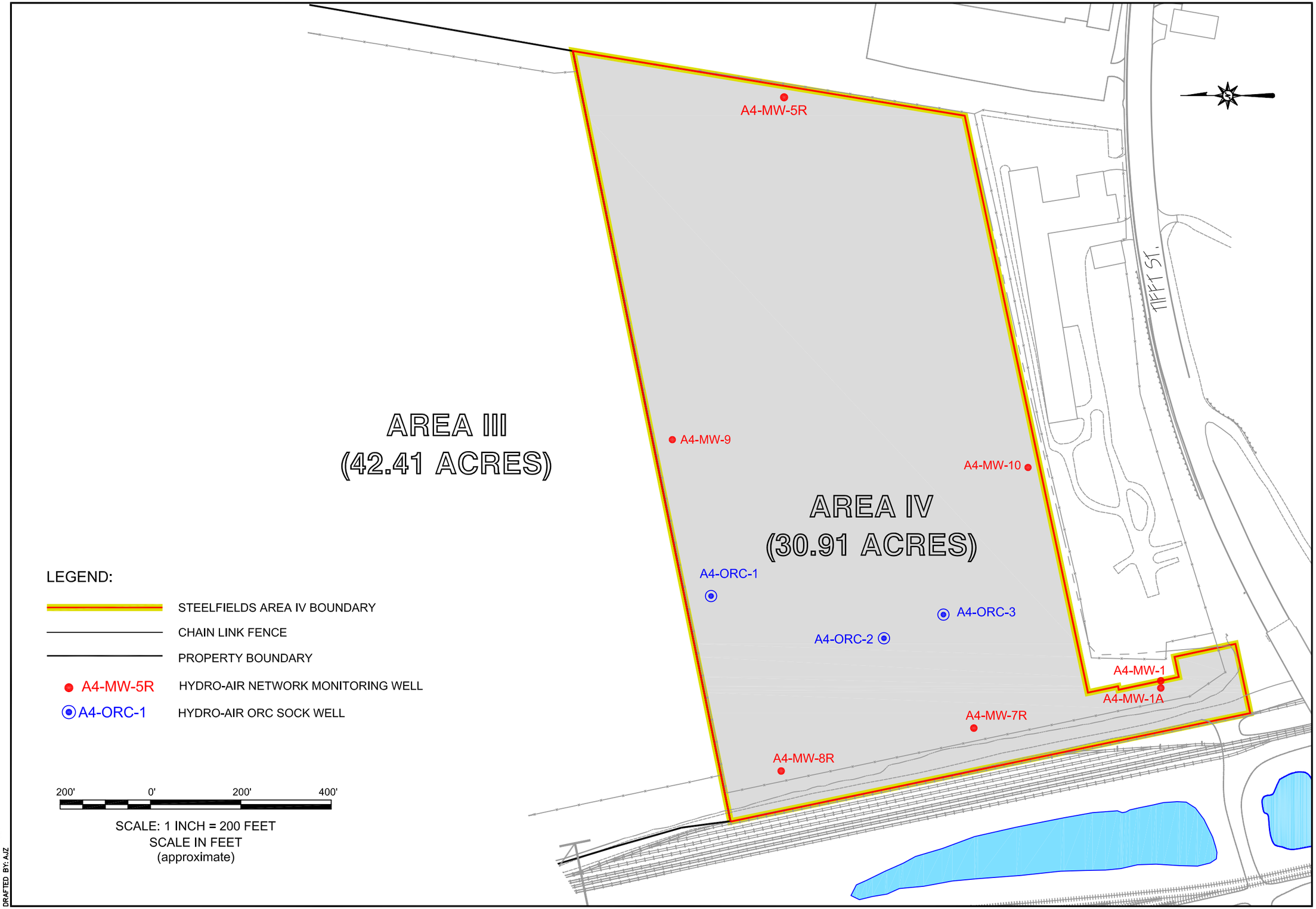
Steelfields Area IV (Hydro-Air) Site
Hydro-Air Components, Inc.
Buffalo, New York

Area IV (A4-MW-5, A4-MW-7, A4-MW-8, A4-MW-9 and A4-MW-10)
STARS List VOCs (Method 8021)[1]
Arsenic (Method 6010)
Chromium (Method 6010)
Lead (Method 6010)
Cyanide (Method 335)

Notes:

1. For the first semi-annual event, wells will be analyzed for "Full List" (i.e., TCL and STARS List VOCs).

FIGURES



DATE: NOVEMBER 2007
DRAFTED BY: AJZ

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
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JOB NO.: 0092-004-200

SITE PLAN
LONG-TERM GROUNDWATER MONITORING PLAN
BUFFALO, NEW YORK
HYDRO-AIR SITE

PREPARED FOR
HYDRO-AIR COMPONENTS, INC.

FIGURE 1

ATTACHMENT 1

LOW-FLOW PURGING/SAMPLING STANDARD OPERATING PROCEDURE

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

FIELD OPERATING PROCEDURES

Low-Flow (Minimal Drawdown) Groundwater Purging & Sampling Procedure

FOP 031.0

LOW FLOW (MINIMAL DRAWDOWN) GROUNDWATER PURGING & SAMPLING PROCEDURES

PURPOSE

This procedure describes the methods used for performing low flow (minimal drawdown) purging, also referred to as micro-purging, at a well prior to groundwater sampling to obtain a representative sample from the water-bearing zone. This method of purging is used to minimize the turbidity of the produced water. This may increase the representativeness of the groundwater samples by avoiding the necessity of filtering suspended solids in the field prior to preservation of the sample.

Well purging is typically performed immediately preceding groundwater sampling. The sample should be collected as soon as the parameters measured in the field (i.e., pH, specific conductance, dissolved oxygen, Eh, temperature, and turbidity) have stabilized.

PROCEDURE

1. Water samples should not be taken immediately following well development. Sufficient time should be allowed to stabilize the groundwater flow regime in the vicinity of the monitoring well. This lag time will depend on site conditions and methods of installation but may exceed one week.

2. Prepare the electronic water level indicator (e-line) in accordance with the procedures referenced in the Benchmark's Groundwater Level Measurement FOP and decontaminate the e-line probe and a lower portion of cable following the procedures referenced in the Benchmark's Non-disposable and Non-dedicated Sampling Equipment Decontamination FOP. Store the e-line in a protected area until use. This may include wrapping the e-line in clean plastic until the time of use.

3. Calibrate all sampling devices and monitoring equipment in accordance with manufacturer's recommendations, the site Quality Assurance Project Plan (QAPP) and/or Field Sampling Plan (FSP). Calibration of field

instrumentation should be followed as specified in Benchmark's Calibration and Maintenance FOP for each individual meter.

4. Inspect the well/piezometer for signs of vandalism or damage and record condition on the Groundwater Well Purge & Sample Collection Log form (sample attached). Specifically, inspect the integrity of the following: concrete surface seal, lock, protective casing and well cover, well casing and J-plug/cap. Report any irregular findings to the Project Manager.

5. Unlock and remove the well protective cap or cover and place on clean plastic to avoid introducing foreign material into the well.

6. Monitor the well for organic vapors using a PID, as per the Work Plan. If a reading of greater than 5 ppm is recorded, the well should be allowed to vent until levels drop below 5 ppm before proceeding with purging.

7. Lower the e-line probe slowly into the monitoring well and record the initial water level in accordance with the procedures referenced in Benchmark's Groundwater Level Measurement FOP. Refer to the construction diagram for the well to identify the screened depth.

8. Decontaminate all non-dedicated pump and tubing equipment following the procedures referenced in the Benchmark's Non-disposable and Non-dedicated Sampling Equipment Decontamination FOP.

9. Lower the purge pump or tubing (i.e., low-flow electrical submersible, peristaltic, etc.) slowly into the well until the pump/tubing intake is approximately in the middle of the screened interval. Rapid insertion of the pump will increase the turbidity of well water, and can increase the required purge time. This step can be eliminated if dedicated tubing is already within the well.

   Placement of the pump close to the bottom of the well will cause increased entrainment of solids, which may have settled in the well over time. Low-flow purging has the advantage of minimizing mixing between the overlying

stagnant casing water and water within the screened interval. The objective of low-flow purging is to maintain a purging rate, which minimizes stress (drawdown) of the water level in the well. Low-flow refers to the velocity with which water enters the pump intake and that is imparted to the formation pore water in the immediate vicinity of the well screen.

10. Lower the e-line back down the well as water levels will be frequently monitored during purge and sample activities.

11. Begin pumping to purge the well. The pumping rate should be between 100 and 500 milliliters (ml) per minute (0.03 to 0.13 gallons per minute) depending on site hydrogeology. Periodically check the well water level with the e-line adjusting the flow rate as necessary to stabilize drawdown within the well. If possible, a steady flow rate should be maintained that results in a stabilized water level (drawdown of 0.3 feet or less). If the water level exceeds 2 feet below static and declining, slow the purge rate until the water level generally stabilizes. Record each pumping rate and water level during the event.

    The low flow rate determined during purging will be maintained during the collection of analytical samples. At some sites where geologic heterogeneities are sufficiently different within the screened interval, high conductivity zones may be preferentially sampled.

12. Measure and record field parameters (pH, specific conductance, Eh, dissolved oxygen (DO), temperature, and turbidity) during purging activities. In lieu of measuring all of the parameters, a minimum subset could be limited to pH, specific conductance, and turbidity or DO.

    Water quality indicator parameters should be used to determine purging needs prior to sample collection in each well. Stabilization of indicator parameters should be used to determine when formation water is first encountered during purging. In general, the order of stabilization is pH, temperature, and specific conductance, followed by Eh, DO and turbidity. Performance criteria for determination of stabilization should be based on water-level drawdown, pumping rate and equipment specifications for measuring indicator

parameters. An in-line flow through cell to continuously measure the above parameters may be used. The in-line device should be disconnected or bypassed during sample collection.

13. Purging will continue until parameters of water quality have stabilized. Record measurements for field indicator parameters (including water levels) at regular intervals during purging. The stability of these parameters with time can be used to guide the decision to discontinue purging. Proper adjustments must be made to stabilize the flow rate as soon as possible.

14. Record well purging and sampling data in the Project Field Book or on the attached Groundwater Well Purge & Sample Collection Log (sample attached). Measurements should be taken approximately every three to five minutes, or as merited given the rapidity of change.

15. Purging is complete when field indicator parameters stabilize. Stabilization is achieved after all field parameters have stabilized for three successive readings. Three successive readings should be within ± 0.1 units for pH, ± 3% for specific conductance, ± 10 mV for Eh, and ± 10% for turbidity and dissolved oxygen. These stabilization guidelines are provided for rough estimates only, actual site-specific knowledge may be used to adjust these requirements higher or lower.

    An in-line water quality measurement device (e.g., flow-through cell) should be used to establish the stabilization time for several field parameters on a well-specific basis. Data on pumping rate, drawdown and volume required for parameter stabilization can be used as a guide for conducting subsequent sampling activities.

16. Collect all project-required samples from the discharge tubing at the flow rate established during purging in accordance with Benchmark's Groundwater Sample Collection Procedures FOP. **If a peristaltic pump and dedicated tubing is used, collect all project-required samples from the discharge tubing as stated before, however volatile organic compounds should be collected in accordance with the procedure presented in the next**

section. Continue to maintain a constant flow rate such that the water level is not drawn down as described above. Fill sample containers with minimal turbulence by allowing the ground water to flow from the tubing along the inside walls of the container.

17. If field filtration is recommended as a result of increased turbidity, an in-line filter equipped with a 0.45-micron filter should be utilized.

18. Replace the dedicated tubing down the well taking care to avoid contact with the ground surface.

19. Restore the well to its capped/covered and locked condition.

20. Upon purge and sample collection completion, slowly lower the e-line to the bottom of the well/piezometer. Record the total depth to the nearest 0.01-foot and compare to the previous total depth measurement. If a significant discrepancy exists, re-measure the total depth. Record observations of purge water to determine whether the well/piezometer had become silted due to inactivity or damaged (i.e., well sand within purge water). Upon confirmation of the new total depth and determination of the cause (i.e., siltation or damage), notify the Project Manager following project field activities.

PERISTALTIC PUMP VOC SAMPLE COLLECTION PROCEDURE

The collection of VOCs from a peristaltic pump and dedicated tubing assembly shall be collected using the following procedure.

1. Once all other required sample containers have been filled, turn off the peristaltic pump. The negative pressure effects of the pump head have not altered groundwater remaining within the dedicated tubing assembly and as such, this groundwater can be collected for VOC analysis.

2. While maintaining the pressure on the flexible tubing within the pump head assembly, carefully remove and coil the polyethylene tubing from the well; taking care to prevent the tubing from coming in contact with the ground

surface and without allowing groundwater to escape or drain from the tubing intake.

3. Once the polyethylene tubing is removed, turn the variable speed control to zero and reverse the pump direction.

4. Slowly increase the pump rate allowing the groundwater within the polyethylene tubing to be "pushed" out of the intake end (i.e., positive displacement) making sure the groundwater within the tubing is not "pulled" through the original discharge end (i.e., negative displacement). Groundwater pulled through the pump head assembly CANNOT be collected for VOC analysis.

5. Slowly fill each VOC vial by holding the vial at a 45-degree angle and allowing the flowing groundwater to cascade down the side until the vial is filled with as minimal disturbance as possible. As the vial fills, slowly rotate the vial to vertical. **DO NOT OVERFILL THE VIAL, AS THE PRESERVATIVE WILL BE LOST.** The vial should be filled only enough so that the water creates a slight meniscus at the vial mouth.

6. Cap the VOC vials leaving no visible headspace (i.e., air-bubbles). Gently tap each vial against your hand checking for air bubbles.

7. If an air bubble is observed, slowly remove the cap and repeat Steps 5 and 6.

ATTACHMENTS

Groundwater Well Purge & Sample Collection Log (sample)

REFERENCES

United States Environmental Protection Agency, 540/S-95/504, 1995. *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures.*

Benchmark FOPs:

007 *Calibration and Maintenance of Portable Dissolved Oxygen Meter*
008 *Calibration and Maintenance of Portable Field pH/Eh Meter*
009 *Calibration and Maintenance of Portable Field Turbidity Meter*
011 *Calibration and Maintenance of Portable Photoionization Detector*
012 *Calibration and Maintenance of Portable Specific Conductance Meter*
022 *Groundwater Level Measurement*
024 *Groundwater Sample Collection Procedures*
040 *Non-Disposable and Non-Dedicated Sampling Equipment Decontamination*
046 *Sample Labeling, Storage and Shipment Procedures*

LOW FLOW (MINIMAL DRAWDOWN) GROUNDWATER PURGING & SAMPLING PROCEDURES

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

LOW FLOW METHOD GROUNDWATER PURGE & SAMPLE COLLECTION LOG

Project Name:	WELL LOCATION:
Project Number:	Sample Matrix: groundwater
Client:	Weather:

WELL DATA: DATE: TIME:

Casing Diameter (inches):	Casing Material:
Screened interval (fbTOR):	Screen Material:
Static Water Level (fbTOR):	Bottom Depth (fbTOR):
Elevation Top of Well Riser (fmsl):	Ground Surface Elevation (fmsl):
Elevation Top of Screen (fmsl):	Stick-up (feet):
Standing volume in gallons:	
[(bottom depth - static water level) x vol calculation in table per well diameter]:	

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

PURGING DATA: Pump Type:

Is equipment dedicated to location?	yes	no	Is tubing dedicated to location? yes no
Depth of Sample (i.e. Level of Intake) (fbTOR):			Approximate Purge Rate (gal/min):

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductivity (uS)	DO (mg/L)	ORP (mV)	Appearance & Odor
	Initial							

SAMPLING DATA: DATE: START TIME: END TIME:

Method: low-flow with dedicated pump	Was well sampled to dryness? yes no
Initial Water Level (fbTOR):	Was well sampled below top of sand pack? yes no
Final Water Level (fbTOR):	Field Personnel:

PHYSICAL & CHEMICAL DATA:

	WATER QUALITY MEASUREMENTS					
Appearance:	pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
Color:						
Odor:						
Sediment Present?						

REMARKS:

PREPARED BY:

ATTACHMENT A5

ACTIVE SUB SLAB DEPRESSURIZATION SYSTEM OPERATIONS MANUAL

ACTIVE SUBSLAB DEPRESSURIZATION SYSTEM OPERATIONS MANUAL

HYRDO-AIR COMPONENTS, INC.
BUFFALO, NY

(NYSDEC BCP SITE #C915204)

November 2007 0062-010-100

Prepared for:

The Krog Corp.
4 Centre Drive Orchard Park , New York 14127
716-667-1234 Fax. 667-1258
Contractors Engineers Developers

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1.0 INTRODUCTION

1.1 Background and History

In October, 2002 Steelfields Ltd. purchased several vacant industrial properties in South Buffalo, New York (See Figure 1-1 and Figure 1-2) out of bankruptcy from the LTV Steel Company and Hanna Furnace Corporation (a wholly owned subsidiary of the National Steel Corporation). At the same time, Steelfields entered into a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC). A Work Plan for Voluntary Cleanup Program Remedial Design/Remedial Action for the Former Steel and Coke Manufacturing Site (by TurnKey Environmental Restoration, LLC, September 2002) was approved by the NYSDEC on December 27, 2002.

In August of 2006, Hydro-Air Components, Inc. purchased approximately 30.9 Acres of property from Steelfields, the parcel known as Area IV – Former Donner-Hanna Coke Yard Parcel subject to agreement between the parties for Steelfields to complete the tar material remediation (i.e. Section 3.4.3.) under provisions of the Steelfields VCP Remedial Design/Remedial Action Work Plan, as amended. Hydro-Air entered into a Brownfields Clean-up Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) on August 21, 2006 to complete redevelopment, soil cover and post remediation groundwater monitoring requirements as set forth in the Work Plan for Brownfield Cleanup Program Remedial Design dated April 2006, as amended.

2.0 ACTIVE SUBSLAB DEPRESSURIZATION SYSTEM DESIGN

2.1 General

An ASD system creates a low-pressure zone beneath a building slab using a powered fan connected via piping to create negative pressure beneath the building foundation. The low pressure field prevents soil gas from entering the building. Generally, essential components of an ASD include:

- a clean layer of coarse aggregate beneath the slab;
- installation of a suction pit beneath the slab for each building area separated by subslab walls (i.e., footings);
- installation of a vent stack from the suction pit(s) under the slab to the roof;
- installation of a continuous operation fan equipped with a pressure gauge to assure the system is under negative pressure; and,
- sealing all major slab and foundation penetrations, including joints, cracks and utility and pipe penetrations.

The active sub-slab depressurization (ASD) system utilized for this project was designed in accordance with the EPA design document entitled "Radon Prevention in the Design and Construction of Schools and Other Large Buildings" Third Printing with Addendum, June 1994 and the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006. The designed system consists of an 8-MIL polyethylene vapor barrier and five assemblies strategically placed within the foot print of the newly constructed building each containing one (1) of the following items; perforated pipe suction assembly, vertical piping vent stack and associated materials, exhaust fan, and magnehelic pressure gauges.

3.0 ASD SYSTEM OPERATION, MAINTENANCE, & MONITORING

3.1 ASD System Operation

This ASD System has been designed for continuous operation with minimal maintenance and/or operational oversight. It is imperative however, that the system is inspected routinely to document operational performance.

Near each suction point, a magnahelic gauge (refer to Appendix B for specifications) will be mounted approx. 5 feet above finished floor to the column at which the vent stack is attached. When the ASD system is operational, the magnehelic gauge will display the effective sub-slab (negative) pressure.

A "normal" operating pressure will be established by recording the displayed pressure approximately 4 hours after initial system start-up. Another reading will be taken and recorded after approximately 1 week of operation to check if significant change in pressure readings is observed relative to the initial "normal" operating pressure. If there is a significant pressure difference from the "normal" operating pressure, additional weekly inspections will be made until the pressure stabilizes, for up to four weeks. If readings do not stabilize within four weeks (1 month) or a significant change in pressure readings is observed after system stabilization, the owner and/or other party responsible for the system will be notified.

3.2 Monthly Visual Inspection

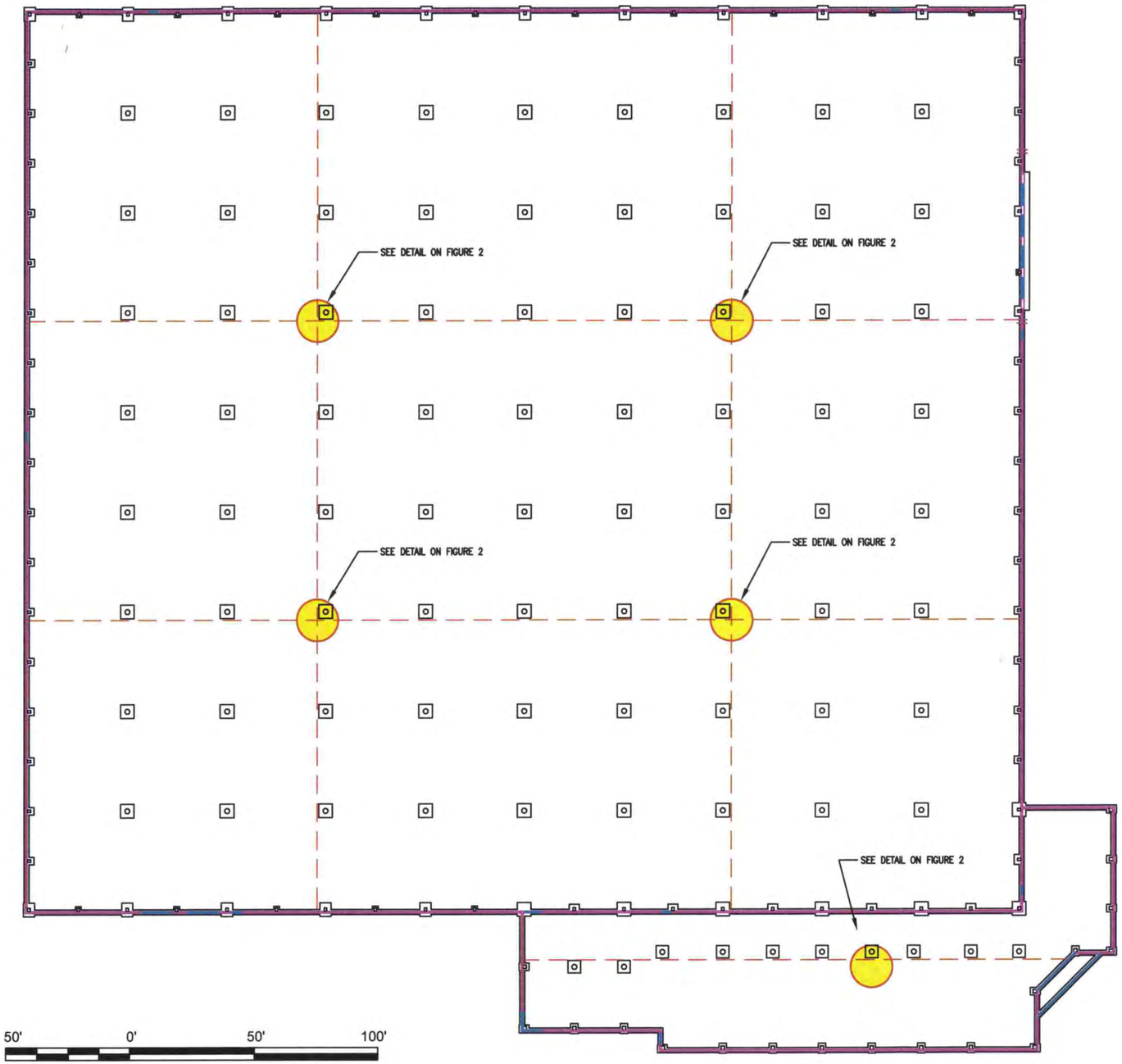
On a monthly basis, the pressure at each suction pit will be read and recorded to document that the fan is maintaining adequate negative pressure and system components will be visually inspected. Any large fluctuations or trends in pressure will be documented and brought to the attention of the owner or other responsible party. Visible leaks in piping and/or the concrete slab will be identified and noted for repair. Changes in use of the space, modifications to the system, building renovations, and/or significant non-running time will be documented on the Monthly Inspection Log (refer to Appendix A).

3.3 Annual Certification/Inspection

An annual system certification inspection and report documenting that the system is performing properly and remains effective will be required by the NYSDEC and is to be submitted by a professional engineer or environmental professional. The certification report will contain the monthly logs, as well as an annual inspection checklist (refer to Appendix A) and is to be included as part of the Site Management Certification Report submission package (refer to Section 2.4 of the Site OM&M Plan). The annual inspection will require:

- system components to be visually inspected by a qualified person;
- the exhaust fan to be inspected for signs of abnormal operation or bearing failure (service and/or replacement if necessary);
- discharge location inspection - to verify no air intake has been located nearby vent pipe;
- HVAC system inspection to determine if it is being maintained and operated as designed; and,
- a detailed floor, wall, and slab inspection for cracks (resealing if necessary); smoke tubes may be used to check for leaks through floor joints and at suction points with the depressurization system running.

FIGURES



SCALE: 1 INCH = 50 FEET
SCALE IN FEET
(approximate)

LEGEND:

- TYPICAL BUILDING PIER & FOOTER
- ACTIVE SUBSLAB DEPRESSURIZATION SYSTEM LOCATION (TYP. OF 5)
- 12 INCHES WIDE x 8 INCHES DEEP TRENCH FILLED WITH CLEAN NO. 2 STONE

JOB NORTH

NORTH

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JOB NO.: 0107-002-100

ACTIVE SUBSLAB DEPRESSURIZATION SYSTEM

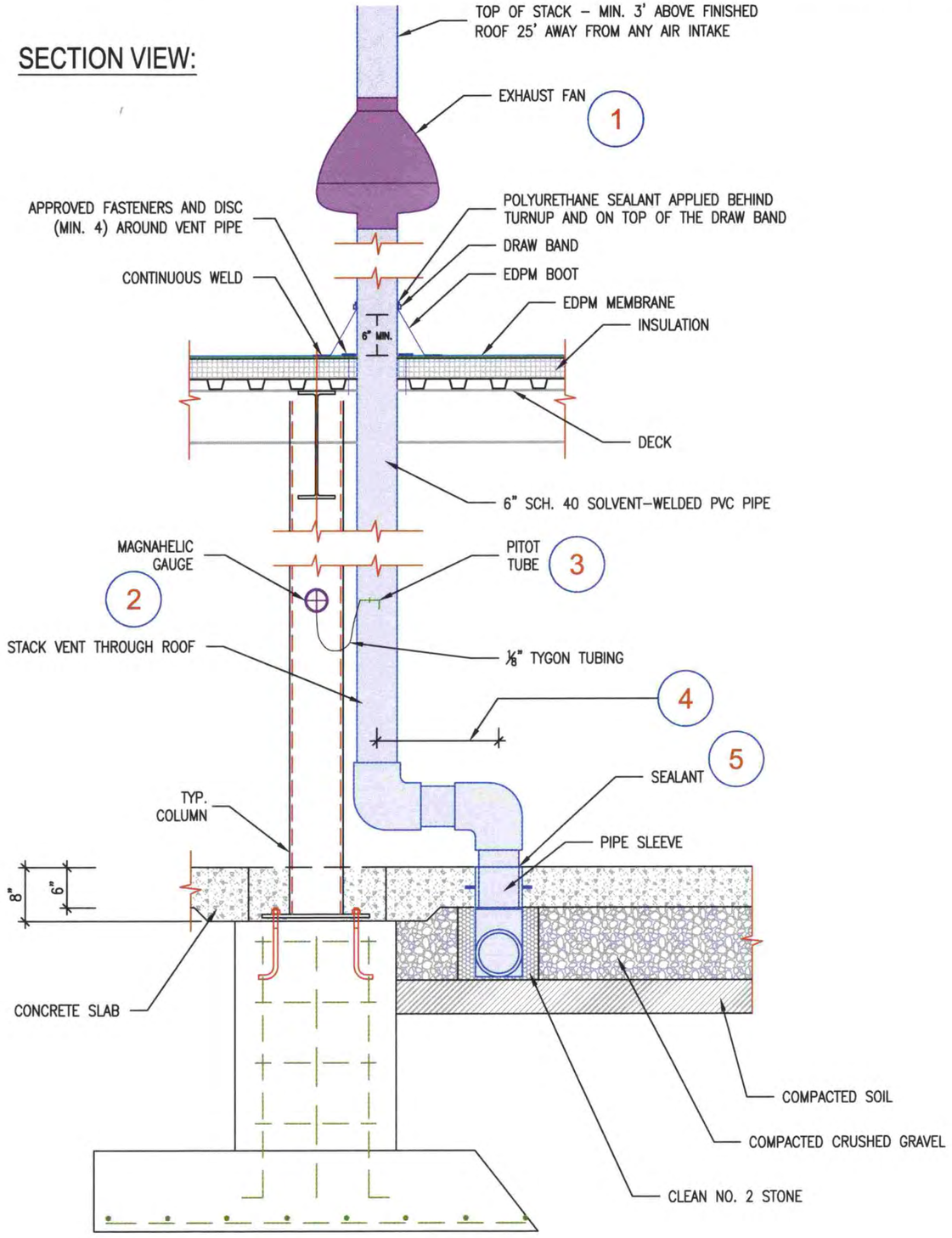
HYDRO-AIR COMPONENTS SITE
BUFFALO, NEW YORK

PREPARED FOR
HYDROAIR COMPONENTS, INC.

FIGURE 1

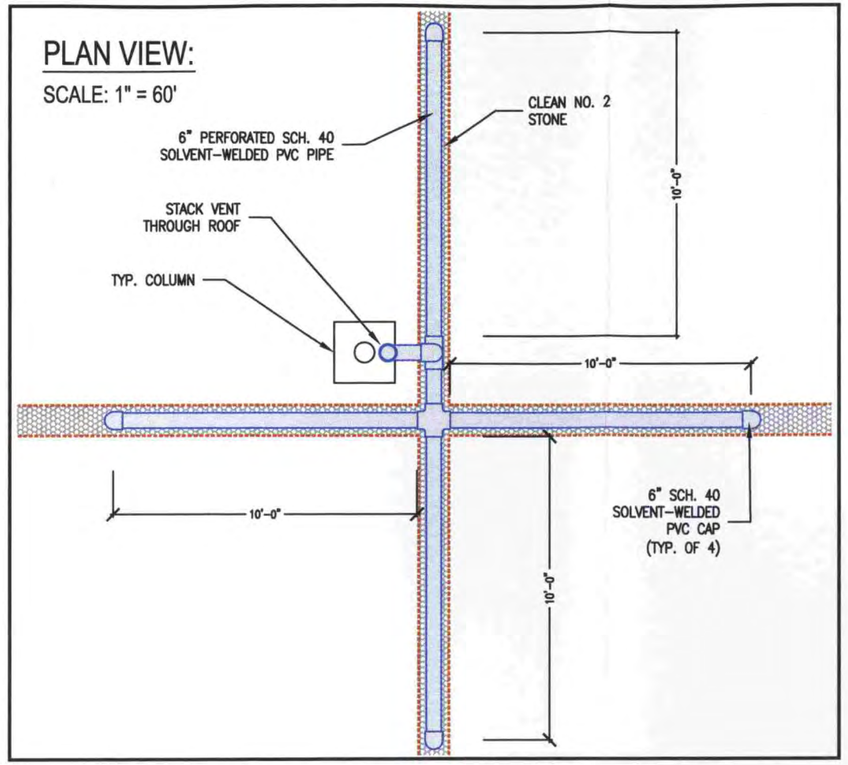
F:\CAD\Benchmark\Hydro-Air\Active Subslab Depressurization System\Figure 1; Foundation Plan.dwg
DATE: SEPTEMBER 2006
DRAFTED BY: BCH

SECTION VIEW:



PLAN VIEW:

SCALE: 1" = 60'



NOTES:

1. FANTECH MODEL FR 160. 115 VOLT 71 RATED WATTS CONTINUOUS DUTY.
2. DWYER MODEL 2002 – AV MAGNAHELIC GAUGE; DWYER MODEL A–368 SURFACE MOUNT BRACKET. MOUNT ON COLUMN AT 5 FEET ABOVE FINISHED FLOOR.
3. DWYER MODEL 166–6CF ⅛" NPT PITOT TUBE WITH COMPRESSION FITTINGS.
4. MAXIMUM OF 24" FROM CENTERLINE OF VERTICAL PVC TO CENTERLINE OF OUTER ELBOW.
5. POLYURETHANE SEALANT APPLIED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS TO SEAL ALL GAPS. USE OF SILICONE SEALANTS IS NOT PERMITTED.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
728 EXCHANGE STREET
SUITE 824
BUFFALO, NEW YORK 14210
(716) 856–0599

JOB NO.: 0107-002-100

ACTIVE SUBSLAB DEPRESSURIZATION SYSTEM

HYDRO-AIR COMPONENTS SITE
BUFFALO, NEW YORK

PREPARED FOR
HYDROAIR COMPONENTS, INC.

FIGURE 2

F:\CAD\Benchmark\Hydro-Air\Active Subslab Depressurization System\Figure 2, Active Subslab Depressurization System.dwg
DATE: SEPTEMBER 2006
DRAFTED BY: BCH

APPENDIX 1

OPERATIONS AND MAINTENANCE LOGS

BENCHMARK
ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

Post Installation Inspection
Active Sub-Slab Depressurization System

Project Name:	Hydro-Air ASD System Verification	Project No.:	0092-004-200
Project Location:	100 Rittling Blvd., Buffalo, NY	Client:	Hydro-Air Components, Inc.
Preparer's Name:	Tom Behrendt	Date/Time:	5/17/2007 13:00

Notes:

Onsite with Mike Lesakowski (Benchmark) and Bryan Hann (TurnKey). Received site floor plan from Dan Hayden (Krog). Each sub-slab vent is marked on map (site plan) with sample locations located as well. Upon initial check all magnahelic gauge tubes were improperly connected. After correcting the problem on all gauges except for one (inaccessible due to shelving and equipment) were working correctly. All sub-slab vapor pressures were checked using a manometer at sample locations approx. 20' from vent stack (see site drawing).

System Information

	Magnahelic Gauge #	Reading	Units
Server room	1	1.00	in H2O
SE corner of plant	2	1.00	in H2O
NE corner of plant	3	1.25	in H2O
NW corner of plant	4	1.25	in H2O
SW corner of plant	5	1.50	in H2O

Refer to Figure 1 for gauge locations

Verification sample information

	Sample Point #	Reading	Units	Negative pressure (y/n)?
Server room	1	-0.10	in H2O	Yes
SE corner of plant	2	-0.50	in H2O	Yes
NE corner of plant	3	-0.10	in H2O	Yes
NW corner of plant	4	-0.40	in H2O	Yes
SW corner of plant	5	-0.30	in H2O	Yes

Refer to Figure 1 for sample point locations

Performance Acceptence: Is the system performing according to a design and/or acceptable criteria? (yes / no) YES

If no state why.

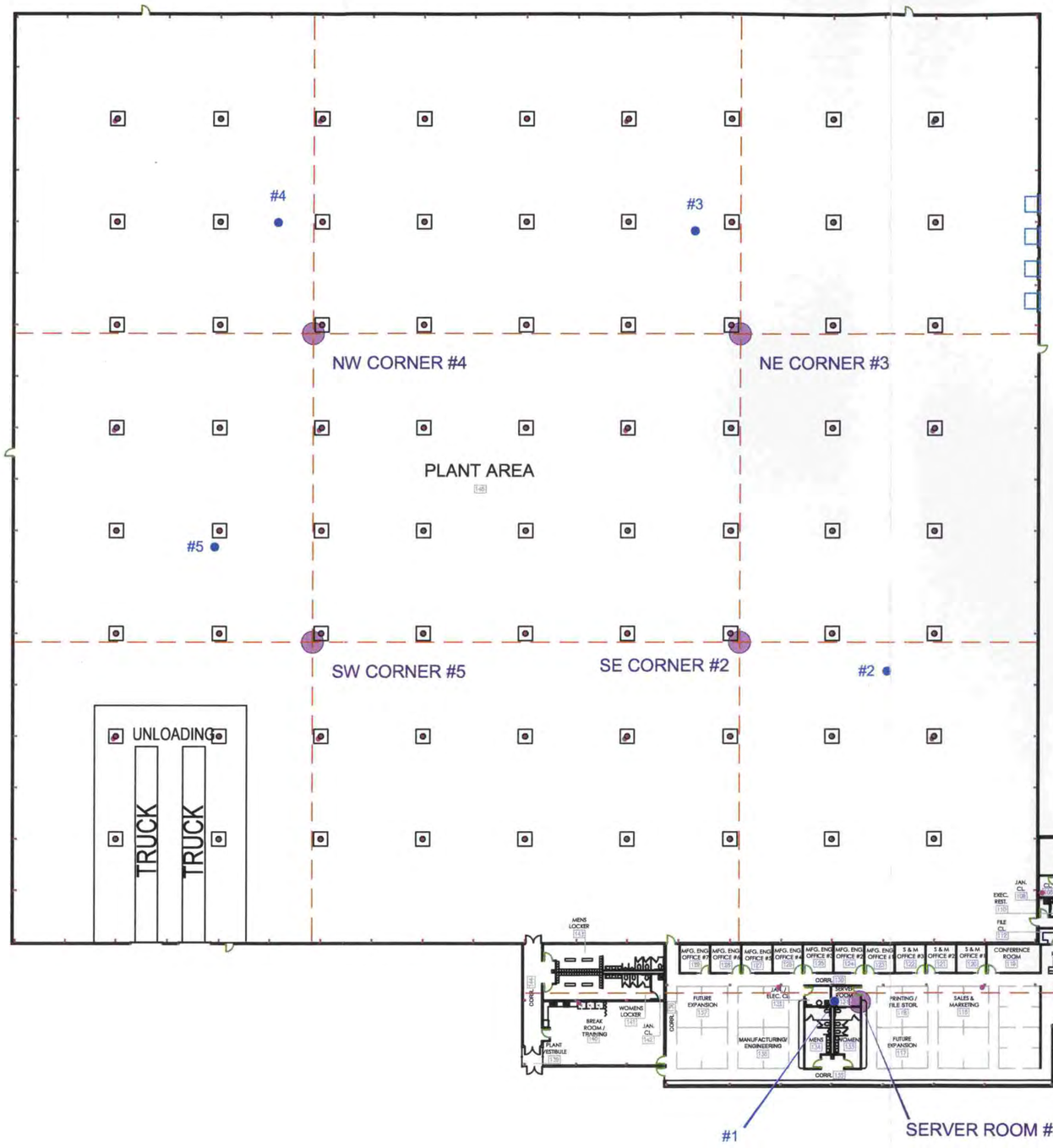
Initial: TAB Date: 5/7/2007

F:\CAD\Benchmark\Hydro-Air\Active Subslab Depressurization System\Figure 1; ASD System & Post Installation Sample Locations.dwg

N

LEGEND:

- TYPICAL BUILDING PIER & FOOTER
- MAGNAHELIC GAUGE LOCATION (TYP. OF 5)
- 12 INCHES WIDE x 8 INCHES DEEP TRENCH FILLED WITH CLEAN NO. 2 STONE
- #1 ASD VERIFICATION SAMPLE LOCATION



600' 0' 600' 1200'

SCALE: 1 INCH = 600 FEET
SCALE IN FEET
(approximate)

DATE: JULY 2007
DRAFTED BY: BCH

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0599

JOB NO.: 0107-002-300

ASD SYSTEM & POST-INSTALLATION SAMPLE LOCATIONS

HYDRO-AIR SITE
BUFFALO, NEW YORK

PREPARED FOR
HYDRO-AIR COMPONENTS, INC.

FIGURE 1

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

Monthly Operation & Maintenance Log
Active Sub-Slab Depressurization System

Project Name:	Project No.:
Project Location:	Client:
Preparer's Name:	Date/Time:

Notes:

Monthly Operating Status:

System(s) currently running? ☐ yes ☐ no

Has the system been off-line in the past month? ☐ yes ☐ no

If yes, please list the dates and brief description why (i.e. maintenance, part replacement, etc.):

What is the current Vacuum reading? ☐

Visual Inspection:

Any piping disconnected?	☐ yes	☐ no
Any cracks visible in piping?	☐ yes	☐ no
Any new cracks visible in slab floor?	☐ yes	☐ no
Magnehelic guage reading 0?	☐ yes	☐ no

If yes to any question above, please provide more information below.

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

Monthly Operation & Maintenance Log
Active Sub-Slab Depressurization System

Change in Occupancy / Use of Space:

Please indicate general use of floor space? _____

Has this general use changed in the past month? ☐ yes ☐ no

If yes, please explain:

System Modifications:

Have any modifications been made to the Sub-Slab Depressurization System? ☐ yes ☐ no

If so, please list with date:

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

Annual Operation & Maintenance
Active Sub-Slab Depressurization System
Certification Checklist

Project Name:	Project No.:
Project Location:	Client:
Preparer's Name:	Date/Time:

Notes:

System Information

Has monthly system inspection been completed regularly?	☐ yes	☐ no
Are last 11 inspection logs attached for the past 12 months?	☐ yes	☐ no

What is the current Vacuum reading? [ ]

System Updates, Maintenance, Part Replacement

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

Annual Operation & Maintenance
Active Sub-Slab Depressurization System
Certification Checklist

Change in Occupancy / Use of Space:

Please indicate general use of floor space? _____

Has this general use changed in the past year? ☐ yes ☐ no

If yes, please explain:

_____

_____

_____

_____

_____

_____

_____

Building Renovations:

Have any building renovations taken place in the last month? ☐ yes ☐ no

If yes, please provide more information below, and sketch any basement floor plan modifications on the floor plan sketch below.

_____

_____

_____

_____

_____

_____

System Modifications:

Have any modifications been made to the Sub-Slab Depressurization System? ☐ yes ☐ no

If so, please list with date:

_____

_____

_____

_____

_____

_____

_____

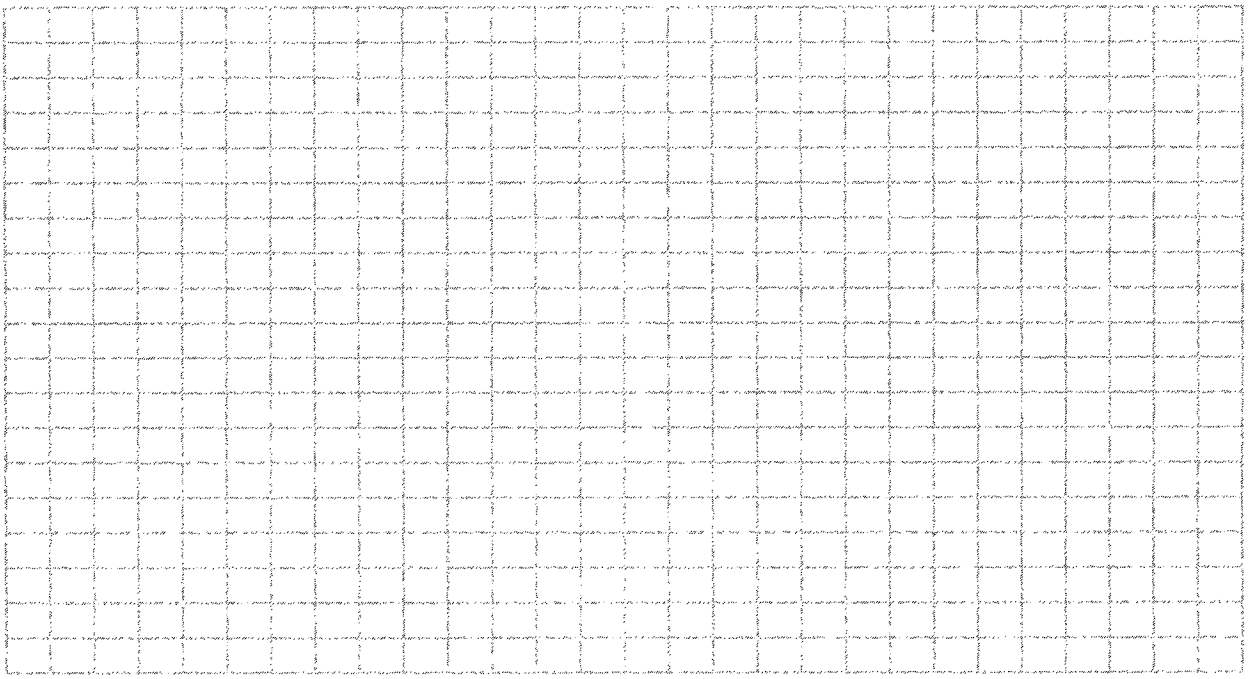
_____

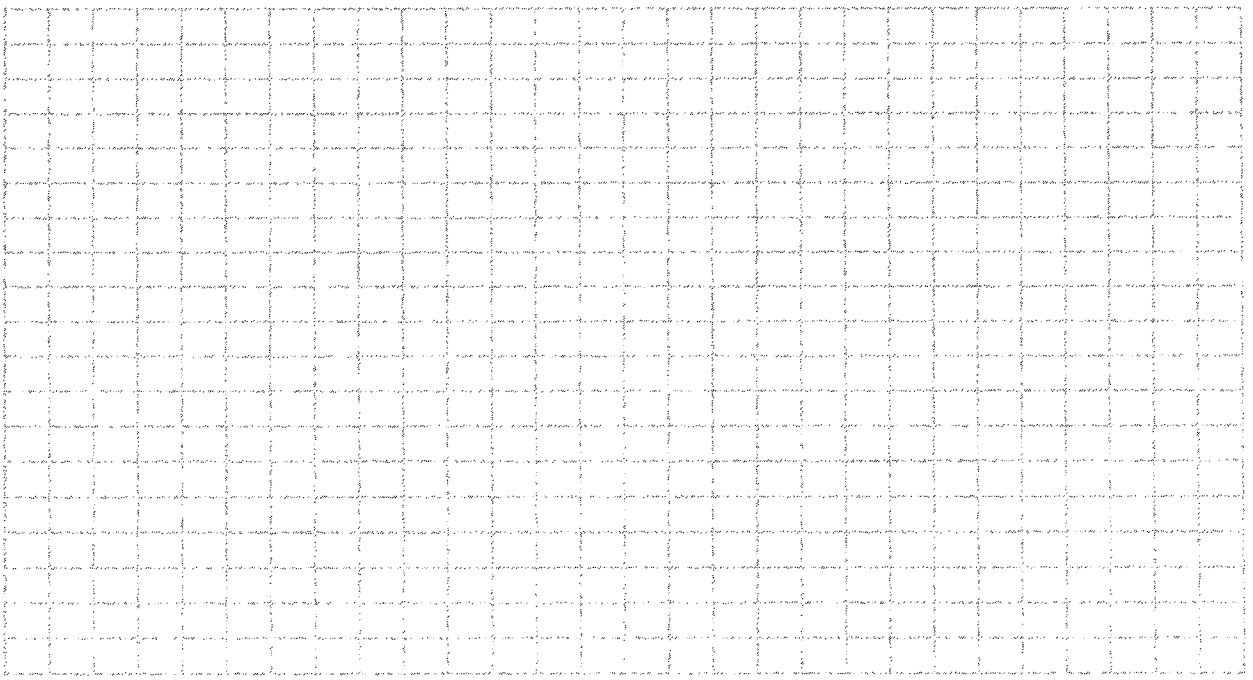
BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

Annual Operation & Maintenance
Active Sub-Slab Depressurization System
Certification Checklist

Floor Plan Sketch:

Draw a plan view sketch of the basement of the building. Indicate Sub-Slab Depressurization system location. Please also note and include, any alterations to the system, locations of visible cracks and/or repairs needed, and changes or alterations to the usage of this space.





N

LEGEND:

- TYPICAL BUILDING PIER & FOOTER
- MAGNAHELIC GAUGE LOCATION (TYP. OF 5)
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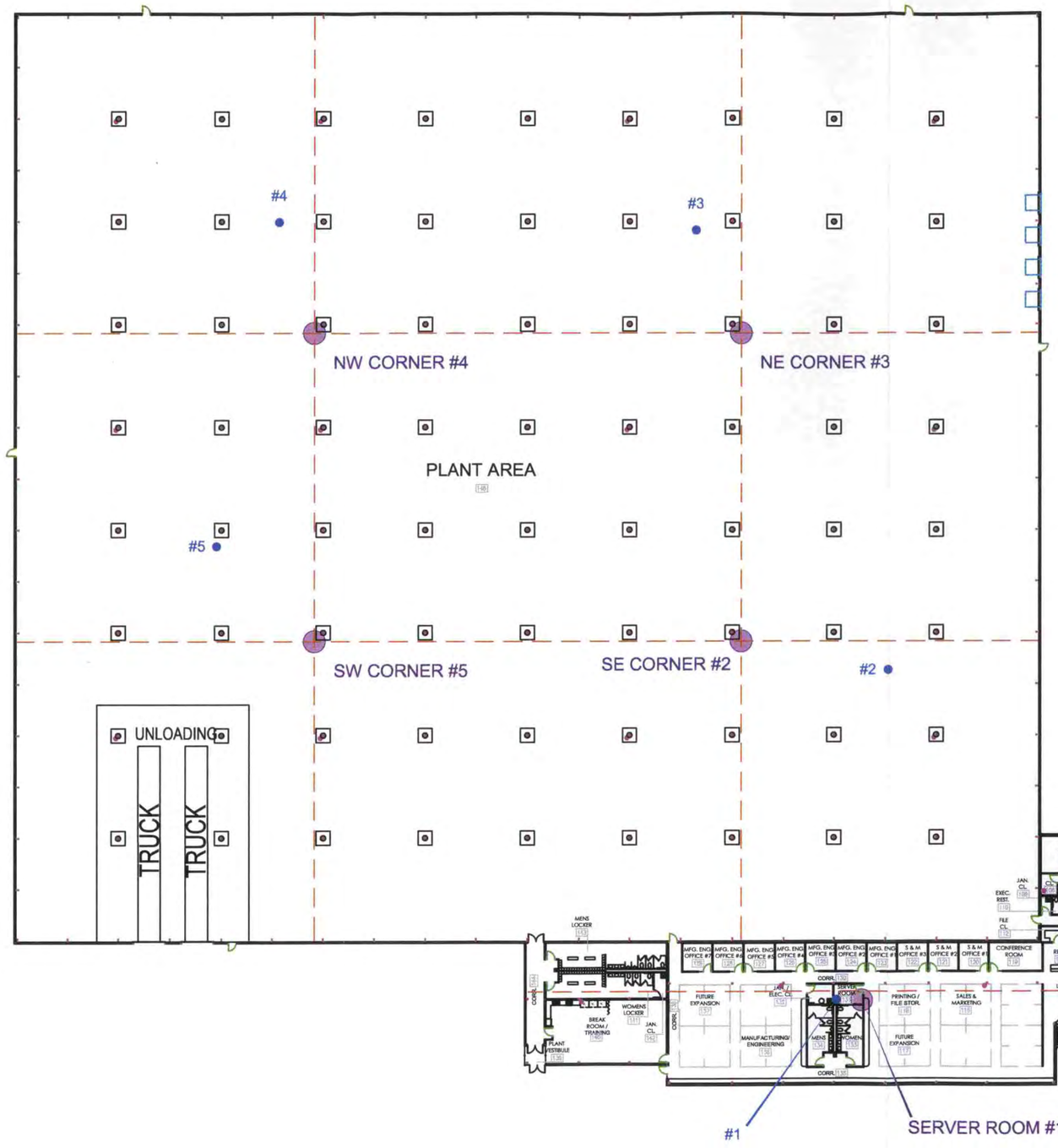

600' 0' 600' 1200'

SCALE: 1 INCH = 600 FEET
SCALE IN FEET
(approximate)

F:\CAD\Benchmark\Hydro-Air\Active Subslab Depressurization System\Figure 1; ASD System & Post Installation Sample Locations.dwg
DATE: JULY 2007
DRAFTED BY: BCH

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
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SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0599

JOB NO.: 0107-002-300

ASD SYSTEM & POST-INSTALLATION SAMPLE LOCATIONS

HYDRO-AIR SITE
BUFFALO, NEW YORK

PREPARED FOR
HYDRO-AIR COMPONENTS, INC.

FIGURE 1

APPENDIX 2

EXHAUST FAN PRODUCT INFORMATION

Fantech FR Series

Versatility and Value

Fantech's versatile FR Series fans feature a plastic housing constructed of UL-recognized, UV-protected thermoplastic resin. This tough protective shell allows the fan to be mounted in outdoor and wet locations.* Ideal for multiple point exhaust, dual bathroom exhaust, or new room additions, Fantech's FR Series fans are caulked at the motor screws, the wiring cables and along the seams of the fan to prevent moisture from entering the housing. Fantech's FR Series fans have long been the choice of residential builders and remodelers but now can be used for commercial projects with our recent UL commercial applications rating.

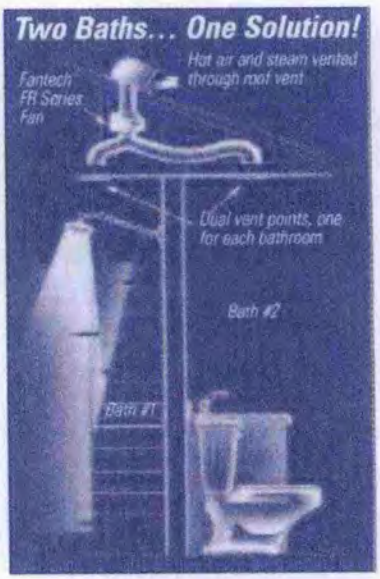
Easy to install
Loaded with features

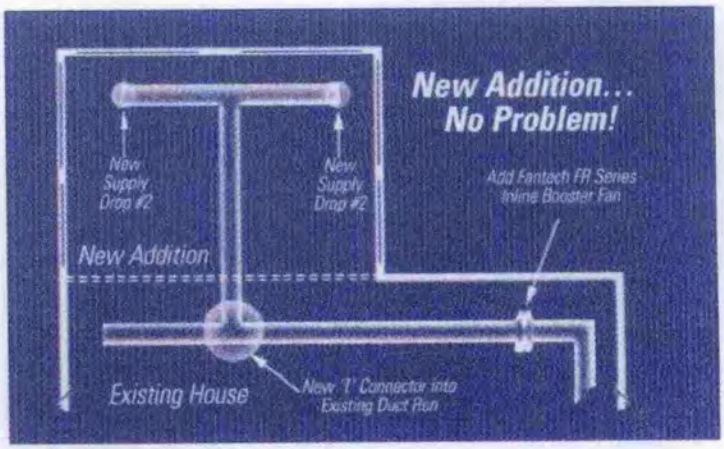
- Prewired and supplied with a mounting bracket for easy installation
- Available singularly with bracket or in a variety of kits for specific applications. Each kit includes the appropriate fan and accessories
- UL Listed; CSA Certified
- Approved for residential and commercial applications and for wet locations
- Suitable for airstream temperatures up to 140° F
- Easy connection using external wiring box with waterproof gasket
- 122-649 CFM
- 4" to 10" duct diameters
- 100% speed controllable
- Five-year factory warranty

Kits are available for the following applications:

- Regular Kits (REG 100 and REG 140) for single point exhaust applications
- Deluxe Kits (DLX 110, DLX 150, and DLX 200) designed for dual point exhaust applications
- Vent Light Kits (REG 100L, DLX 150L) for single and dual vent light exhaust applications

Typical attic installation





** The FR Series is not manufactured to operate with water running through the motor compartment, or to be used in applications where the fan would be buried underground. A UL-recognized waterproof conduit should be used for all outdoor applications to prevent moisture entry via knockout in wiring box.*

FR Kits

Pictured from left to right: DLX150 – Dual Point Ventilation Kit; REG100L – Single Vent Light Kit. Additional kits (not pictured) are available.

DLX150

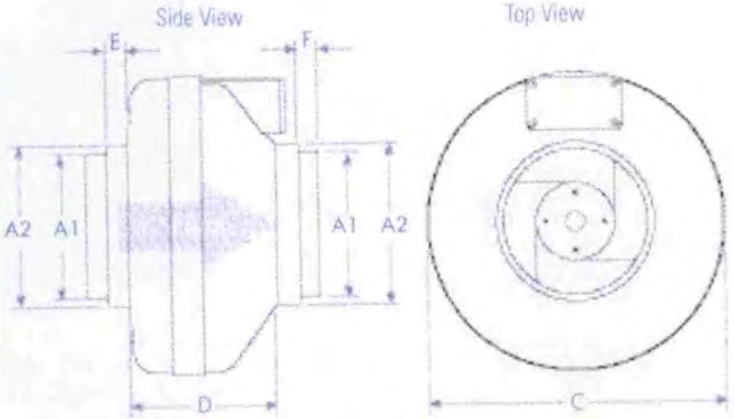
REG100L

Specifications

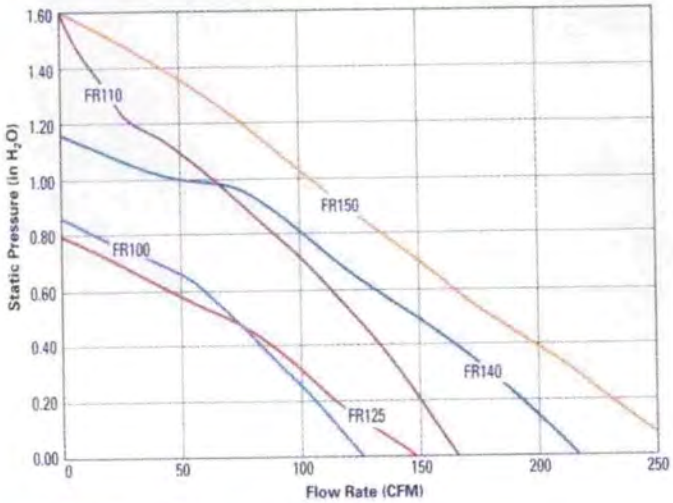
FR Series Dimensional Data

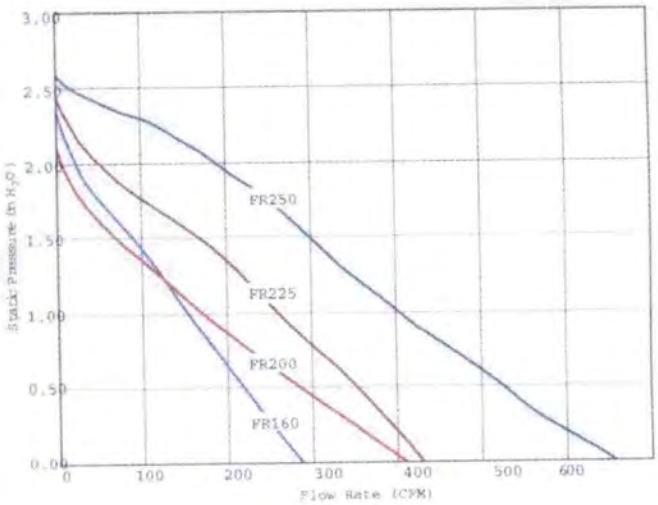
model	†A1	A2	C	D	E	F
FR 100	4	5	9½	6⅛	⅞	⅞
FR 110	4	5	9½	6⅛	⅞	⅞
FR 125	—	5	9½	6⅛	⅞	—
FR 140	6	6¼	11¾	5⅞	1	⅞
FR 150	6	6¼	11¾	5⅞	1	⅞
FR 160	6	6¼	11¾	6⅜	1	⅞
FR 200	8	10	13¼	6¼	1½	1½
FR 225	8	10	13¼	6¼	1½	1½
FR 250	—	10	13¼	6¼	1½	—

All dimensions in inches. † Duct connections are ⅛" smaller than duct size.



FR Series Air Performance Graphs





FR Series Performance Data

Fan Model	Energy Star	RPM	Volts	Rated Watts	Wattage Range	Max. Amps	Static Pressure in Inches W.G							Max. Ps	Duct Dia.
							0"	2"	4"	6"	8"	1.0"	1.5"		
FR 100	√	2900	115	19	13 – 19	0.18	122	100	78	55	15	—	—	0.87"	4"
FR 110	—	2900	115	80	62 – 80	0.72	167	150	133	113	88	63	4	1.60"	4"
FR 125	√	2950	115	18	15 – 18	0.18	148	120	88	47	—	—	—	0.79"	5"
FR 140	√	2850	115	61	47 – 62	0.53	214	190	162	132	99	46	—	1.15"	6"
FR 150	√	2750	120	71	54 – 72	0.67	263	230	198	167	136	106	17	1.58"	6"
FR 160	—	2750	115	129	103 – 130	1.14	289	260	233	206	179	154	89	2.32"	6"
FR 200	√	2750	115	122	106 – 128	1.11	408	360	308	259	213	173	72	2.14"	8"
FR 225	√	3100	115	137	111 – 152	1.35	429	400	366	332	297	260	168	2.48"	8"
FR 250	—	2850	115	241	146 – 248	2.40	649	600	553	506	454	403	294	2.58"	10"

FR Series performance is shown with ducted outlet. Per HVI's Certified Ratings Program, charted air flow performance has been derated by a factor based on actual test results and the certified rate at .2 inches WG.

ATTACHMENT A6

ORC MONITORING & MAINTENANCE MANUAL

ORC MAINTENANCE & MONITORING MANUAL

STEELFIELDS, LTD. – AREA IV
BUFFALO, NY

(NYSDEC VCP SITE #V0619-9)
(NYSDEC BCP SITE #C915204)

November 2007 0092-004-200

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Table of Contents

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LIST OF FIGURES

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 Background and History

In October, 2002 Steelfields Ltd. purchased several vacant industrial properties in South Buffalo, New York (See Figure 1-1 and Figure 1-2) out of bankruptcy from the LTV Steel Company and Hanna Furnace Corporation (a wholly owned subsidiary of the National Steel Corporation). At the same time, Steelfields entered into a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC). A Work Plan for Voluntary Cleanup Program Remedial Design/Remedial Action for the Former Steel and Coke Manufacturing Site (by TurnKey Environmental Restoration, LLC, September 2002) was approved by the NYSDEC on December 27, 2002.

In August of 2006, Hydro-Air Components, Inc. purchased approximately 30.9 Acres of property from Steelfields, the parcel known as Area IV – Former Donner-Hanna Coke Yard Parcel subject to agreement between the parties for Steelfields to complete the tar material remediation (i.e. Section 3.4.3.) under provisions of the Steelfields VCP Remedial Design/Remedial Action Work Plan, as amended. Hydro-Air entered into a Brownfields Clean-up Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) on August 21, 2006 to complete redevelopment, soil/fill management, community air monitoring, soil cover and post remediation groundwater monitoring requirements as set forth in the Work Plan for Brownfield Cleanup Program Remedial Design dated April 2006, as amended.

2.0 ORC SYSTEM

2.1 General

Though excavation of tar soil/fill through Area IV reached native soil at depths of 8-12 feet below grade, several floor verification samples indicated the presence of residual benzene at elevations exceeding SSALs in underlying native soil. In-situ treatment of this chemical residual in native soil using ORC was proposed by TurnKey on behalf of Steelfields, Ltd. in a letter entitled "Subareas G & E – Proposed In-Situ Treatment of Residual Soil & Groundwater" dated 07/27/06 and approved by NYSDEC in correspondence entitled "Approval of Subareas G & E – Proposed In-Situ Treatment of Residual Soil & Groundwater" dated 07/28/06 (refer to Appendix A). These specific sample locations are previously noted in Section 3.4.4 of this Final Engineering Report, and are depicted in Figure 3-3.

2.1.1 *ORC Well Installation*

The in-situ ORC application was proposed and approved based on the relatively low concentrations of benzene in subgrade native silty-clay soils, and the susceptibility of benzene to natural aerobic biodegradation by indigenous microbes. The in-situ treatment method consisted of installing three in-situ treatment wells with 5-foot screens that extended to a depth of approximately 24 inches into the native soils. Each well was located within the general vicinity of each floor sample that exceeded SSALs, as documented in section 3.4.4 of this Report (refer to Figure 3-5). ORC "socks" were suspended in each of the wells to slowly release oxygen to the shallow water column and saturated soils. It is duly noted that the installation, development, and documentation of the ORC wells was not performed by TurnKey but by Steelfields or its contractors. Information regarding this remedial task can be found in Appendix B.

3.0 ORC MAINTENANCE & MONITORING

3.1 ORC Maintenance

In-situ treatment using ORC is directly dependent on providing an adequate supply of oxygen in groundwater for aerobic biodegradation to occur. As a result, timely and regular replacement of depleted ORC socks within supply wells is critical. Initial research has shown that ORC well socks deplete at approximately 6-month intervals, requiring replacement at that time. Sock replacement and monitoring will occur at this frequency, until such time as it is displayed or documented that it can be reduced and still meet demand. Periodic consultation with the ORC provider will also be necessary to determine this timeframe. Any changes to the original replacement and sampling frequency of six months will be documented and submitted to the NYSDEC for approval.

3.2 ORC Monitoring & Evaluation

The progress of in-situ treatment using ORC will be monitored and reported through measurement of dissolved oxygen, pH, oxidation-reduction potential (ORP), temperature, alkalinity and water levels in ORC monitoring wells designated as A4-ORC-1, A4-ORC-2 and A4-ORC-3. The ORC wells will be sampled and analyzed for the parameters listed above at the frequency set forth in Table 1, except as otherwise modified in writing by the NYSDEC. The sampling and analytical data will be used to evaluate the effectiveness of the ORC treatment. The ORC evaluation will address whether or not:

- ORC treatment has been operated, maintained, & monitored in accordance with this ORC OM&M Plan;
- anything has occurred that may impair the ability of this measure to protect public health and the environment;
- anything has occurred that would constitute a violation or failure to comply with the Site Management Plan for this measure; and
- the measure appears to have achieved its purpose of treating the targeted residual contamination in saturated subsurface soils to levels compliant with SSALs.

The ORC data and evaluation will be submitted to NYSDEC annually as part ORC certification inspection and report described in Section 3.3 of this Plan. Based on a comparison of the most recent ORC data to past ORC data and, to the extent pertinent, to the trend assessment and evaluation of groundwater quality data from the perimeter groundwater monitoring wells being conducted under the SMP's Long-Term Groundwater Monitoring Plan, NYSDEC will determine whether the ORC measure can be discontinued based on a finding that the ORC measure has completed the treatment of the targeted residual contamination in groundwater related to the ORC placement. If not, NYSDEC will determine whether the ORC measure should be continued, modified, or replaced to achieve its intended purpose.

3.3 Annual Certification/Inspection

A system certification inspection and report will be submitted to NYSDEC annually. The certification report will contain the ORC sock replacement logs, the report and evaluation of ORC sampling/analytical data, and an annual inspection checklist (refer to Appendix C). This documented information shall be attached as an appendix to the Environmental Inspection Form as required by the Site Operation, Monitoring, & Maintenance Plan – Part I of the Site Management Plan and submitted to the NYSDEC annually as part of the Institutional & Engineering Controls Certification.

TABLES

TABLE 1

GROUNDWATER MONITORING NETWORK AND SAMPLE FREQUENCY

Steelfields Area IV (Hydro-Air) Site
Hydro-Air Components, Inc.
Buffalo, New York

Well Designation	Type of Well		Former Well Designation	Monitoring Event				
				Year 1		Year 2		Year 3
	New	Existing		1 SA	2SA	1 SA	2SA	Annually
AREA IV - In-Situ Remediation Wells								
A4-ORC-1	x		--	x	x	x		x
A4-ORC-2	x		--	x	x	x		x
A4-ORC-3	x		--	x	x	x		x

Notes:

1. These wells were previously installed, however they were destroyed due to construction activities. As such, the wells will be replaced and are identified as "new".

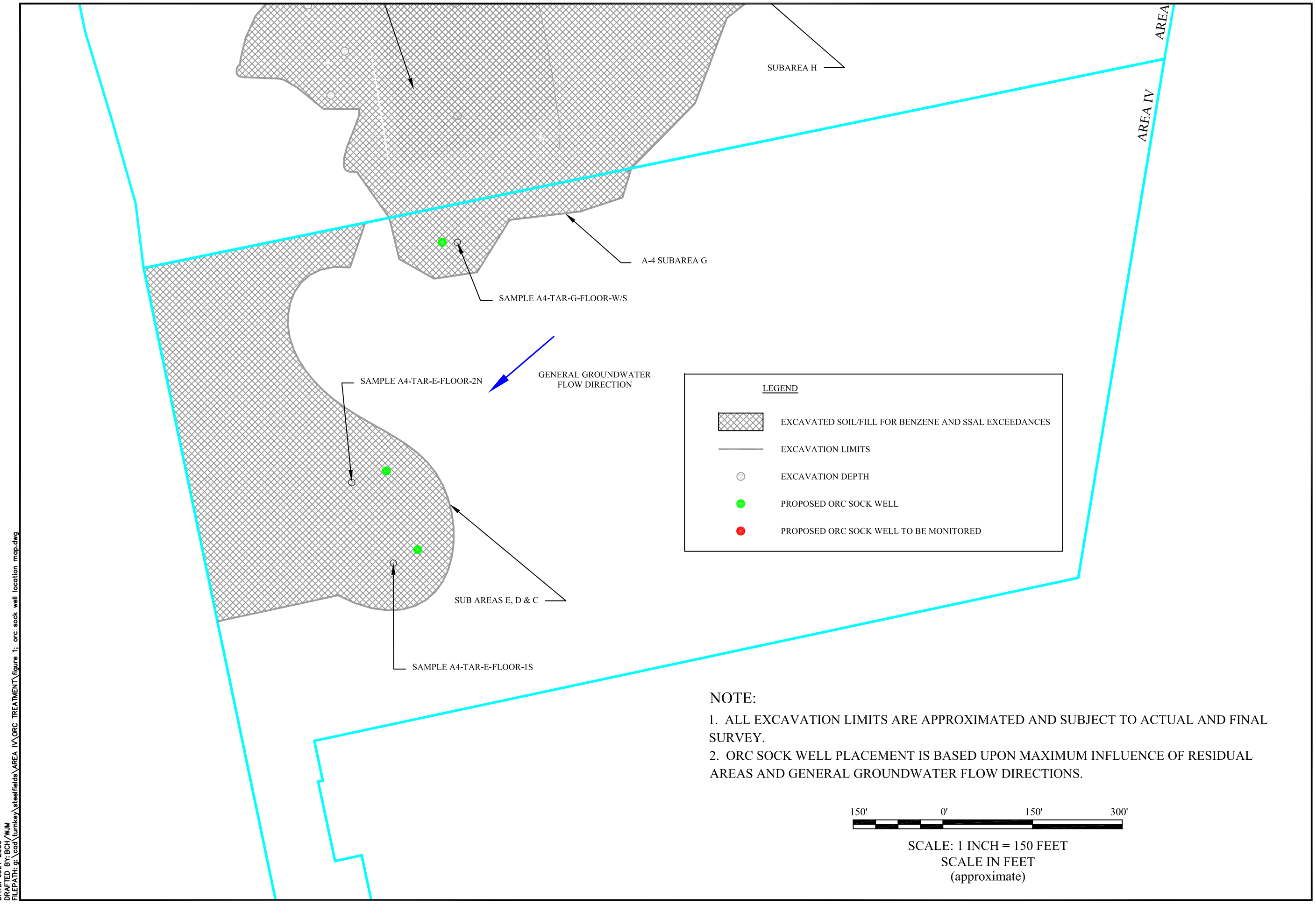
TABLE 2

ANALYTICAL PARAMETERS

Steelfields Area IV (Hydro-Air) Site
Hydro-Air Components, Inc.
Buffalo, New York

Area IV ORC In-Situ Remediation Wells (A4-ORC-1, A4-ORC-2, & A4-ORC-3)
pH
Oxidation-Reduction Potential (ORP)
Temperature
Alkalinity
Dissolved Oxygen
Water Level

FIGURES



NOTE:

1. ALL EXCAVATION LIMITS ARE APPROXIMATED AND SUBJECT TO ACTUAL AND FINAL SURVEY.
2. ORC SOCK WELL PLACEMENT IS BASED UPON MAXIMUM INFLUENCE OF RESIDUAL AREAS AND GENERAL GROUNDWATER FLOW DIRECTIONS.

150' 0' 150' 300'

SCALE: 1 INCH = 150 FEET
SCALE IN FEET
(approximate)

726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0635

TURNKEY ENVIRONMENTAL RESTORATION, LLC

JOB NO.: 0062-008-404

ORC SOCK WELL LOCATION MAP

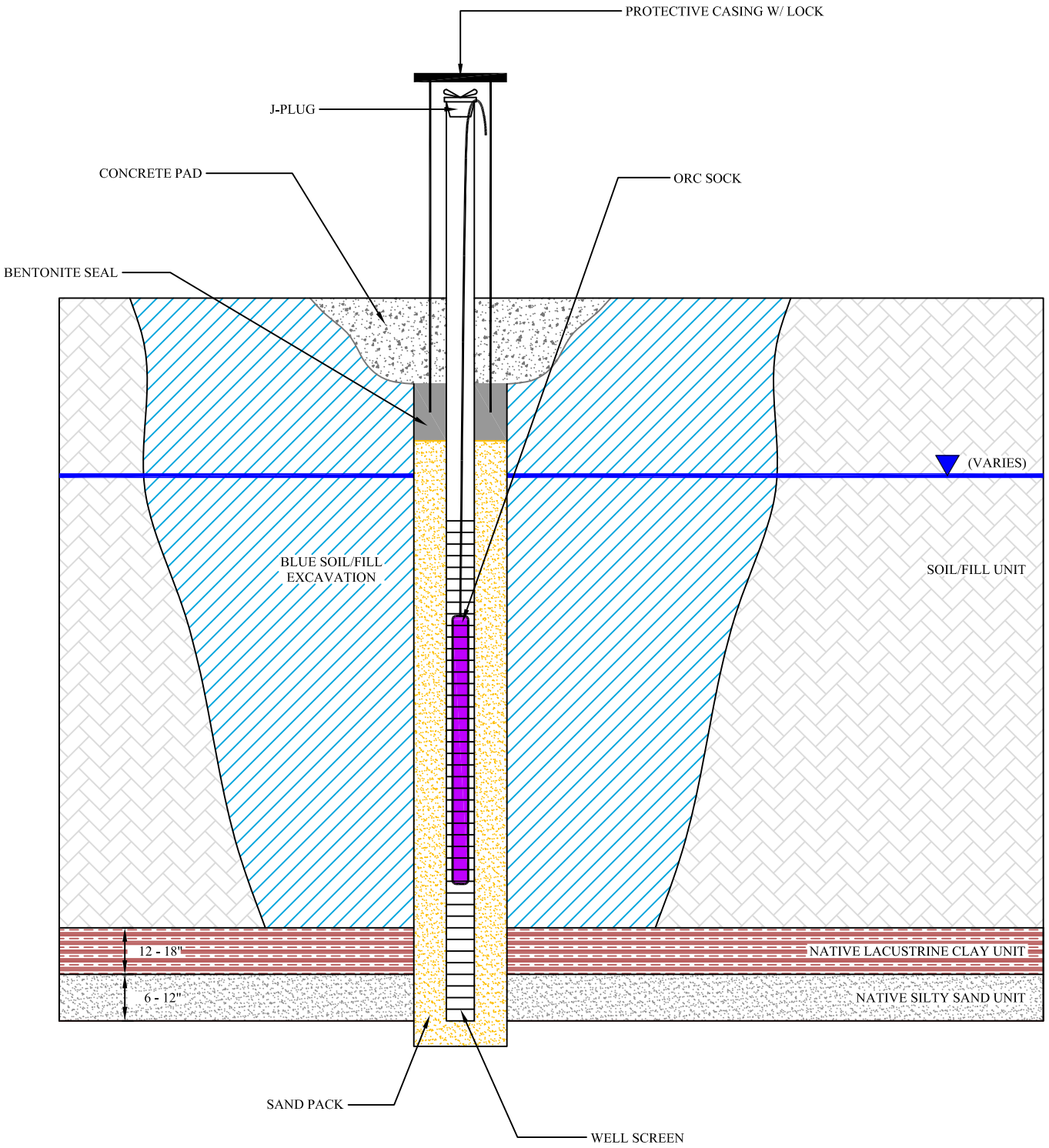
IN-SITU TREATMENT OF RESIDUAL SOIL & GROUNDWATER
FINAL ENGINEERING REPORT
BUFFALO, NEW YORK

PREPARED FOR
STEELFIELDS, LTD.

FIGURE 1

\\Benchmark-dc1\f data\CAD\TurnKey\Steelfields\AREA IV\ORC Treatment\Figure 2; ORC Sock Well Detail.dwg

FIGURE 2



TURNKEY ENVIRONMENTAL RESTORATION, LLC

726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0635

PROJECT NO.: 0062-008-404

DATE: JULY 2006

DRAFTED BY: BCH/WJM

ORC SOCK WELL DETAIL

IN-SITU TREATMENT OF RESIDUAL SOIL & GW

AREA IV - HYDRO-AIR PROPERTY
BUFFALO, NEW YORK

PREPARED FOR
STEELFIELDS, LTD.

FILEPATH: g:\cad\turnkey\steelfields\blue stained soils\orc sock well installation figures\figure 2; orc sock well detail.dwg

APPENDIX A

NYSDEC Correspondence

July 27, 2006

Mr. Maurice Moore
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue
Buffalo, NY 14203-2999

Re: Steelfields Area IV, Subareas G & E - Proposed In-Situ Treatment of Residual Soil & Groundwater

Dear Mr. Moore:

I have prepared this correspondence to document our preliminary discussions and proposed approach to complete remediation of Subareas G & E within Area IV at the above-referenced site. As you are aware, excavation of tar-impacted soil/fill within Area IV is substantially complete with all sidewall and most floor verification sampling results meeting SSALs. The only exceptions are three floor samples from Subareas G & E that exhibit benzene, toluene and xylene (BTEX) in the native lacustrine silty-clay soils on the bottom of the excavations. The analytical results are attached (Sample A4-TAR E- FLOOR- W/S is mislabeled by the lab and should be A4- TAR G- FLOOR-W/S) as is Figure 1 showing the approximate locations where the samples were collected. The SSALs for these BTEX parameters are 1.0 mg/kg for each compound. All other parameters in the native soil at the base of the excavations meet SSALs. We are also awaiting analytical results for two additional floor samples in Subareas C & D.

The native soils in the bottom of the excavation were overlain by approximately 12-28 inches of sandy silt deposits that contained high concentrations of BTEX and were just recently excavated for treatment and disposal. The (now removed) sandy silt deposits are believed to be beach deposits that are not contiguous or laterally extensive. Apparently benzene from the overlying blue-stained fill deposits in Subarea G Area III had penetrated the sandy silt native soils and migrated laterally into Area IV.

Continued verification sampling and excavation of the subgrade native soil/fill with such low residual BTEX concentrations is impractical and is significantly delaying backfilling operations. Given the relatively low concentrations of benzene in subgrade native silty-clay soils, and the susceptibility of benzene to natural aerobic biodegradation by indigenous microbes, we propose to use oxygen release compounds (ORC®) to enhance the natural biodegradation process. More specifically, we propose to apply the ORC at these locations following backfill placement by installing three-inch diameter in-situ treatment wells with 5-foot screens that will extend to a depth approximately 24-inches into the native soils. One such in-situ treatment well would be installed by Steelfields in the general vicinity of each of the above-referenced floor sample locations that exceeded SSALs (i.e. minimum of three). ORC "socks" will be suspended in each of the wells to slowly release oxygen to the shallow water column

and saturated soils. Attached Figure 1 shows the proposed locations of ORC in-situ treatment wells. Attached Figure 2 illustrates the proposed in-situ treatment well construction details. For clarity and consistency, it may be advisable to incorporate this in-situ treatment task into Section 3.0 of the HydroAir BCP Work Plan.

This proposed in-situ treatment process, similar to that employed by Steelfields in Subareas D, K & L of Area 1 and planned to be installed by Steelfields in Subareas G & H of Area III, is expected to eventually achieve SSALs in Area IV native soils. Due to the relatively low contaminant concentrations and depth below grade of the native soils (i.e. 6-8 feet), they are not expected to have any material impact on future site use and related exposure potential. We propose that Hydro Air monitor the progress of in-situ treatment through measurement of dissolved oxygen, pH, ORP, temperature, alkalinity and water levels in the additional wells proposed herein at the same frequency as sampling and analysis is planned in the perimeter groundwater quality monitoring wells as specified in Hydro Air's Long-Term Groundwater Monitoring Plan (See Appendix C to the BCP Work Plan). No additional base soil verification samples beyond those already analyzed will be collected in Area IV. Again, for clarity and consistency, it may be advisable to incorporate the monitoring and reporting of this in-situ treatment task into Hydro Air's Long-Term Groundwater Monitoring Plan.

Finally, we assume if this proposal is deemed acceptable by your Department that, following the installation of the in-situ treatment wells and ORC socks, the issuance of Hydro Air's Certificate of Completion by the Department will not be delayed as a result of this additional remediation task.

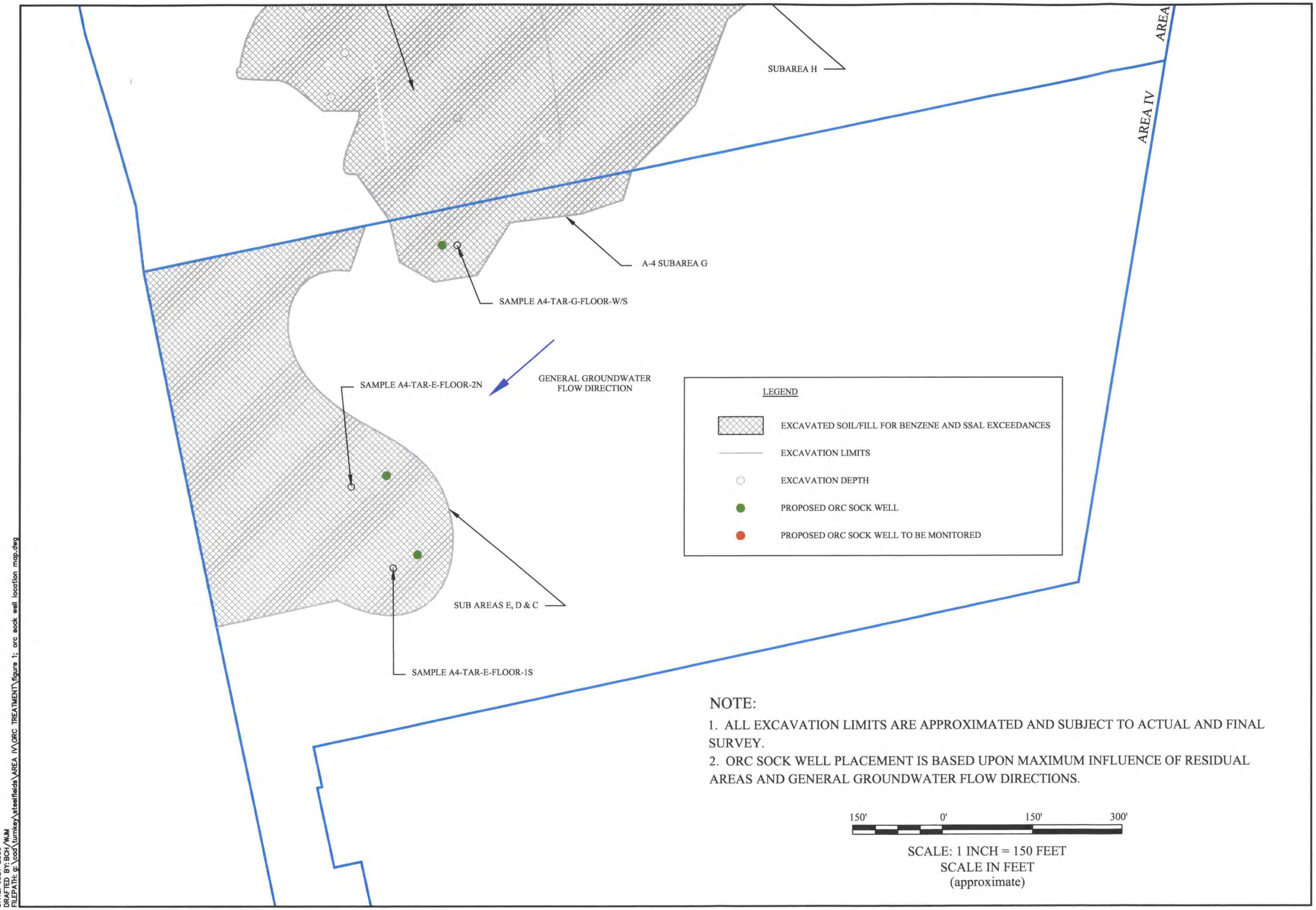
Please contact us if you have any questions or wish to discuss details further.

Sincerely,
TurnKey Environmental Restoration, LLC

Walter Meisner, P.E.
Resident Engineer

C: 0062-008-404

NYSDEC/ Buffalo- James Tuck
Steelfields- G. Smith, R. Palumbo
Hydro Air- K. Koch
Hiscock & Barclay- T. Warth, E. Daniels
Modern- J. Plewniak



NOTE:

1. ALL EXCAVATION LIMITS ARE APPROXIMATED AND SUBJECT TO ACTUAL AND FINAL SURVEY.
2. ORC SOCK WELL PLACEMENT IS BASED UPON MAXIMUM INFLUENCE OF RESIDUAL AREAS AND GENERAL GROUNDWATER FLOW DIRECTIONS.

150' 0' 150' 300'

SCALE: 1 INCH = 150 FEET
SCALE IN FEET
(approximate)

726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0635

TURNKEY ENVIRONMENTAL RESTORATION, LLC

JOB NO.: 0062-008-404

ORC SOCK WELL LOCATION MAP

PROPOSED IN-SITU TREATMENT OF RESIDUAL SOIL & GROUNDWATER

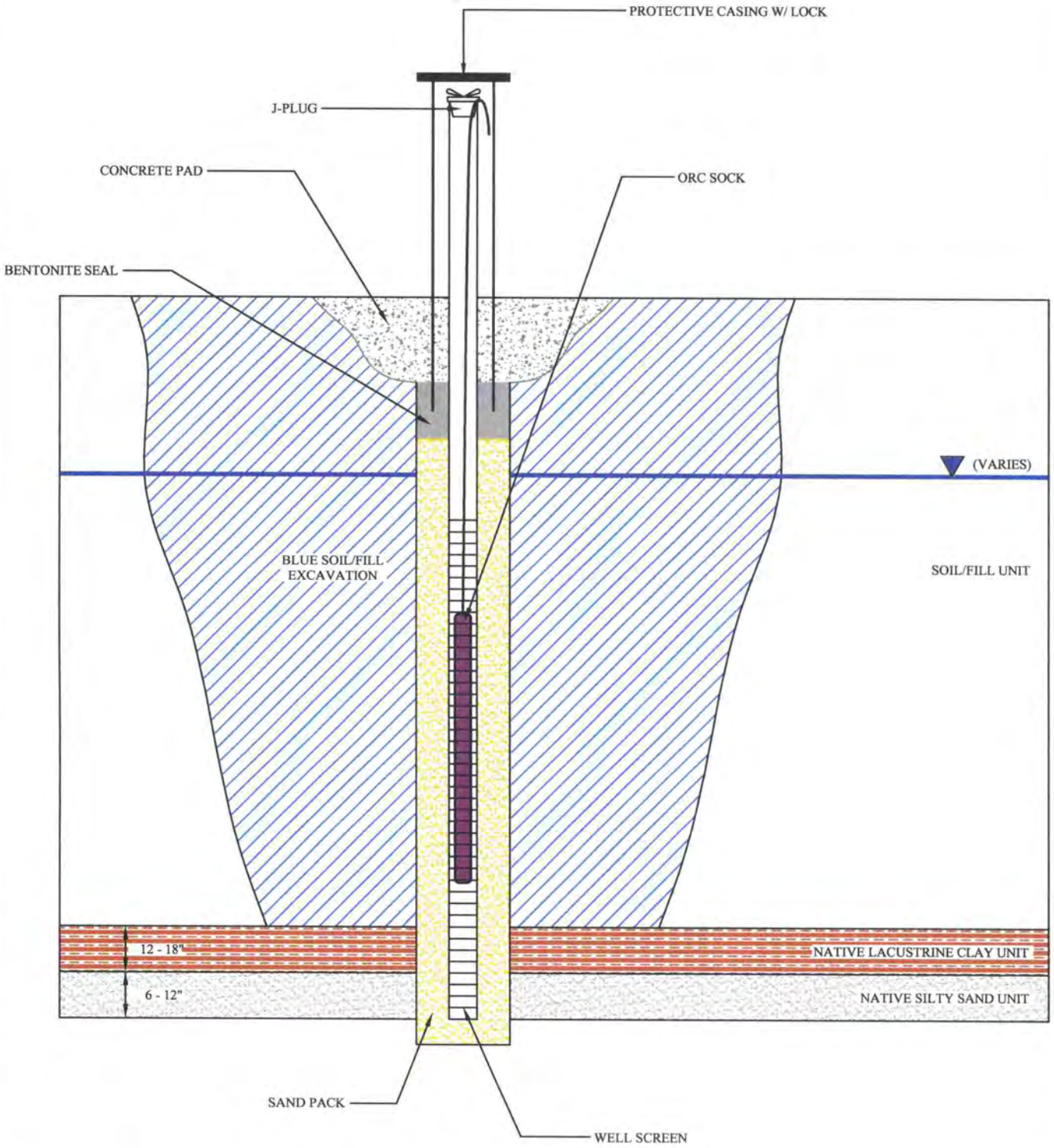
AREA IV - HYDRO AIR PROPERTY
BUFFALO, NEW YORK

PREPARED FOR
STEELFIELDS, LTD.

FIGURE 1

FILEPATH: g:\cad\turnkey\steelfields\AREA IV\ORC TREATMENT\figure 1: orc sock well location map.dwg
DRAFTED BY: BGH/WJM
DATE: JULY 2006
FILE: G:\CAD\Turnkey\Steelfields\AREA IV\ORC Treatment\Figure 1: ORC Sock Well Location Map.dwg

FIGURE 2



TURNKEY ENVIRONMENTAL RESTORATION, LLC

726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0635

ORC SOCK WELL DETAIL

PROPOSED IN-SITU TREATMENT OF RESIDUAL SOIL & GW

AREA IV - HYDRO-AIR PROPERTY
BUFFALO, NEW YORK

PREPARED FOR
STEELFIELDS, LTD.

PROJECT NO.: 0062-008-404
DATE: JULY 2006
DRAFTED BY: BCH/WJM

FILEPATH: g:\cad\turnkey\steelfields\blue stained soils\orc sock well installation figures\figure 2; orc sock well detail.dwg

F:\CAD\TurnKey\Steelfields\AREA IV\ORC Treatment\Figure 2; ORC Sock Well Detail.dwg

JUL 3 1 2006

New York State Department of Environmental Conservation
Regional Engineer, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2999
Phone: (716) 851-7070 • **FAX:** (716) 851-7009
Website: www.dec.state.ny.us

Denise M. Sheehan
Commissioner

July 28, 2006

Mr. Paul H. Werthman, P.E.
Steelfields LTD/Turnkey Environmental Restoration, LLC
726 Exchange Street
Suite 624
Buffalo, New York 14210

Dear Mr. Werthman:

This is in response to the July 27 letter from Mr. Walter Meisner to Mr. Maurice Moore of my staff. The letter confirms their discussions earlier this week concerning the remediation strategy to be used for Subareas G & E on Area IV of the current Steelfields property.

As described in the letter, we agree that the use of oxygen release compounds (ORC) is an appropriate technology to address the remaining contamination in that area. As suggested in the letter, a description of this work and of the continued monitoring of the results should be incorporated into the Hydro Air's Long-Term Groundwater Monitoring Plan.

Finally, we agree that as long as the treatment system is installed and continues to be monitored as described, it will not affect the issuance of the Certificate of Completion to Hydro Air. Please feel free to call me if you have additional questions or comments.

Sincerely,

Daniel R. David, P.E.
Regional Engineer for
Environmental Quality

APPENDIX B

ORC Well Installation Documentation

STEELFIELDS LTD
11 State Street
Pittsford, NY 14534

July 9, 2007

Mr. Walter Meisner
TurnKey Environmental Restoration
726 Exchange Street, Suite 624
Buffalo, New York 14210

Re: Former LTV Steel Site – Area IV
ORC Well Installation

Dear Walter:

Enclosed please find the letter report regarding Area IV ORC well placement. I understand from Rich that you have already prepared a report for Steelfields covering all of the information required by Section 6.2 of the Hydro-Air Workplan, less the information relating to the ORC wells for Area IV. I am enclosing that ORC data with this letter. Please incorporate this material into the report that Steelfields has agreed to provide for Hydro-Air in accordance with Section 6.2 and provide me with a copy of the report on or before July 20. Please call or e-mail me if you have any questions.

Sincerely,

Gary E. Smith CK

Gary E. Smith, P.E.
President
Steelfields, LTD

Enclosure

GS:ck

STEELFIELDS LTD

11 State Street
Pittsford, NY 14534

July 9, 2007

Mr. Paul Werthman, P.E.
TurnKey Environmental Restoration
726 Exchange Street, Suite 624
Buffalo, New York 14210

Re: Former LTV Steel Site – Area IV
ORC Well Installation

Dear Mr. Werthman,

On behalf of Steelfields, Ltd., Modern Construction LLC (Modern) is submitting this letter report summarizing the installation of three ORC wells in Area IV at the above referenced site.

Scheduling & Mobilization

On June 21, 2007 Modern scheduled Earth Dimensions, Inc. to install fourteen 4" ORC and three monitoring wells in Area III & IV. On Monday June 25th Earth Dimensions mobilized a drill rig and other equipment to began work in Area IV with the ORC well installations. Stakes designating the location of each well were previous placed by Benchmark/TurnKey personnel and labeled in both Area III & IV.

A two-man crew, a driller and his helper were utilized to operate the Diedrick model 120 drill rig. Mr. Brian Barton, a geologist with Earth Dimensions was on site to oversee the drilling and well installation.

Well Installation & Development

Work began that morning with the installation of A4-ORC-2. A 6-5/8 inch ID x 10-inch OD hollow stem auger was used to advance the boring to depth of twelve feet below the surface. Spoil from the boring was stockpiled on plastic near the borehole location. A 5-foot section of screened schedule 40 PVC well pipe was installed at the bottom of the boring and solid PVC pipe extended to the surface. The well pipe was packed with bentonite and sand as required. A locking cap was placed on the top of the PVC casing and secured. Upon completion of the first well, A4-ORC-3 and A4-ORC-1 were completed respectively by the end of that day. Clean augers were used at each new borehole location. A temporary decon station was set up at the terminal basin in Area II and all equipment cleaned before reuse. Drilling continued the following days in Area III to complete the remaining eleven ORC wells.

Upon completion of all fourteen ORC wells a technician with Earth Dimensions developed and recorded water levels at each location. Water level readings were taken over the next few days and recorded on a Well Development Log to determine actual water elevation after stabilization had occurred. Information on water depth was used in the determination of amount of ORC socks to be placed in each well. Attached here is copy of the development log for each well. Also attached is a detailed cross section of each well as it was installed. On Thursday July 5th Niagara Boundary obtained survey locations and casing elevations for all 14 ORC wells in both Area III & IV. The survey information was forwarded via email to Walter Miesner on Friday July 6th.

ORC Installation

One foot long, 4" ORC filter socks were ordered from Regenesis Bioremediation Products. A partial order of filter socks, enough to complete the Area IV wells was received on July 6 and installed in the three Area IV wells later that day. Mr. Maurice Moore with NYSDEC was on site in Area IV during some the ORC sock installation.

Based on water levels recorded at each well location, following is the amount of ORC socks placed in the Area IV wells.

A4-ORC-1 2 socks
A4-ORC-2 2 socks
A4-ORC-3 3 socks

The remainder of the ORC socks for the Area III wells have been ordered and will be received during the week of July 9th 2007. The socks will be installed in the remaining 11 wells when the order is received. An addendum to this report will be submitted with the additional information required for the Area III ORC wells.

If there are any further questions or additional information required in this matter, do not hesitate to contact Jerry Plewniak. He can be reached cellular at (716) 622-2227 or via email at jerry@modern-corp.com.

Sincerely,

Gary E. Smith, P.E.
President
Steelfields, LTD

cc: R. Palumbo – Steelfields, (via email)
J. Plewniak – Modern
W. Miesner – Benchmark (via email)

EARTH DIMENSIONS, INC.
Soil and Hydrogeologic Investigations • Wetland Delineations
1091 Jamison Road • Elma, NY 14059
(716) 655-1717 • FAX (716) 655-2915

18A031 HOLE NO. A4-ORC-1 SURF. ELEVATION _

PROJECT Steelfields LTD Site, off Tift St., Install Well LOCATION _
City of Buffalo, Erie Co., NY

CLIENT Steelfields LTD DATE STARTED 06/25/07 COMPLETED 06/25/07

DEPTH IN FT	SN	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WELL	WATER TABLE AND REMARKS
								Advanced bore hole without split spoon sampling with 6 5/8 inch ID x 10 inch OD hollow stem auger casing to 12.0 feet.	(1) (2) (4) (3) (5) (6)	(1) 2.5' OF 4" PVC STICK UP WITH LOCKING J PLUG AND KEYED ALIKE LOCK ← 3.0' ← 5.0' ← 7.0' (2) CEMENT BENTONITE GROUT (3) BENTONITE SEAL (4) 4" SCHEDULE 40 FLUSH JOINT THREADED PVC RISER (5) .010 SLOT 4" PVC SCREEN (6) #00N SIZE MORIE SAND PACK
5										
10								12.0		← 12.0'
								Augering completed at 12.0 feet.		Installed 4 inch ORC Injection Well in completed bore hole.
15										
20										

N=NUMBER OF BLOWS TO DRIVE N/A SPOON N/A" WITH N/A lb. WT. FALLING N/A " PER BLOW

LOGGED BY Brian R. Bartron, Geologist, (mw)

SHEET 1 OF 1

EARTH DIMENSIONS, INC.
Soil and Hydrogeologic Investigations • Wetland Delineations
1091 Jamison Road • Elma, NY 14059
(716) 655-1717 • FAX (716) 655-2915

18A03f

HOLE NO. A4-ORC-2

SURF. ELEVATION _

PROJECT Steelfields LTD Site, off Tift St., Install Well
City of Buffalo, Erie Co., NY

LOCATION _

CLIENT Steelfields LTD

DATE STARTED 06/25/07 COMPLETED 06/25/07

DEPTH IN FT	SN	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WELL	WATER TABLE AND REMARKS
								Advanced bore hole without split spoon sampling with 6 5/8 inch ID x 10 inch OD hollow stem auger casing to 12.0 feet.	(1) (4) (3) (5) (6)	(1) 2.5' OF 4" PVC STICK UP WITH LOCKING J PLUG AND KEYED ALIKE LOCK ← 3.0' ← 5.0' ← 7.0' (2) CEMENT BENTONITE GROUT (3) BENTONITE SEAL (4) 4" SCHEDULE 40 FLUSH JOINT THREADED PVC RISER (5) .010 SLOT 4" PVC SCREEN (6) #00N SIZE MORIE SAND PACK
5										
10								12.0		← 12.0'
								Augering completed at 12.0 feet.		Installed 4 inch ORC Injection Well in completed bore hole.
15										
20										

N=NUMBER OF BLOWS TO DRIVE N/A " SPOON N/A " WITH N/A lb. WT. FALLING N/A " PER BLOW

LOGGED BY Brian R. Bertron, Geologist, (aw)

EARTH DIMENSIONS, INC.
Soil and Hydrogeologic Investigations • Wetland Delineations
1091 Jamison Road • Elma, NY 14059
(716) 655-1717 • FAX (716) 655-2915

18A03f HOLE NO. A4-ORC-3 SURF. ELEVATION _

PROJECT Steelfields LTD Site, off Tift St., Install Well LOCATION _
City of Buffalo, Erie Co., NY

CLIENT Steelfields LTD DATE STARTED 06/25/07 COMPLETED 06/25/07

DEPTH IN FT	SN	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WELL (1)	WATER TABLE AND REMARKS
0								Advanced bore hole without split spoon sampling with 6 5/8 inch ID x 10 inch OD hollow stem auger casing to 12.0 feet.		(1) 2.5' OF 4" PVC STICK UP WITH LOCKING J PLUG AND KEYED ALIKE LOCK
										← 3.0'
5										← 5.0'
										← 7.0'
10										(2) CEMENT BENTONITE GROUT (3) BENTONITE SEAL (4) 4" SCHEDULE 40 FLUSH JOINT THREADED PVC RISER (5) .010 SLOT 4" PVC SCREEN (6) #00N SIZE MORIE SAND PACK
								12.0		← 12.0'
								Augering completed at 12.0 feet.		Installed 4 inch ORC Injection Well in completed bore hole.
15										
20										

N=NUMBER OF BLOWS TO DRIVE N/A SPOON N/A" WITH N/A lb. WT. FALLING N/A " PER BLOW

LOGGED BY Brian R. Bartron, Geologist, (mw) SHEET 1 OF 1

H DIMENSIONS, INC.

Well #: A4-ORC-1

Well Development Log

EDI Project Code: 18A03f

Project Location: Steelfields LTD Site

Well Location: Area 4

Date	Start Time	Water Level	Gallons Removed	Finish Water Level	Finish Time	Notes
06/27/07		1.8'				
06/29/07	9:53am	2.2'	15.0 gal	11.4'	10:06am	
06/29/07	11:44am	4.6'				
07/02/07	11:03am	2.2'				

H DIMENSIONS, INC.

Well #: A4-ORC-2

Well Development Log

EDI Project Code: 18A03f

Project Location: Stapifields LTD Site

Well Location: Area 4

Date	Start Time	Water Level	Gallons Removed	Finish Water Level	Finish Time	Notes
06/27/07		4.5'				
06/29/07	10:56 AM	1.8'	8.0 gal	11.8'	11:05 AM	Dry
06/29/07	11:27am	9.3'	3.0 gal	11.8'	11:31 AM	Dry
06/29/07	11:46am	10.8'				
07/02/07	9:05 AM	3.7'				

H DIMENSIONS, INC.

Well #: A4-ORC-3

Well Development Log

EDI Project Code: 18A03f

Project Location: Steelfields LTD Site

Well Location: Area 4

Date	Start Time	Water Level	Gallons Removed	Finish Water Level	Finish Time	Notes
06/27/07		10.3'				
06/29/07	10:53 AM	9.3'	4.0 gal	11.8'	11:09 AM	
06/29/07	11:48 AM	10.9'				
07/02/07	9:08 AM	9.2'				

APPENDIX C

ORC Well Annual Inspection

ORC WELL ANNUAL INSPECTION FORM
Active ORC monitoring wells

Project Name: Project No.:

Project Location: Client:

Preparer's Name: Date/Time:

	A4 - ORC - 1		A4 - ORC - 2		A4 - ORC - 3	
sampling dates:						

Field groundwater quality measurements

Water Level						
Bottom Depth						
pH						
Temperature						
DO						
ORP						
Alkalinity						

Refer to Figure 1 for well locations

Well integrity

Cement seal ☐ good ☐ poor If poor please note well. _____

Pro - casing condition ☐ good ☐ poor If poor please note any damage. _____

Lock condition ☐ good ☐ poor If poor please note well. _____

Working J - plug ☐ yes ☐ no If no please note well. _____

ORC Sock's

Have any Socks been replaced ☐ yes ☐ no

If replaced on what date and why. _____

Are socks fully submerged in well screens. ☐ yes ☐ no

If no explain why. _____

Are all ORC wells begin sampled and maintained according to the site management plan

☐ yes ☐ no

If no please state why. _____

Initial: _____ Date: _____

PART II

SOIL / FILL MANAGEMENT PLAN

BROWNFIELD CLEANUP PROGRAM

SITE MANAGEMENT PLAN
PART II

SOIL/FILL MANAGEMENT PLAN

STEELFIELDS AREA IV SITE
BUFFALO, NEW YORK
(NYSDEC BCP SITE #C915204)

November 2007 **0092-004-200**

Prepared for:

SOIL/FILL MANAGEMENT PLAN FOR STEELFIELDS AREA IV (HYDRO-AIR) SITE

Table of Contents

SOIL/FILL MANAGEMENT PLAN FOR STEELFIELDS AREA IV (HYDRO-AIR) SITE

Table of Contents

LIST OF TABLES

LIST OF FIGURES

LIST OF ATTACHMENTS

1.0 INTRODUCTION

1.1 Background

In October, 2002 Steelfields Ltd. purchased several vacant industrial properties in South Buffalo, New York (See Figure 1-1 and Figure 1-2) out of bankruptcy from the LTV Steel Company and Hanna Furnace Corporation (a wholly owned subsidiary of the National Steel Corporation). At the same time, Steelfields entered into a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC). Pursuant to the VCA, NYSDEC approved a Work Plan for Voluntary Cleanup Program Remedial Design/Remedial Action for the Former Steel and Coke Manufacturing Site prepared by TurnKey Environmental Restoration, LLC, dated September 2002 (VCA Work Plan) on December 27, 2002.

In August of 2006, Hydro-Air Components, Inc. purchased from Steelfields approximately 30.9 acres of the property that is subject to the VCA Work Plan, the parcel known as Area IV – Former Donner-Hanna Coke Yard Parcel (Area IV or Site). Hydro-Air entered into a Brownfields Cleanup Agreement (BCA) with NYSDEC on August 21, 2006 to continue to completion the remedial program activities on Area IV that had been commenced under the VCA Work Plan. Pursuant to the BCA, NYSDEC approved a Remedial Design Work Plan for Steelfields Area IV (Hydro-Air) Site dated September 2006, as amended (BCA Work Plan).

In September, 2007, Hydro-Air will submit to NYSDEC a Final Engineering Report documenting the completion of the remedial program construction activities in accordance with the BCA Work Plan and documenting the institutional controls, engineering controls and operation, monitoring and maintenance measures that will maintain the Site as protective of the environment and human health.

1.2 Purpose and Scope

The purpose of this Soil/Fill Management Plan (S/FMP) is to protect both the

environment and human health during redevelopment of the Site subsequent to completion of remedial program construction activities.

While an assessment of surface and subsurface soil/fill and groundwater at the Site has already been performed and substantial quantities of impacted soil/fill has been removed, subsurface information is never 100 percent complete or accurate, especially on such a large site with a long and diverse manufacturing history. As such, it is not unreasonable to anticipate the possibility that some quantity of subsurface soil/fill contamination may be encountered after completion of the remedial program construction activities. In particular, soil/fill contamination may be encountered during development activities such as infrastructure construction (i.e. roads, waterline, sewers, electric cable etc.) or foundation excavation and site grading.

Compliance with this S/FMP is required to properly manage the potential for encountering subsurface soil contamination. This S/FMP was developed and incorporated into the BCA Work Plan for the Site with the express purpose of addressing unknown subsurface contamination if and when encountered, thus maintaining the release and covenant not to sue by the NYSDEC. The S/FMP also facilitates the transfer of responsibilities with property ownership.

This S/FMP provides protocols for the proper handling of site soil/fill during development activities, including:

- excavation, grading, sampling and handling of Site soils.
- acceptability of soils/fill from off-Site sources for backfill or subgrade fill.
- erosion and dust control measures.
- access controls.
- health and safety procedures for subsurface construction work and the protection of the surrounding community.
- acceptability and placement of final soil and vegetative cover.
- environmental easement restrictions.
- program responsibilities.

- notification and reporting requirements.

1.3 Soil/Fill Management Program Responsibility

Hydro-Air Components, Inc., as the BCA volunteer and its successors and assigns (collectively, the Volunteer) and any subsequent Site owner will be responsible for all monitoring, implementation and reporting requirements of the S/FMP. The Volunteer and any subsequent owner will not perform, nor contract, nor permit their employees, agents, or assigns to perform any excavations or disturbance of site soils, except as in accordance with this S/FMP. Any excavation, regrading or disturbance of on-Site soils inconsistent with the provisions of the Plan may be grounds for NYSDEC to void its release from claims, actions, suits, proceeding by the NYSDEC against the site owner(s), successor(s) or assigns for environmental conditions on the Site. The Volunteer and any subsequent property owner(s) or their agents will be responsible for proper notification and reporting to regulatory agencies (i.e., NYSDEC Region 9, Division of Environmental Remediation and NYS Department of Health) prior to and following site development as described in Section 2.9.

The NYSDEC may provide periodic construction oversight and monitoring during site redevelopment activities to verify that the requirements of this S/FMP are adhered to.

2.0 SOIL/FILL MANAGEMENT

2.1 Site Preparation

As part of redevelopment or future intrusive on-site activities, the Site may require grading prior to cover system replacement. The fill material and any debris piles generated during intrusive activities will be graded to the surface required for redevelopment. Trees, shrubs, roots, brush, masonry, rubbish, scrap, debris, pavement, etc. will be removed and properly disposed off-site. Only exempt materials as defined in 6 NYCRR Part 360-7.1(b)(1) are allowed for on-site stockpiling. Prior to cover system replacement, protruding material will be removed from the ground surface. Burning will not be allowed on-site.

2.2 Excavation and Grading of Soil/Fill Below the Cover System

During construction activities at the Site, the excavation of soil/fill material may be necessary. For excavation work below the cover system, a Professional Engineer's or other Qualified Environmental Professional's representative with construction/remediation experience, representing the subject property owner or developer will monitor soil/fill excavations, or disturbances. This Professional Engineer (P.E.) or other Qualified Environmental Professional (QEP), as the Department may find acceptable as set forth in ECL 27-1415(b), must also provide a stamped/signed certification that handling, testing and disposition of soil/fill excavated from below the cover system and subsequent repair/replacement of the cover system was conducted in a manner consistent with this SMP. This P.E./QEP certification must be included in the annual certification report required in Attachment A-3 of this document.

During excavation performed to support development activities, the soil/fill will be inspected for staining and/or odors and will be field screened for the presence of VOCs with a photoionization detector (PID).

2.2.1 Visibly Impacted Soil/Fill or Soil/Fill That Exhibits Elevated PID Readings

Stained soil is soil that is observed to be discolored, tinted, dyed, unnaturally mottled, or has a sheen. Excavated soil/fill that is visibly stained, produces odors or produces elevated PID readings (i.e., sustained 5 ppm or greater) will be considered potentially contaminated and stockpiled on the property for further assessment. The potentially contaminated soil/fill will be stockpiled (maximum 50 cubic yard piles) on polyethylene sheeting and then sampled for reuse, treatment, or disposal. The stockpiled, potentially contaminated soil/fill will also be completely covered using polyethylene sheeting to reduce the infiltration of precipitation and the migration of dust. Sampling and analysis will be completed in accordance with the protocols delineated in Section 2.3.1.

Stockpiled soils must be either removed from the site or used on-site as fill in accordance with Section 2.3 *below* within 90 days of excavation. Impacted soil/fill containing one or more constituents in excess of the Site Specific Action Levels (SSALs), specific for the Site, as shown in Table 2-1 will be transported off-site to a permitted waste management facility. In addition, any impacted soil/fill containing one or more constituents not included in the SSALs specific for the Site, but in excess of restricted commercial use Soil Cleanup Objectives (SCOs) as in 6NYCRR Part 375 Table 375-6.8(b) for a non-SSAL constituent will be transported, off-site, to a permitted waste management facility.

2.2.2 Buried Drums or Underground Storage Tanks

If buried drums or underground storage tanks are encountered during soil excavation activities, excavation will cease and the NYSDEC will be immediately notified. All drums and/or underground storage tanks encountered will be evaluated and the contractor will submit a removal plan for NYSDEC review. Appropriately trained personnel will excavate all of the drums and/or underground storage tanks while following all applicable federal, state, and local regulations. Removed drums and underground storage tanks will be properly characterized and disposed off-site. The soil/fill surrounding the buried drums or underground storage tanks will be considered as potentially contaminated and will be stockpiled and characterized.

2.3 Soil/Fill Characterization

Excavated soil/fill may be used on-site as fill below the cover system if it is below SSALs. Soil/fill that is excavated as part of development which can not be used as fill below the cover system will be further characterized prior to transportation off-site for disposal at a permitted facility.

2.3.1 Excavated and Stockpiled soil/fill

A soil characterization flowchart is provided on Figure A-2. For soil/fill excavated from on-site with visual evidence of contamination (i.e., staining or elevated PID measurements), one composite sample and a duplicate sample will be collected for each 100 cubic yards of stockpiled soil/fill. For excavated soil/fill excavated from on-site that does not exhibit visual evidence of contamination, one composite sample and a duplicate sample will be collected for 2000 cubic yards of stockpiled soil, and a minimum of 1 sample will be collected for volumes less than 2000 cubic yards. For soil/fill that must be sent off-site for disposal the receiving landfill will dictate sampling requirements.

The composite sample will be collected from five locations within each stockpile. A duplicate composite sample will also be collected. PID measurements will be recorded for each of the five individual locations. One grab sample will be collected from the individual location with the highest PID measurement. If none of the five individual sample locations exhibit PID readings, one location will be selected at random. The composite sample will be analyzed by a NYSDOH ELAP-certified laboratory for pH (EPA Method 9045C), Target Compound List (TCL) SVOCs, pesticides, and PCBs, and TAL metals, and cyanide. The grab sample will be analyzed for TCL VOCs.

Soil/fill samples will be composited by placing equal portions of fill/soil from each of the five composite sample locations into a pre-cleaned, stainless steel (or Pyrex glass) mixing bowl. The soil/fill will be thoroughly homogenized using a stainless steel scoop or trowel and transferred to pre-cleaned jars provided by the laboratory. Sample jars will then be labeled and a chain-of-custody form will be prepared.

2.3.2 Soil/fill Disposal or Reuse

Visually contaminated soil/fill that has been characterized and found to meet the SSALs, may be reused as subgrade or excavation subgrade backfill. If the analysis of the soil/fill samples reveals unacceptably high levels of any analytes, the soil/fill may not be used as backfill on-site. The developer will be responsible for characterizing any material that is found to contain one or more constituents in excess of the SSALs.

Additional characterization sampling for off-site disposal may be required by the disposal facility. To potentially reduce off-site disposal requirements/costs, the owner or site developer may also choose to characterize each stockpile individually. If the analytical results indicate that the soil is not a hazardous waste, the material will be properly disposed off-site at a solid waste facility. Stockpiled soil shall be transported, in accordance with environmental conservation law and regulations.

2.3.3 Backfill

Subgrade material used to backfill excavations or placed to increase site grades or elevation shall meet the following criteria:

- Excavated on-site soil/fill which appears to be visually impacted shall be sampled and analyzed. Analytical results shall indicate that the contaminants, if any, are present at concentrations below the SSALs.

- Imported soil/fill will be documented as having originated from locations having no evidence of disposal or release of hazardous, toxic or radioactive substances, wastes or petroleum products.

- Imported soil/fill intended for use as site backfill cannot otherwise be defined as a solid waste in accordance with 6 NYCRR Part 360-1.2(a).

- If off-site soil is designated as "virgin" soil, it shall be further documented in writing to be native soil material from areas not having supported any known prior industrial or commercial development or agricultural use.

- "Virgin" soils should be subject to collection of one representative composite sample per source. The sample should be analyzed for TCL VOCs, SVOCs, pesticides, PCBs, arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, and cyanide. The soil will be acceptable for use as backfill provided that all parameters meet the requirements set forth in the restricted commercial use Soil Cleanup Objectives (SCOs) in 6NYCRR Part 375 Table 375-6.8(b) as detailed in Table 2-2.

- Non-virgin soils will be tested via collection of one composite sample per 500 cubic yards of material from each source area. If more than 1,000 cubic yards of soil are borrowed from a given off-site non-virgin soil source area and both samples of the first 1,000 cubic yards meet SCOs, the sample collection frequency will be reduced to one composite for every 2,500 cubic yards of additional soils from the same source, up to 5,000 cubic yards. For borrow sources greater than 5,000 cubic yards, sampling frequency may be reduced to one sample per 5,000 cubic yards, provided all earlier samples met the SCOs.

TABLE 2-1

Site-Specific Action Levels

PARAMETER	MAXIMUM CONCENTRATION IN SOIL/FILL (mg/kg) [1]
Individual VOC	1
Total VOCs [2]	10
Total SVOCs [3]	500
Total cPAHs [4]	10
Arsenic	75
Barium	1,000
Cadmium	15
Chromium	1,000
Lead	1,000
Mercury	10
Selenium	61
Silver	10
Cyanide (Total Amenable)	1,600

NOTES:

(1) All analyses shall be performed per USEPA SW-846 methodology or other methods acceptable to NYSDEC.
(2) NYSDEC STARS List VOCs per USEPA Method 8021
(3) Target Compound List (TCL) SVOCs per USEPA Method 8270
(4) Carcinogenic polynuclear aromatic hydrocarbons (i.e., benzo(a)anthracene, benzo(a)pyrene, dibenzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene per USEPA Method 8270.

TABLE 2-2

Criteria for Use of Off-Site Soil

Bold number applicable

Parameter	Commer-cial	Protection of Ground-water
Metals (mg/kg)		
Arsenic	**16**	16
Barium	**400**	820
Beryllium	590	**47**
Cadmium	9.3	**7.5**
Chromium, hexavalent [h]	400	**19**
Chromium, trivalent[h]	**1,500**	NS
Copper	**270**	1,720
Total Cyanide [h]	**27**	40
Lead	1,000	**450**
Manganese	10,000	**2,000**
Total Mercury	2.8	**0.73**
Nickel	310	**130**
Selenium	1,500	**4**
Silver	1,500	**8.3**
Zinc	10,000	**2,480**
PCBs/Pesticides (mg/kg)		
2,4,5-TP Acid (Silvex)	500	**3.8**
4,4'-DDE	62	**17**
4,4'-DDT	**47**	136
4,4'-DDD	92	**14**
Aldrin	0.68	**0.19**
alpha-BHC	3.4	**0.02**
beta-BHC	3	**0.09**

PCBs/Pesticides (mg/kg) (con'd)		
Chlordane (alpha)	24	**2.9**
delta-BHC	500	**0.25**
Dibenzofuran	350	**210**
Dieldrin	1.4	**0.1**
Endosulfan I	200	**102**
Endosulfan II	200	**102**
Endosulfan sulfate	**200**	1,000
Endrin	89	**0.06**
Heptachlor	15	**0.38**
Lindane	9.2	**0.1**
Polychlorinated biphenyls	**1**	3.2

Semi-volatile Organic Compounds (mg/kg)		
Acenaphthene	500	**98**
Acenapthylene	500	**107**
Anthracene	**500**	1,000
Benz(a)anthracene	5.6	**1**
Benzo(a)pyrene	**1**	22
Benzo(b)fluoranthene	5.6	**1.7**
Benzo(g,h,i)perylene	**500**	1,000
Benzo(k)fluoranthene	56	**1.7**
Chrysene	56	**1**
Dibenz(a,h)anthracene	**0.56**	1,000
Fluoranthene	**500**	1,000
Fluorene	500	**386**
Indeno(1,2,3-cd)pyrene	**5.6**	8.2

Semi-volatile Organic Compounds (mg/kg) (con'd)		
m-Cresol	500	**0.33**
Naphthalene	500	**12**
o-Cresol	500	**0.33**
p-Cresol	500	**0.33**
Pentachlorophenol	6.7	**0.8**
Phenanthrene	**500**	1,000[c]
Phenol	500	**0.33**
Pyrene	**500**	1,000
Volatile Organic Compounds (mg/kg)		
1,1,1-Trichloroethane	500	**0.68**
1,1-Dichloroethane	240	**0.27**
1,1-Dichloroethene	500	**0.33**
1,2-Dichlorobenzene	500	**1.1**
1,2-Dichloroethane	30	**0.02**
cis-1,2-Dichloroethene	500	**0.25**
trans-1,2-Dichloroethene	500	**0.19**
1,3-Dichlorobenzene	280	**2.4**
1,4-Dichlorobenzene	130	**1.8**
1,4-Dioxane	130	**0.1**
Acetone	500	**0.05**

Volatile Organic Compounds (mg/kg) (con'd)		
Benzene	44	**0.06**
Butylbenzene	500	**12**
Carbon tetrachloride	22	**0.76**
Chlorobenzene	500	**1.1**
Chloroform	350	**0.37**
Ethylbenzene	390	**1**
Hexachlorobenzene	6	**3.2**
Methyl ethyl ketone	500	**0.12**
Methyl tert-butyl ether	500	**0.93**
Methylene chloride	500	**0.05**
n-Propylbenzene	500	**3.9**
sec-Butylbenzene	500	**11**
tert-Butylbenzene	500	**5.9**
Tetrachloroethene	150	**1.3**
Toluene	500	**0.7**
Trichloroethene	200	**0.47**
1,2,4-Trimethylbenzene	190	**3.6**
1,3,5- Trimethylbenzene	190	**8.4**
Vinyl chloride	13	**0.02**
Xylene (mixed)	500	**1.6**

2.4 Final Surface Coverage

Vegetative or other (e.g., asphalt, buildings, concrete) surface coverage over the entire redeveloped parcel will be required by the developer or owner as a pre-condition of occupancy of newly constructed facilities. A minimum of 12-inches of soil cover will be placed in all areas where concrete, asphalt or buildings are not present or proposed as part of the final development. Of the total 12-inches of cover, the upper 6-inches will be topsoil as specified below.

Topsoil used for the final soil cover shall meet the criteria specified in Section 2.2 and the following general specifications:

1. Fertile, friable, natural loam surface soil, capable of sustaining plant growth, free of, clods of hard earth, plants or roots, sticks or other extraneous material harmful to plant growth. Supply a well-graded topsoil with the following approximate analysis:

   (a)

Sieve Size	Percent Passing by Weight
3-inch	100
No. 4	>75
No. 200	>30
0.002 mm	<20

   (b) pH 5.5 to pH 7.6.

   (c) Minimum organic content of 2.5 percent as determined by ignition loss.

   (d) Soluble salt content not greater than 500 ppm.

2. Before delivery, collect soil samples for every 5,000 cubic yards of topsoil provided by Developer.

Grass seed used for the final soil cover shall meet the following general specifications:

1. Grass seed mixture: Provide fresh, clean, new-crop seed complying with the tolerance for purity and germination established by the Official Seed Analysts of North America. Provide seed of the grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified.

2. The entire ground surface disturbed by construction operations shall be seeded with 100 lbs/acre of seed conforming to the following:

Name of Grass	Application Rate (lbs/acre)	Purity (%)	Germination (%)
Perennial Ryegrass	10	95	85
Kentucky Bluegrass	20	85	75
Strong Creeping Red Fescue	20	95	80
Chewings Fescue	20	95	80

Hard Fescue	20	95	80
White Clover	10	98	75

(a) Germination and purity percentages should equal or exceed the minimum seed standards listed. If it is necessary to use seed with a germination percentage less than the minimum recommended above, increase the seeding rate accordingly to compensate for the lower germinations.

(b) Weed seed content not over 0.25 percent and free of noxious weeds.

(c) All seed shall be rejected if the label lists any of the following grasses:
1) Sheep Fescue
2) Meadow Fescue
3) Canada Blue
4) Alta Fescue
5) Kentucky 31 Fescue
6) Bent Grass

3. In addition to the seed mixtures listed above, one bushel per acre of oats or rye seed shall be sowed over the entire area, including drainage ditches, to provide a quick shade cover and to prevent erosion during turf establishment.

2.5 Erosion Controls

An important element of soil and fill management on this site is the mitigation and control of surface erosion from stormwater runoff. For this reason a Master Erosion Control Plan to be used by all developers has been developed and incorporated as Attachment A2.

2.6 Dust Controls

Particulate monitoring will be performed along the downwind occupied perimeter of subareas or parcels during subgrade excavation, grading and handling activities in accordance with the Community Monitoring Plan further detailed in Section 3.0.

Dust suppression techniques will be employed as necessary to mitigate fugitive dust from unvegetated or disturbed soil/fill to the extent practicable during post-remediation construction and redevelopment. Such techniques shall be employed even if the community air monitoring results indicate particulate levels are below action levels. Techniques to be

utilized may include one or more of the following:

- Applying water on haul roads.
- Wetting equipment and excavation faces.
- Spraying water on buckets during excavation and dumping.
- Hauling materials in properly tarped containers or vehicles.
- Restricting vehicle speeds on-site.
- Covering excavated areas and materials after excavation activity ceases.
- Reducing the excavation size and/or number of excavations.

All reasonable attempts will be made to keep visible and/or fugitive dust to a minimum.

2.7 Access Control

A 6-foot tall chain link fence currently surrounds a portion of the site. Additional construction fencing shall be temporarily erected and maintained as necessary by the building contractor to control access around utility trenches and other construction excavations.

2.8 Property Use Limitations

Requirements for surface coverage over the site and limitations placed on the type of buildings to be constructed are to be in accordance with all local building codes. An Environmental Easement (Appendix A) recorded with the Erie County Clerk shall bind Hydro-Air Components, Inc. and successors and assigns of the Site to abide by this S/FMP, other use restrictions, engineering and institutional controls, and operation, monitoring and maintenance measures to maintain the Site as protective of human health and the environment in accordance with the BCA and BCA Work Plan.

Certain stormwater system design criteria will also be required to be implemented during site development. In areas with known groundwater impacts, subsurface injection of storm water from building and parking area stormwater systems could mobilize additional contaminants. In these areas, stormwater injection (drywells) will be prohibited on the Site

and stormwater conveyance pipes will be required to have gasketed joints for water tightness to prevent the infiltration of impacted groundwater into the collection systems.

2.9 Notification and Reporting Requirements

The following minimum notification and reporting requirements shall be followed by the Site owner prior to and following further development of the Site, as appropriate:

- The NYSDEC and NYSDOH will be notified that subgrade activities are being initiated a minimum of 5 working days in advance of construction.
- A construction certification report stamped by a NYS-licensed Professional Engineer, will be prepared and submitted to the NYSDEC and NYSDOH within 90 days after development. At a minimum, the report will include:
    - An area map showing the parcel that was developed;
    - A map of the developed property showing actual building locations and dimensions, roads, parking areas, utility locations, berms, fences, property lines, sidewalks, green areas, contours and other pertinent improvements and features;
    - Plans showing areas and depth of fill removal;
    - Copies of daily inspection reports;
    - A text narrative describing the excavation activities performed, health and safety monitoring performed (both site specific and Community Air Monitoring), quantities and locations of soil/fill excavated, disposal locations for the soil/fill, soil sampling locations and results, a description of any problems encountered, location and acceptability test results for backfill sources, and other pertinent information necessary to document that the site activities were carried out properly;
    - Plans documenting the thickness of the clean soil cover system; and
    - A certification that all work was performed in conformance with the S/FMP.

- The owners of developed parcels shall complete and submit to the New York State Department of Environmental Conservation, an Annual Report by January 15th of the following year [or in accordance with the specific requirements of the Brownfield Cleanup Agreement (BCA)]. This report shall contain certification that the institutional controls put in place, pursuant to the Soil/Fill Management Plan, are still in place, have not been altered and are still effective.

2.10 Vapor Intrusion Controls

Extensive site investigation and characterization data have not detected the presence of chlorinated volatile organic compounds in site soil/fill or groundwater currently targeted by the New York State Health Department for vapor intrusion control. Volatile organic compounds consisting primarily of BTEX compounds have been remediated in the soil/fill and groundwater at the western end of the site as part of the tar-impacted soil fill remediation described in the Final Engineering Report.

Although the new manufacturing and office complex was constructed on the eastern half of the Site (where coke residuals removal and replacement with clean cover soils has already occurred), a sub-slab vapor depressurization system has been constructed and is being operated to address potential vapor intrusion concerns (refer to the Attachment 5 Operation, Maintenance, & Monitoring Plan included in the Site Management Plan for more information).

3.0 HEALTH AND SAFETY PROCEDURES

During redevelopment activities on the Site involving the disturbance of soils or fill, the developer shall be responsible for implementing suitable procedures to prevent both site construction workers and the community from adverse exposure to residual parameters of concern and other potential hazards posed by the redevelopment work. This will be accomplished through adherence to a written, parcel-specific worker Health and Safety Plan, prepared in accordance with the regulations contained in OSHA 29CFR 1910.120 and, where applicable, the attached Community Air Monitoring Plan.

Although remedial program activities completed to date are anticipated to reduce the potential for encountering parameters of concern above site-specific action levels, the redevelopment activities governed by this Soils Management Plan are a required element of the Brownfields Cleanup Agreement for the site. Thus, 29CFR 1910.120(a)(1)(iii) indicates that these activities are subject to OSHA's hazardous waste operations and emergency response (Hazwoper) standard. This includes the requirement for preparation and implementation of a site-specific worker Health and Safety Plan addressing the following items:

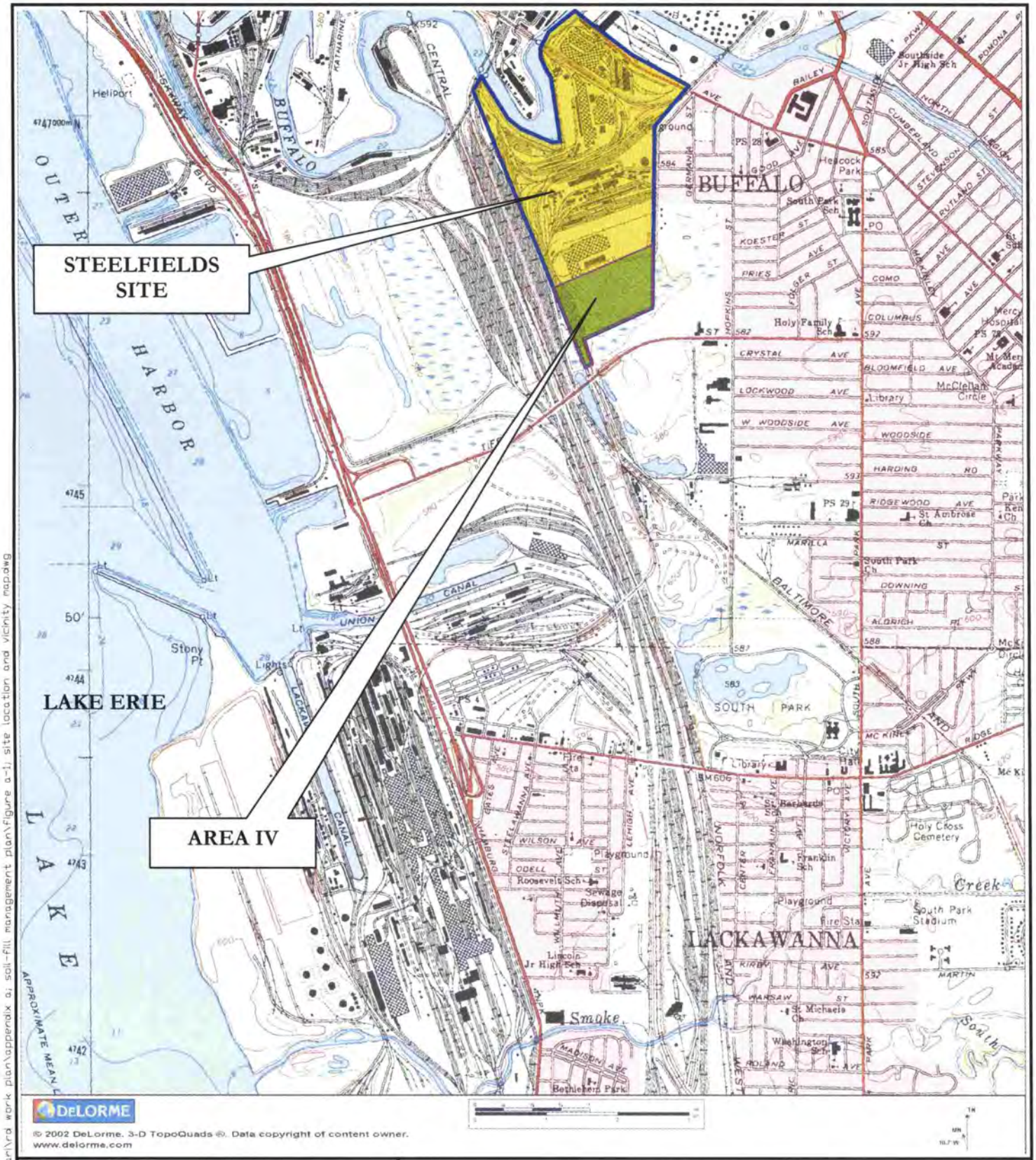
- A safety and health or hazard analysis for each site task and operation.
- Employee training requirements.
- Personal protective equipment (PPE) to be used by employees for the site tasks.
- Medical surveillance requirements.
- Frequency and type of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used, including methods of maintenance and calibration of equipment.
- Site control measures.
- Decontamination procedures.
- An emergency response plan.

- Confined space entry procedures.
- A spill containment program.

As an integral component of the worker HASP, the developer or site/parcel owner will be responsible for implementing a Community Air Monitoring Plan designed to prevent the surrounding community from adverse exposures due to potential release/migration of airborne particulates or vapors. The community as referenced herein includes potential receptors located off-site (e.g., neighboring residents or businesses) as well as on-site receptors not directly involved in redevelopment activities (e.g. businesses or contractors occupying the site prior to final redevelopment). The Community Air Monitoring Plan presented as Attachment A1 of this Report, will be implemented during redevelopment work involving disturbance or handling of Site fill soils. The Plan includes appropriate monitoring, mitigation and response measures consistent with NYSDOH and NYSDEC guidelines. The results of the Community Air Monitoring Plan must be documented to the NYSDEC as described in Section 4.3 of Attachment A1.

FIGURES

FIGURE A-1



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PROJECT NO.: 0107-001-100

DATE: APRIL 2006

DRAFTED BY: BCH

SITE LOCATION AND VICINITY MAP

SITE MANAGEMENT PLAN – PART II
STEELFIELDS AREA IV SITE
BUFFALO, NEW YORK

PREPARED FOR
HYDRO-AIR COMPONENTS, INC.

FILEPATH=\\cas\benchmark\Hydro-air\rd work plan\appendix a; soil-fill management plan\figure a-1; site location and vicinity map.dwg

ATTACHMENT A1

Community Air Monitoring Plan For Post Remediation-Redevelopment Activities

COMMUNITY AIR MONITORING PLAN
for
POST REMEDIATION AND REDEVELOPMENT AND ACTIVITIES

STEELFIELDS AREA IV (HYDRO-AIR) SITE
BUFFALO, NY

July 2007 0092-004-200

Prepared for:

Hydro-Air Components, Inc.

COMMUNITY AIR MONITORING PLAN FOR POST REMEDIATION AND REDEVELOPMENT ACTIVITIES

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1.0 INTRODUCTION

This Community Air Monitoring Plan (CAMP) presents requirements for real-time community air monitoring and responses following completion of voluntary cleanup activities at Area IV - the Former Donner Hanna Coke Storage Yard Site (hereafter referred to as the Site) located in Buffalo, NY. This plan is generally consistent with the requirements for community air monitoring at remediation sites as established by the New York State Department of Health (NYSDOH) and the New York State Department of Environmental Conservation (NYSDEC). It follows procedures and practices outlined under the NYSDOH's generic Community Air Monitoring Plan dated June 20, 2000 and NYSDEC Technical Assistance and Guidance Memorandum (TAGM) 4031: Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites.

This CAMP requires real-time monitoring for particulates (i.e., dust) only at the downwind perimeter of each designated work area when certain activities are in progress at the Site. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community from potential airborne contaminant releases as a direct result of redevelopment or post-remediation monitoring and maintenance activities. The community, as referenced in this document, includes off-site residences, public buildings and grounds, and commercial or industrial establishments on or adjacent to the site, including the Hickory Woods neighborhood (see Figure 1). The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, this CAMP helps to confirm that work activities did not spread contamination into the surrounding community.

2.0 MONITORING AND MITIGATION REQUIREMENTS

Real-time air monitoring for particulate levels and organic vapors at the perimeter of the work area will be necessary. Periodic monitoring will be required for all ground intrusive activities. Ground intrusive activities include, but are not limited to, subgrade soil/fill excavation, grading and handling, subgrade trench excavation and backfill.

"Periodic" monitoring will reasonably consist of taking at least one reading immediately following the installation of the above-referenced activities and taking at least one reading during intrusive activities. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include any subgrade excavation and backfilling within 100 feet of occupied structures or publicly-accessible locations.

2.1 Organic Vapors

VOCs must be monitored at the downwind perimeter of the site on a continuous basis or as otherwise specified throughout the site. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate.

The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the various action levels referenced in this section.

2.1.1 Vapor Emission Response Plan

If the ambient air concentration of total organic vapors at the downwind perimeter of the site exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background,

work activities can resume with continued monitoring.

If total organic vapor levels at the downwind perimeter of the site persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the site or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less (but in no case less than 20 feet), is below 5 ppm over background for the 15-minute average.

If the organic vapor level is above 25 ppm at the perimeter of the site, the Site Safety and Health Officer (SSHO) must be notified and work activities shut down. The SSHO will determine when re-entry of the work zone is possible and will implement downwind air monitoring to ensure vapor emissions do not impact the nearest off-site residential or commercial structure at levels exceeding those specified under the Major Vapor Emission Monitoring program described below. All 15-minute readings must be recorded and be available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Routine trips will be made into the surrounding community during construction activities to check for the presence of nuisance odors. If nuisance odors are determined to be pervasive in the surrounding community, construction activities will be halted or modified until odor mitigation measures are applied before resuming work.

2.1.2 Major Vapor Emission Monitoring

If the organic vapor level is greater than 5 ppm over background 200 feet downwind from the site or half the distance to the nearest off-site receptor (residential or commercial structure), whichever is less, all work activities must be halted. If, following the cessation of the work activities or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest off-site residential or commercial structure from the site perimeter, then the air quality must be monitored within 20 feet of the perimeter of the nearest off-site receptor (20-foot zone).

If efforts to abate the emission source are unsuccessful and if organic vapor levels

approach or exceed 5 ppm above background within the 20-foot zone for more than 30 minutes, or are sustained at levels greater than 10 ppm above background for longer than one minute, then the Major Vapor Emission Response Plan will automatically be placed into effect.

2.1.3 Major Vapor Emission Response Plan

Upon activation of Major Vapor Emission Response Plan, the following activities will be undertaken:

1. All Emergency Response Contacts as listed below and in the Site-Specific Health and Safety Plan will be contacted.

2. The local police authorities will immediately be contacted by the SSHO and advised of the situation.

3. Frequent air monitoring will be conducted at 30-minute intervals within the 20-foot zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the SSHO.

4. The SSHO will determine if site workers can safely undertake source abatement measures. Abatement measures may include covering the source area with clean fill or plastic sheeting, or consolidating contaminated materials to minimize surface area. The SSHO will adjust worker personal protective equipment as necessary to protect workers from over-exposure to organic vapors.

The following personnel are to be notified by the SSHO in the listed sequence if the Major Vapor Emission Response Plan is activated:

Contact	Phone
Police/Fire Department	911
NYSDOH	(716) 847-4502
NYSDEC	(716) 851-7220
State Emergency Response Hotline	(800) 457-7362

In addition, the SSHO will provide these authorities with a description of the apparent source of the contamination and abatement measures being taken by the contractor, if any.

2.2 Airborne Particulates

Fugitive dust suppression and airborne particulate monitoring shall be performed during any redevelopment or post-remediation activities involving disturbance or handling of site soil/fill. Fugitive dust suppression techniques will include the following minimum measures:

- Excavated stockpiles from post remediation site redevelopment activities that generate unacceptable dust levels, will be seeded, covered with synthetic materials (e.g., tarps, membranes, etc.), or watered, to reduce dust generation to acceptable levels.

- Stockpiles of soil/fill from post-remediation and redevelopment activities that are contaminated (i.e. are visually stained, discolored or produce elevated PID readings) and awaiting analytical results should be covered with tarps or poly membranes at the end of each day's work activities.

- All fill materials leaving the site will be hauled in properly covered containers or haul trailers.

Additional dust suppression efforts may be required as discussed below.

2.2.1 Particulate Monitoring

Particulate concentrations should be monitored at least periodically (i.e., not less than

two times per day) at the upwind and downwind perimeters of the work zone at temporary particulate monitoring stations during work activities. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (ug/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 ug/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 ug/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures, such as those described in Section 2.2.3 are employed and are successful in reducing the downwind PM-10 particulate concentration to within 150 ug/m^3 of the upwind level and in ;preventing visible dust migration.

2.2.2 Visual Assessment

In conjunction with the real-time monitoring program, the property owner(s) or their agents will be responsible for visually assessing fugitive dust migration from the site. If airborne dust is observed leaving undeveloped portions of the Former Steel Manufacturing Site property (i.e., migrating onto off-site parcels or redeveloped areas of the site), the work will be stopped and supplemental dust suppression techniques will be employed.

2.2.3 Supplemental Dust Suppression

Supplemental dust suppression techniques may include but are not necessarily limited to the following measures:

- Reducing the excavation size, number of excavations or volume of material

handled.

- Restricting vehicle speeds.
- Applying water on buckets during excavation and dumping.
- Wetting equipment and excavation faces.
- Wetting haul roads.
- Restricting work during extreme wind conditions.
- Use of a street sweeper on paved haul roads, where feasible.

Work can resume using supplemental dust suppression techniques provided that the measures are successful in reducing the downwind particulate concentration to below 150 ug/m^3 or 100 ug/m^3 above background, and in preventing visible dust migration off-site.

3.0 MONITORING EQUIPMENT

3.1 Particulate Monitoring Equipment

Particulate monitoring will be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

Size Range:	<0.1 to 10 microns
Sensitivity:	1 ug/m^3
Range:	0.001 to 10 mg/m^3
Overall Accuracy:	+/- 10% as compared to gravimetric analysis of stearic acid or reference dust
Battery Rating:	8-hour continuous operation
Operating Conditions:	
Temperature:	0-40°C
Humidity:	0-99% relative humidity

The device will be fitted with a microprocessor capable of calculating 15-minute moving average concentrations. An adjustable audible alarm will be provided to indicate exceedance of the action levels prescribed in Section 2.2.

3.2 Weather Station Equipment

A portable meteorological station will be utilized to record wind speed, direction, temperature, relative humidity and barometric pressure. Weather station parameters will be verified on a routine basis throughout the workday.

4.0 QA/QC REQUIREMENTS

Quality Assurance/Quality Control (QA/QC) requirements for the particulate meter and organic vapor monitoring equipment include instrument calibration, training, and documentation/record keeping.

4.1 Instrument Calibration

Instrument calibration shall be performed in accordance with the manufacturer's instructions at the beginning of each workday. Following calibration and initial (upwind) measurement of background conditions, audio alarms shall be set so as to activate at the appropriate action levels based on a 15-minute moving average (i.e., short term exposure limit) concentration.

4.2 Training

All persons responsible for calibrating, handling and/or interpreting the meters or meter output data should be experienced with such work. As a minimum, the following training and experience will be required:

- 40-hour OSHA Hazwoper Training per 29 CFR 1910.120(e)(3) and 1910.120(e)(8).
- 8 hour supervisory training, in compliance with 29 CFR 1910.120(e)(4).
- Site-specific training, as required by the Site Health and Safety Plan.
- A minimum 40-hours field experience in the operation of same or similar equipment.

The Site Safety and Health Officer will designate the person(s) responsible for performing air-monitoring work. Construction activities involving disruption or handling of site fill soils will not be performed unless a qualified individual is available on site to perform the community air monitoring specified in this document.

4.3 Documentation and Reporting

Documentation of community air monitoring information will be required to provide written record of the air monitoring results and response actions taken, and to allow for verification that the program was followed in accordance with this Community Air Monitoring Plan. Monitoring information will be recorded on forms presented in Attachment A1-1 or on similar loose-leaf forms to facilitate photocopying. The following documentation schedule will be followed during typical site conditions (i.e., organic vapor and particulate concentrations below action levels).

Item	Documentation Schedule
Instrument Calibration Results	Whenever calibration is performed (minimum once daily).
Background Monitoring Results	At beginning of work day and once every 4 hours thereafter.
Downwind Monitoring Results (15-minute moving average)	Hourly

All documentation records will be maintained in the project file for inspection by the NYSDEC and/or the NYSDOH upon request. NYSDEC will be provided copies of the monitoring results recorded during voluntary cleanup activities as part of close-out reporting for the site. Monitoring results recorded during redevelopment activities will be maintained and furnished to NYSDEC upon substantial completion of the redevelopment project.

During the redevelopment period, NYSDEC and NYSDOH will be contacted if will be contacted in writing within 5 days of exceeding the 150 ug/m3 respirable dust action level. These notifications will include a description of the control measures implemented to prevent further exceedances.

ATTACHMENT A1-1

Community Air Monitoring Documentation Forms

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

COMMUNITY AIR MONITORING DAILY LOG

Date:
Project:
Job No.:
Client:

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

DESCRIPTION OF SITE ACTIVITIES:

WEATHER CONDITIONS:

Time of Day:	A.M.	P.M.
Ambient Air Temp.:		
Wind Direction:		
Wind Speed:		
Precipitation:		

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]					
Exceedence of 150 ug/m3 [1]					
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]					Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]					Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]					Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: Date:
Checked By: Date:

ATTACHMENT A2

Master Erosion Control Plan

MASTER EROSION CONTROL PLAN
for
HYDRO-AIR COMPONENTS, INC.
SITE

BUFFALO, NY

November 2007 0092-004-200

Prepared for:

HYDRO-AIR COMPONENTS, INC.

MASTER EROSION CONTROL PLAN
FORMER STEEL MANUFACTURING SITE

Table of Contents

1.0 INTRODUCTION

1.1 Background

In October, 2002 Steelfields Ltd. purchased several vacant industrial properties in South Buffalo, New York (See Figure 1-1 and Figure 1-2) out of bankruptcy from the LTV Steel Company and Hanna Furnace Corporation (a wholly owned subsidiary of the National Steel Corporation). At the same time, Steelfields entered into a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC). Pursuant to the VCA, NYSDEC approved a Work Plan for Voluntary Cleanup Program Remedial Design/Remedial Action for the Former Steel and Coke Manufacturing Site prepared by TurnKey Environmental Restoration, LLC, dated September 2002 (VCA Work Plan) on December 27, 2002.

In August of 2006, Hydro-Air Components, Inc. purchased from Steelfields approximately 30.9 acres of the property that is subject to the VCA Work Plan, the parcel known as Area IV – Former Donner-Hanna Coke Yard Parcel (Area IV or Site). Hydro-Air entered into a Brownfields Cleanup Agreement (BCA) with NYSDEC on August 21, 2006 to continue to completion the remedial program activities on Area IV that had been commenced under the VCA Work Plan. Pursuant to the BCA, NYSDEC approved a Remedial Design Work Plan for Steelfields Area IV (Hydro-Air) Site dated September 2006, as amended (BCA Work Plan).

In September, 2007, Hydro-Air submitted to NYSDEC a Final Engineering Report documenting the completion of the remedial program construction activities in accordance with the BCA Work Plan and documenting the institutional controls, engineering controls and operation, monitoring and maintenance measures that will maintain the Site as protective of the environment and human health.

1.2 Purpose and Scope

A Soil/Fill Management Plan (S/FMP) was prepared as part of the RD/RA Work Plan that describes protocols for the proper handling of site soil/fill during development activities. The property owner at the time of development will be responsible for all monitoring, implementation and reporting requirements of the S/FMP.

Since erosion control will be a critical component of preventing the potential migration of contaminants onto developed property or off-site during development of the site, this Master Erosion Control Plan (MECP) was prepared to provide guidance to developers during build-out activities on the properties. This MECP is a critical component of the S/FMP. This document is generic in nature and provides minimum erosion control practices to be utilized by site owners and/or developers. More specific plans for each parcel may be developed by the property owner(s) after the long-term development approach for each property has been determined.

2.0 GENERAL PERMIT REQUIREMENTS

Redevelopment of the Site will be in accordance with the S/FMP and Voluntary Cleanup Agreement. Since development activities will disturb more than five acres of land, the Federal Water Pollution Control Act (as amended, 33 U.S.C. 1251 et.seq.), and the New York State Environmental Conservation Law (Article 17, Titles 7 and 8, and Article 70) require that the project developer obtain coverage under the NYS Department of Environmental Conservation SPDES General Permit for Storm Water Discharges from Construction Activities that are classified as "Associated with Industrial Activity", Permit #GP-93-06 (Construction Storm Water General Permit).

Requirements for coverage under the general permit includes the submittal of a Notice of Intent form and the development of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must fulfill permit requirements and should be prepared in accordance with "Chapter Four: The Storm Water Management and Erosion Control Plan" in *Reducing Impacts of Storm Water Runoff from New York Development, NYSDEC, 1992*. The

Notice of Intent application form and the text of the Construction Storm Water General Permit are provided in Attachment A2-1.

A complete Storm Water Management and Erosion Control Plan (SWM & ECP) should provide the following information:

- A background discussion of the scope of the construction project;
- A statement of the storm water management objectives;
- An evaluation of post-development runoff conditions;
- A description of proposed storm water control measures; and
- A description of the type and frequency of maintenance activities required to support the control measure.

The Plan should be parcel-specific and address issues such as erosion prevention, sedimentation control, hydraulic loading, pollutant loading, ecological protection, physical site characteristics that impact design, and site management planning. Descriptions of proposed features and structures at the site should include a description of drainage structure placement, supporting engineering data and calculations, construction scheduling, and references to established detailed design criteria.

3.0 POTENTIAL EROSION AND SEDIMENT CONTROL CONCERNS

Following remediation of individual parcels, redevelopment activities will proceed for commercial and light industrial uses of the properties. Parcel-specific design measures regarding erosion and sediment control measures will need to be determined at that time after the development approach for each area of the site has been determined.

Potential areas and items of concern during site re-development activities include the following:

- All portions of the site not covered by buildings, sidewalks, roadways, parking areas, or other structures will be required to be covered with 6"-12" of "clean" soils to limit exposure to remaining subsurface soil/fill materials. The transportation and placement activities associated with this work will require erosion and sediment controls to prevent the surface soil from being washed off the area being developed.

- Remediated areas or off-site properties adjacent to unremediated parcels need protection so they do not become impacted by site operations.

- Storm water inlets will require protective measures to limit sediment transfer to storm sewers.

- Runoff from soil stockpiles will require erosion controls.

- Surface slopes need to be minimized as much as practical to control sediment transfer.

- Soil/fill excavated during development will require proper handling and disposal.

4.0 EROSION AND SEDIMENT CONTROL MEASURES

4.1 Background

Standard soil conservation practices need to be incorporated into the construction and development plans to mitigate soil erosion damage, off-site sediment migration, and water pollution from erosion. These practices combine vegetative and structural measures, many of which will be permanent in nature and become part of the completed project (ie. drainage channels and grading). Other measures will be temporary and serve only during the construction stage. Selected erosion and sediment control measures will meet the following criteria:

- Minimize erosion through project design (maximum slopes, phased construction, etc.)

- Incorporate temporary and permanent erosion control measures; and

- Remove sediment from sediment-laden storm water before it leaves the site.

4.2 Temporary Measures

Temporary erosion and sedimentation control measures and facilities will be utilized during construction. They will be installed by the site Developer and will be maintained until they are either no longer needed or until such time as permanent measures are installed and become effective. At a minimum, the following temporary measures will be used:

- Silt fencing
- Straw/hay bales
- Temporary vegetation/mulching
- Temporary sedimentation basins
- Cautious placement, compaction and grading of stockpiles

4.2.1 Silt Fencing

Construction and regrading activities will result in surface water flow to drainage ditches and swales, storm sewers, the Buffalo River, and adjacent properties. Silt fencing will be the primary sediment control measure used in these areas. Prior to extensive soil excavation or grading activities, silt fences will be installed along the perimeter of all construction areas. The orientation of the fencing will be adjusted as necessary as the work proceeds to accommodate changing site conditions.

Intermediate fencing will be utilized upgradient of the perimeter fencing to help lower surface water runoff velocities and reduce the volume of sediment to perimeter fencing. Stockpiles will also be surrounded with silt fencing.

As sediment collects, the silt fences will be cleaned as necessary to maintain their integrity. Removed sediment will be utilized elsewhere on-site as general fill. All perimeter silt fences will remain in place until construction activities in an area are completed and

vegetative cover has been established. Silt fences will be installed in accordance with the details presented in Attachment A2-2.

4.2.2 Straw and/or Hay Bales

Straw and/or hay bales will be used to intercept sediment laden storm water runoff in drainage channels during construction. The use of either hay or straw will be based on the availability of materials at the time of construction.

Bales will be placed in swales and ditches where the anticipated flow velocity is not expected to be greater than 5 feet/second (fps). Intermediate bales will be placed upgradient of the final barrier to reduce flow velocities and sediment loadings where higher velocities are anticipated.

As with silt fencing, sediment will be removed as necessary from behind the bales and disposed of on-site. Bales that have become laden with sediment or that have lost their structural integrity or effectiveness due to the weather will be replaced. Bales should be installed in accordance with the details presented in Attachment A2-2.

4.2.3 Temporary Vegetation and Mulching

Due to the extensive nature of the planned site remediation activities and the anticipated project schedule, development of the site is expected to occur in phases as the remediation proceeds. As a result, intermediate areas where development activities will not occur or resume for an extended period of time (greater than 90 days) will be seeded with a quick germinating variety of grass or covered with a layer of mulch to control fugitive dust and erosion. Soil/fill stockpiles that will not be utilized for an extended period of time will also vegetated or covered.

4.2.4 Temporary Sedimentation Basins

Temporary sedimentation basins will be constructed as necessary upgradient of storm water inlets to reduce the volume of sediment laden runoff from the site. The basins can be as simple as a small excavated area along the alignment of a storm water ditch or as elaborate as a full-scale sedimentation basin with outlet structures designed for certain storm events from a given area of the site. The basins will be cleaned as necessary and the removed sediment utilized elsewhere on-site as subgrade fill material.

4.2.5 Cautious Placement of Stockpiles

As development occurs, excavation activities will produce stockpiles of soil and subgrade fill materials. Careful placement and construction of stockpiles will be required to control erosion. Stockpiles will be placed no closer than fifty feet from the Buffalo River, storm water inlets and parcel boundaries. Additionally, stockpiles will be graded and compacted as necessary for positive surface water runoff and dust control.

4.3 Permanent Control Measures During Site Redevelopment

Permanent erosion and sedimentation control measures and structures will be installed as soon as practical during construction for long-term erosion protection. Since the detailed development approach for the site has not been determined, specific design features are yet to be selected. Examples of permanent erosion control measures could include:

- Utilizing maximum slopes in erosion prone areas (ie. along the Buffalo River) to limit erosion.
- Minimizing the potential contact with, and migration of, subsurface soil/fill through the placement of a "clean" soil cover system in all areas not covered with structures, roads, parking areas, sidewalks, etc.
- Construction of permanent storm water detention ponds where appropriate.

- Planting and maintaining vegetation.
- Limiting runoff flow velocities to the extent practical.
- Lining collection channels with riprap, erosion control fabric, vegetation, or similar materials.

5.0 CONSTRUCTION MANAGEMENT PRACTICES

5.1 General

The following general construction practices should be evaluated for erosion and sedimentation control purposes during site development activities:

- Clearing and grading only as much area as is necessary to accommodate the construction needs to minimize disturbance of areas subject to erosion (ie. phasing the work).
- Covering exposed or disturbed areas of the site as quickly as practical.
- All erosion and sediment control measures should be installed prior to disturbing the site subgrade.
- Both on-site and off-site tracking of soil by vehicles should be minimized by utilizing routine entry/exit routes.

5.2 Monitoring, Inspection and Maintenance

All erosion and sedimentation controls described in this Plan will be inspected by a qualified representative of the site developer within 24 hours of a heavy rainfall event and repaired or modified as necessary to effectively control erosion of turbidity problems. Inspections should include areas under construction, stockpile areas, erosion control devices (ie. silt fences, hay bales, etc.) and locations where vehicles enter and leave the site. Routine inspections of the entire site should also be made on a monthly basis during development.

If inspections indicate problems, corrective measures should be implemented within 24 hours. A report summarizing the scope of the inspection, name of the inspector, date, observations made, and a description of the corrective actions taken should be completed. Examples of inspection forms to be completed are included in Attachment A2-3.

ATTACHMENT A2-1
NYSDEC SPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

1. Notice of Intent
2. Notice of Termination
3. NYSDEC SPDES General Permit For Storm Water Discharges from Construction

4286041005

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR ☐☐☐☐☐☐ (for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-02-01

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required. To properly complete this form, please refer to the Instruction Manual which can be accessed at http://www.dec.ny.gov/docs/water_pdf/instr_man.pdf

-IMPORTANT-

THIS FORM FOR HANDPRINT ONLY

RETURN THIS FORM TO THE ADDRESS ABOVE

PRINT CAPITAL LETTERS IN BLACK INK AND AVOID CONTACT WITH THE EDGE OF BOXES
FILL IN CIRCLES COMPLETELY AND DO NOT USE CHECKMARKS
OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

Owner/Operator Contact Person First Name

Owner/Operator Mailing Address

City

State Zip -

Phone (Owner/Operator) - -

Fax (Owner/Operator) - -

Email (Owner/Operator)

Location Information

Project Site Information

Project/Site Name

Street Address (NOT P.O. BOX)

City/Town/Village (THAT ISSUES BUILDING PERMIT)

State: N Y

Zip: ____ - ____

County

DEC Region (if known)

Name of Nearest Cross Street

Distance to Nearest Cross Street (Feet)

Direction to Nearest Cross Street

○ **North** ○ **South** ○ **East** ○ **West**

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you **must** go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.state.ny.us/website/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site go to the dropdown menu on the left and choose "Get Coordinates". Click on the center of your site and a small window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)

Y Coordinates (Northing) 4

2. What is the nature of this construction project?

○ **New Construction**

○ **Redevelopment with increase in imperviousness**

○ **Redevelopment with no increase in imperviousness**

Project Site Information

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use

- ○ FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ SUBSURFACE UTILITY
- ○ PARKING LOT
- ○ OTHER

OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME — Number of Lots
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ OTHER

OTHER

4. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law ? ○ **Yes** ○ **No**

5. Is this a project which does not require coverage under the General Permit (e.g. Project done under an Individual SPDES Permit, or department approved remediation)? ○ **Yes** ○ **No**

6. Is this property owned by a state authority, state agency or local government? ○ **Yes** ○ **No**

7. In accordance with the larger common plan of development or sale; enter the total project site acreage, the acreage to be disturbed and the future impervious area (acreage)within the disturbed area. Round to the nearest tenth of an acre.

Total Site Acreage	**Acreage To Be Disturbed**	**Existing Impervious Area Within Disturbed**	**Future Impervious Area Within Disturbed**
.	.	.	.

8. Will there be more than 5 acres disturbed at any given time? ○ **Yes** ○ **No**

9. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

A	**B**	**C**	**D**
%	%	%	%

10. Is this a phased project? **(if yes, The SWPPP must address all planned phases)** * ○ Yes ○ No

11. Enter the planned start and end dates of the disturbance activities

Start Date __/__/____ - **End Date** __/__/____

Receiving System(s)

12. Provide the name of the nearest, natural, classified surface waterbody(ies) into which construction site runoff has the potential to discharge.

For Questions 13 and 14 refer to the Instruction Manual for a subset of 303(d) segments and TMDL watersheds subject to Condition A of the permit. These waterbodies and watersheds have been identified for regulation within the stormwater program due to some level of impairment by nutrients, silt or sediment. The Instruction Manual can be accessed at www.dec.state.ny.us/website/dow/toolbox/instr_man.pdf

13. Has the surface waterbody(ies) in question 12 been identified as a 303(d) segment? * ○ Yes ○ No

14. Is this project located in a TMDL Watershed? * ○ Yes ○ No

***NOTE: If you answered Yes to either question 13 or 14, Pursuant to Part I.D.3.(b) of the permit, you must have your SWPPP prepared and certified by a licensed/certified professional and the SWPPP is subject to a 60-business day review.**

15. Does the site runoff enter a separate storm sewer system- including roadside drains, swales, ditches, culverts, etc? **(if no, skip question 16)** ○ Yes ○ No ○ Unknown

16. What is the name of the municipality/entity that owns the separate storm sewer system?

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ Yes ○ No ○ Unknown

Stormwater Pollution Prevention Plan (SWPPP)

18. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book) ?

○ Yes ○ No*

19. Does this construction activity require the development of a SWPPP that includes Water Quality and Quantity Control components (Post-Construction Stormwater Management Practices) **If no, Skip question 20**

○ Yes ○ No

20. Have the Water Quality and Quantity Control components of the SWPPP been developed in comformance with the current NYS Stormwater Management Design Manual ?

○ Yes ○ No*

NOTE: If you answered no to question 18 or 20, Pursuant to Part I.D.3.(b) of the permit, you must have your SWPPP prepared and certified by a licensed/certified professional and the SWPPP is subject to a 60-business day review. Please provide further details in the details/comment section on the last page of this form.

21. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ○ **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer Information
(if different from Owner/Operator info)

SWPPP Preparer

Contact Name (Last, Space, First)

Mailing Address

City

State Zip -

Phone - - Fax - -

Email

Stormwater Pollution Prevention Plan (SWPPP)

Erosion and Sediment Control Practices

22. Has a construction sequence schedule for the planned management practices been prepared? ○ Yes ○ No

23. Select **all** of the erosion and sediment control practices that will be employed on the project site.

Temporary Structural

- ○ Check Dams
- ○ Construction Road Stabilization
- ○ Dust Control
- ○ Earth Dike
- ○ Level Spreader
- ○ Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ○ Sediment Basin
- ○ Sediment Traps
- ○ Silt Fence
- ○ Stabilized Construction Entrance
- ○ Storm Drain Inlet Protection
- ○ Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ○ Temporary Stormdrain Diversion
- ○ Temporary Swale
- ○ Turbidity Curtain
- ○ Water bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Other

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ○ Grassed Waterway
- ○ Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ○ Seeding
- ○ Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ○ Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ○ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ○ Retaining Wall
- ○ Riprap Slope Protection
- ○ Rock Outlet Protection
- ○ Streambank Protection

Stormwater Pollution Prevention Plan (SWPPP)

Water Quality and Quantity Control

Important:Completion of Questions 24-30 is not required if the project:

Disturbs less than 5 acres and is planned for single-family residential homes(including subdivisions) or construction on agricultural property and does not have a discharge to a 303(d) water or is not located within a TMDL watershed.

Additionally, sites where there will be no future impervious area within the disturbed area and that do not have a change(pre to post development)in hydrology do not need to complete questions 24-30.

24. Indicate **all** the permanent Stormwater Management Practice(s) that will be installed on this site

Post Construction Stormwater Management Practices

Ponds

- ○ **Micropool Extended Detention (P-1)**
- ○ **Wet Pond (P-2)**
- ○ **Wet Extended Detention (P-3)**
- ○ **Multiple Pond System (P-4)**
- ○ **Pocket Pond (P-5)**

Filtering

- ○ **Surface Sand Filter (F-1)**
- ○ **Underground Sand Filter (F-2)**
- ○ **Perimeter Sand Filter (F-3)**
- ○ **Organic Filter (F-4)**
- ○ **Bioretention (F-5)**

Wetlands

- ○ **Shallow Wetland (W-1)**
- ○ **Extended Detention Wetland (W-2)**
- ○ **Pond/Wetland System (W-3)**
- ○ **Pocket Wetland (W-4)**

Infiltration

- ○ **Infiltration Trench (I-1)**
- ○ **Infiltration Basin (I-2)**
- ○ **Dry Well (I-3)**

Open Channels

- ○ **Dry Swale (O-1)**
- ○ **Wet Swale (O-2)**

○ **Other**

Describe other stormwater management practices not listed above or explain any deviations from the technicial standards. If the SWPPP does not conform to the technicial standards, the SWPPP must be prepared and certified by a licensed/certified professional and is subject to a 60-business day review.

Has a long term Operation and Maintenance plan for the post construction management practices been developed? ○ **Yes** ○ **No**

If Yes, Identify the entity responsible for the long term Operation and Maintenance

Stormwater Pollution Prevention Plan (SWPPP)
Water Quality and Quantity Control

25. Provide the total water quality volume required and the total provided for the site.

Total Water Quality Volume (WQv)

WQv Required ___.___ **acre-feet**

WQv Provided ___.___ **acre-feet**

26. Provide the following Unified Stormwater Sizing Criteria for the site.

Total Channel Protection Storage Volume (CPv) - Extended detention of post-developed 1 year, 24 hour storm event

CPv Required ___.___ **acre-feet**

CPv Provided ___.___ **acre-feet**

The need to provide for channel protection has been waived because

○ **Site discharges directly to fourth order stream or larger**

Total Overbank Flood Control Criteria (Qp) - Peak discharge rate for the 10 year storm

Pre-Development ___.___ **CFS**

Post-development ___.___ **CFS**

Total Extreme Flood Control Criteria (Qf) - Peak discharge rate for the 100 year storm

Pre-Development ___.___ **CFS**

Post-development ___.___ **CFS**

The need to provide for flood control has been waived because

○ **Site discharges directly to fourth order stream or larger**

○ **Downstream analysis reveals that flood control is not required**

IMPORTANT: For questions 27 and 28 impervious area should be calculated considering the project site and all offsite areas that drain to the post-construction stormwater management practice(s) (Total Drainage Area = Project Site + Offsite areas)

27. Pre-Construction Impervious Area - As a percent of the Total Drainage Area enter the percentage of the existing impervious areas before construction begins. ___ %

28. Post-Construction Impervious Area - As a percent of the Total Drainage Area enter the percentage of the future impervious areas that will be created/remain on the site after completion of construction. ___ %

29. Indicate the total number of permanent stormwater management practices to be installed ___

30. Provide the total number of stormwater discharge points from the site (include discharges to either surface waters or to seperate storm sewer systems) ___

Other Permits

31. Select any other DEC permits that are required for this project or ○ None

DEC Permits

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Other SPDES
- ○ Solid Waste
- ○ Stream Protection/Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers

Other

32. If this NOI is being submitted for the purpose of continuing coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned.

N Y R

Details/Comments

Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I also certify under penalty of law that this document and the corresponding documents were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction. and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name

MI

Print Last Name

Owner/Operator Signature

Date

/ /

9100215042

New York State Department of Environmental Conservation
Division of Water
Bureau of Water Permits, 4th Floor
625 Broadway, Albany, New York 12233-3505
Phone: (518) 402-8111 . **Fax:** (518) 402-9029
Website: www.dec.state.ny.us

NYR _____ (for DEC use only)

Notice of Intent or Termination

For Stormwater Discharges Associated with Industrial Activity under the State Pollutant Discharge Elimination System (SPDES) Multi-Sector General Permit GP-0-06-002

All Sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this Notice of Intent or Termination (NOIT) Form. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

"IMPORTANT - PRINT CAPITAL LETTERS USING BLACK INK. AVOID CONTACT WITH THE EDGE OF THE BOXES. FILL IN CIRCLES COMPLETELY AND DO NOT USE CHECK MARKS. OWNER/OPERATOR MUST SIGN FORM."

Owner/Operator Information

O/O Name

O/O Street Address

O/O City

O/O State N Y

O/O Zip -

Contact Information

Contact First Name

Contact Last Name

Contact Phone - -

Contact Fax - -

Contact eMail

0250215049

Facility Information

Facility Name

Facility Street Address

Facility City

Facility State N Y

Facility Zip -

Facility County

Name of Nearest Cross Street

Distance to Nearest Cross Street (feet)

Direction to Nearest Cross Street

○ **North** ○ **South** ○ **East** ○ **West**

---

1. Permit I.D Number (for renewals, modifications or terminations) **NYR**

2. Reason for Submittal:

   ○ Coverage for a new facility (not previously permitted)

   ○ Permit Renewal

   ○ Modification (There has been a change in information since the earlier submission)

   ○ Want to terminate general stormwater permit coverage

3. Provide the Geographic Coordinates for the facility in NYTM units.

   X Coordinates (Easting)

   4 Y Coordinates (Northing)

These coordinates can be obtained through the NYSDEC Stormwater Interactive Map on the DEC Website at: http://www.dec.state.ny.us/website/imsmaps/stormwater/viewer.htm
Directions: Go to the above website. Zoom into your project location such that you can accurately click on the center of your facility. Once you have located your facility, go to the drop-down menu on the left and choose "Get Coordinates". Click on the center of your facility and a small window containing the X, Y coordinates in NYTM units will pop up. Transcribe these coordinates into the spaces above. For problems with the interactive map, please try the help function.

4. Identify all applicable Industrial Activities from the Industrial Sectors shown below that are located within areas subject to the stormwater discharges covered under this permit. Check all that apply to your facility.

Sampling Notes	Mark all that apply	SIC Code or Activity Code	Activity Represented
		Sector A: Timber Products	
B,C	O	2411	Log Storage and Handling (Wet deck storage areas are only authorized if no chemical additives are used in the spray water or applied to the logs).
B	O	2421	General Sawmills and Planning Mills
B	O	2426	Hardwood Dimension and Flooring Mills
B	O	2429	Special Product Sawmills, Not Elsewhere
B	O	2431-2439 (except 2434 - see sector W)	Millwork, Veneer, Plywood, and Structural Wood.
B	O	2441, 2448, 2449	Wood Containers
B	O	2451, 2452	Wood Buildings and Mobile Homes
B	O	2491	Wood Preserving
B	O	2493	Reconstituted Wood Products
B	O	2499	Wood Products, Not Elsewhere Classified
		Sector B: Paper and Allied Products	
	O	2611	Pulp Mills
	O	2621	Paper Mills
B	O	2631	Paperboard Mills
	O	2652-2657	Paperboard Containers and Boxes
	O	2671-2679	Converted Paper and Paperboard Products, Except Containers and Boxes
		Sector C: Chemical and Allied Products	
B	O	2812-2819	Industrial Inorganic Chemicals.
B	O	2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass.
	O	2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; In Vitro and In Vivo Diagnostic Substances; Biological Products, Except Diagnostic Substances.
B	O	2841-2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations.
	O	2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products.
	O	2861-2869	Industrial Organic Chemicals.
B,C	O	2873-2879	Agricultural Chemicals.
	O	2891-2899	Miscellaneous Chemical Products.
	O	3952 (limited to list)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors.
		Sector D: Asphalt Paving and Roofing Materials and Lubricants	
B,C	O	2951, 2952	Asphalt Paving and Roofing Materials
	O	2992, 2999	Miscellaneous Products of Petroleum and Coal
		Sector E: Glass Clay, Cement, Concrete, and Gypsum Products	
	O	3211	Flat Glass
	O	3221, 3229	Glass and Glassware, Pressed or Blown
	O	3231	Glass Products Made of Purchased Glass
C	O	3241	Hydraulic Cement
B	O	3251-3259	Structural Clay Products
B	O	3261-3269	Pottery and Related Products
B,C	O	3271-3275	Concrete, Gypsum and Plaster
	O	3281	Cut Stone and Stone Products
	O	3291-3299	Abrasive, Asbestos, and Miscellaneous Non-metallic Mineral Products

Sampling Notes	Mark all that apply	SIC Code or Activity Code	Activity Represented
		Sector F: Primary Metals	
B	O	3312-3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills
B	O	3321-3325	Iron and Steel Foundries
	O	3331-3339	Primary Smelting and Refining of Nonferrous Metals
	O	3341	Secondary Smelting and Refining of Nonferrous Metals
B	O	3351-3357	Rolling, Drawing, and Extruding of Nonferrous
B	O	3363-3369	Nonferrous Foundries (Castings)
	O	3398, 3399	Miscellaneous Primary Metal Products
		Sector G: Metal Mining (Ore Mining and Dressing)	
B	O	1011	Iron Ores
B	O	1021	Copper Ores
B	O	1031	Lead and Zinc Ores
B	O	1041, 1044	Gold and Silver Ores
B	O	1061	Ferroalloy Ores, Except Vanadium
B	O	1081	Metal Mining Services
B	O	1094, 1099	Miscellaneous Metal Ores
		Sector H: Coal Mines and Coal Mining Related Facilities	
		Sector I: Oil and Gas Extraction and Refining	
B	O	1311	Crude Petroleum and Natural Gas
B	O	1321	Natural Gas Liquids
B	O	1381-1389	Oil and Gas Field Services
B	O	2911	Petroleum Refineries
		Sector J: Mineral Mining and Dressing	
B	O	1411	Dimension Stone
B,C	O	1422-1429	Crushed and Broken Stone, Including Rip Rap
B,C	O	1442, 1446	Sand and Gravel
	O	1455, 1459	Clay, Ceramic, and Refractory Materials
	O	1474-1479	Chemical and Fertilizer Mineral Mining
B	O	1481	Nonmetallic Minerals Services, Except Fuels
B	O	1499	Miscellaneous Nonmetallic Minerals, Except Fuels
		Sector K: Hazardous Waste Treatment, Storage, or Disposal Facilities	
B,C	O	HZ	Hazardous Waste Treatment, Storage or Disposal
		Sector L: Land Fills and Land Application Sites	
B,C	O	LF	Landfills, Land Application Sites, and Open Dumps
		Sector M: Automobile Salvage Yards	
B	O	5015	Automobile Salvage Yards
		Sector N: Scrap Recycling Facilities	
B	O	5093	Scrap Recycling Facilities
B	O	4499 (limited to list)	Dismantling Ships, Marine Salvaging, and Marine Wrecking - Ships for Scrap
		Sector O: Steam Electric Generating Facilities	
B,C	O	SE	Steam Electric Generating Facilities

Sampling Notes	Mark all that apply	SIC Code or Activity Code	Activity Represented
		Sector P: Land Transportation and Warehousing	
B	O	4011, 4013	Railroad Transportation
B	O	4111-4173	Local and Highway Passenger Transportation
B	O	4212-4231	Motor Freight Transportation and Warehousing
B	O	4311	United States Postal Service
B	O	5171	Petroleum Bulk Stations and Terminals
		Sector Q: Water Transportation	
B	O	4412-4499 (except 4499 as specified in Sector N)	Water Transportation
		Sector R: Ship and Boat Building or Repairing Yards	
	O	3731, 3732	Ship and Boat Building or Repair Yards
		Sector S: Air Transportation	
B	O	4512-4581	Air Transportation Facilities
		Sector T: Treatment Works	
B	O	TW	Treatment Works
		Sector U: Food and Kindred Products	
	O	2011-2015	Meat Products
	O	2021-2026	Dairy Products
	O	2032-2038	Canned, Frozen and Preserved Fruits, Vegetables and Food Specialties
B	O	2041-2048	Grain Mill Products
	O	2051-2053	Bakery Products
	O	2061-2068	Sugar and Confectionery Products
B	O	2074-2079	Fats and Oils
	O	2082-2087	Beverages
	O	2091-2099	Miscellaneous Food Preparations and Kindred Products
	O	2111-2141	Tobacco Products
		Sector V: Textile Mills, Apparel, and Other Fabric Product Manufacturing, Leather and Leather Pruducts	
	O	2211-2299	Textile Mill Products
	O	2311-2399	Apparel and Other Finished Products Made From Fabrics and Similiar Materials
	O	3131-3199 (except 3111- see sector Z)	Leather and Leather Products, except Leather Tanning and Finishing
		Sector W: Furniture and Fixtures	
	O	2434	Wood Kitchen Cabinets
	O	2511-2599	Furniture and Fixtures
		Sector X: Printing and Publishing	
	O	2711-2796	Printing, Publishing, and Allied Industries
		Sector Y: Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries	
B	O	3011	Tires and Inner Tubes
B	O	3021	Rubber and Plastics Footwear
B	O	3052, 3053	Gaskets, Packing, and Sealing Devices and rubber and Plastics Hose and Belting
B	O	3061, 3069	Fabricated Rubber Products, Not Elsewhere Classified
B	O	3081-3089	Miscellaneous Plastics Products
	O	3931	Musical Instruments
	O	3942-3949	Dolls, Toys, Games and Sporting and Athletic Goods
	O	3951-3955	Pens, Pencils, and Other Artists' Materials
	O	3961, 3965	Costume Jewelry, Costume Noveltics, Buttons, and Miscellaneous Notions, Except Precious Metal
	O	3991-3999	Miscellaneous Manufacturing Industries

Sampling Notes	Mark all that apply	SIC Code or Activity Code	Activity Represented
		Sector Z: Leather Tanning and Finishing	
B	○	3111	Leather Tanning, Currying and Finishing
		Sector AA: Fabricated Metal Products	
B	○	3411-3499	Fabricated Metal Products, Except Machinery and Transportation Equipment
B	○	3911-3915	Jewelry, Silverware, and Plated Ware
		Sector AB: Transportation Equipment, Industrial or Commercial Machinery	
	○	3511-3599 (except 3571-3579 see Sector AC)	Industrial and Commercial Machinery (Except Computer and Office Equipment)
	○	3711-3799 (except 3731 & 3732 see Sector R)	Transportation Equipment (Except Ship and Boat Building and Repairing)
		Sector AC: Electronic, Electrical, Photographic, and Optical Goods	
B	○	3571-3579	Computer and Office Equipment
B	○	3612-3699	Electronic, Electrical Equipment and Components, Except Computer Equipment
B	○	3812-3873	Measuring, Analyzing and Controlling Instrument; Photographic and Optical Goods
		Sector AD & AE: Non-Classified Facilities/Storm Water Discharges Designated By the Board As Requiring Permits	
B	○	Sector AD	Other Storm Water Discharges Designated By the Department As Needing a Permit or Any Facility Discharging Storm Water Associated With Industrial Activity Not Described By Any of Sectors A-AC. Note: Facilities may not elect to be covered under Sector AD. Only the Department may assign a facility to Sector AD.
B	○	Sector AE	

Notes: B - Benchmark Monitoring Required
C - Compliance Monitoring for Point Source Category Effluent Limitations

5. Has a Stormwater Pollution Prevention Plan (SWPPP) been prepared for this facility in accordance with the requirements of the SPDES Multi-Sector General Permit? Please be advised that you cannot obtain coverage under this permit without having first prepared a SWPPP. ..... ○ Yes ○ No

6. For each stormwater discharge associated with industrial activity at your facility identify the outfall number (e.g., 001, 002, etc.); the four digit Standard Industrial Classification (SIC) codes or 2-letter Industrial Activity Codes that best represent the principal products or services rendered by the facility for that drainage area; and the acreage of industrial activity exposed to stormwater for each outfall (round to nearest tenth of an acre):

Outfall No.	Industrial Activities (SIC or 2-letter Codes) A	B	C	Acreage
1				.
2				.
3				.
4				.
5				.
6				.
7				.
8				.
9				.
			Total Acreage	.

(Note: SIC information can be obtained at the following web sites: http://www.osha.gov/pls/imis/sicsearch.html and http://www.softshare.com/tables/sic/. The 2-letter Industrial Activity Codes are: **HZ** - hazardous waste treatment, storage or disposal facilities; **LF** - landfills/disposal facilities that receive or have received any industrial waste; **SE** - steam electric power generating facilities; or **TW** - treatment works for treating domestic sewage.)

7. Does this facility have coal piles that are exposed to precipitation? .... ○ Yes ○ No

8. Does this facility discharge have salt piles that are exposed to precipitation? .... ○ Yes ○ No

9. Does this facility discharge stormwater from secondary containment areas for liquid bulk storage or transfer areas? .... ○ Yes ○ No

10. Is the facility subject to any of the following EPA Point Source Category Effluent Limitations?

- Runoff from material storage piles at cement manufacturing facilities (40 CFR Part 411 Subpart C)? .... ○ Yes ○ No

If yes, list Outfall Nos.

- Contaminated runoff from phosphate fertilizer manufacturing facilities (40 CFR Part 418 Subpart A)? .... ○ Yes ○ No

If yes, list Outfall Nos.

- Coal Pile runoff at steam electric power generating facilities (40 CFR Part 423)? .... ○ Yes ○ No

If yes, list Outfall Nos.

- Discharges resulting from spraydown or intentional wetting of logs at wet deck storage areas (40 CFR Part 429 Subpart I)? .... ○ Yes ○ No

If yes, list Outfall Nos.

- Mine dewatering discharges at crushed stone, construction sand and gravel, and industrial sand mines (40 CFR Part 436)? .... ○ Yes ○ No

If yes, list Outfall Nos.

- Runoff from asphalt emulsion facilities (40 CFR Part 443 Subpart A)? .... ○ Yes ○ No

If yes, list Outfall Nos.

- Runoff from landfills (40 CFR 445 Subpart A and B)? .... ○ Yes ○ No

If yes, list Outfall Nos.

11. Provide the name(s) of the surface waterbody(ies) into which site runoff will discharge:

12(a). Does site runoff enter a Municipal Separate Storm Sewer System including roadside drains, swales, ditches, culverts, etc.? .... ○ Yes ○ No

12(b). If yes, what is the name of the municipality/entity that owns the Municipal Separate Storm Sewer System?

13. Identify any other DEC Permits that are required for this facility:

○ Air Pollution Control	○ Stream Protection/Article 15
○ Coastal Erosion	○ Water Quality Certificate
○ Hazardous Waste	○ Dam Safety
○ Long Island Wells	○ Water supply
○ Mined Land Reclamation	○ Freshwater Wetlands
○ Other SPDES	○ Tidal Wetlands
○ Solid Waste	○ Wild, Scenic and Recreational Rivers

Other

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name (please print or type)

MI

Date

Owner/Operator Last Name (please print or type)

Signature

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

from

CONSTRUCTION ACTIVITY

Permit No. GP-02-01

Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: January 8, 2003 Expiration: January 8, 2008

William R. Adriance
Chief Permit Administrator

Address: NYS DEC
Div. Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

Authorized Signature

William R. Adriance

Date: January 8, 2003

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES
FROM CONSTRUCTION ACTIVITY

Preface

Pursuant to Section 402 of the Clean Water Act ("CWA"), stormwater discharges from certain construction activities to waters of the United States[1] are unlawful unless they are authorized by a NPDES (National Pollutant Discharge Elimination System) permit or by a state permit program. New York's SPDES (State Pollutant Discharge Elimination System) is a NPDES-approved program with permits issued in accordance with the Environmental Conservation Law ("ECL"). Discharges of pollutants to all other "Waters of New York State" such as groundwaters are also unlawful unless they are authorized by a SPDES permit.

A discharger, owner, or operator may[2] obtain coverage under this general permit by submitting a Notice of Intent ("NOI") to the Department. Copies of this General Permit and the NOI for New York are available by calling (518) 402-8109 or at any Department of Environmental Conservation (the Department) regional office (see Appendix A on Page 23). They are also available on the Department's website at:

www.dec.state.ny.us

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[1] "Waters of the United States" means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; and
(b) All interstate waters, including interstate "wetlands"; and
(c) All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
    (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    (3) Which are used or could be used for industrial purposes by industries in interstate commerce; and
(d) All impoundments of waters otherwise defined as waters of the United States under this definition; and
(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; and
(f) The territorial sea; and
(g) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal areas in wetlands) nor resulted from the impoundment of waters of the United States.

[2] "may" refers to circumstances under which the discharger is ineligible for coverage under this general permit because of other provisions of this permit. Dischargers which are excluded from coverage under this general permit as provided for in Part I, Section C, for example, are not authorized to discharge under this permit. This also applies to possible situations in which an NOI has been submitted and/or a regulatory fee paid pursuant to Article 72 of the ECL. The submittal of an NOI and/or regulatory fee has no bearing or relevance whatsoever on the eligibility of the construction activity discharging stormwater runoff under the authority of this permit.

Local Programs of a Regulated MS4

Under the federal Phase II stormwater program, many cities, villages, towns, and other public entities in New York State which are located within "Urbanized Areas" as defined by the U.S. Census and who operate a Municipal Separate Storm Sewer System ("MS4") will be required to obtain SPDES permit coverage for stormwater discharges under their jurisdiction and control (see 40CFR Part 122 §122.26.32). Additionally, MS4s may be designated by the Department as regulated MS4s. Among other requirements, the Phase 2 NPDES stormwater regulations require regulated MS4s to address stormwater runoff from construction activities. Construction activities covered under this general permit, which are subject to stormwater runoff controls of a regulated MS4, will also need to comply with the MS4's controls.

Five (5) Day Coverage

Prior to the submission of an NOI, the owner or operator must have completed a Storm Water Pollution Prevention Plan (SWPPP) that complies with all requirements of this general permit. Submitting an NOI is an affirmation that a SWPPP has been prepared and will be implemented. If an applicant certifies that the SWPPP has been developed in conformance with the Department's technical standards, the applied-for activity may obtain coverage under this general permit in five (5) business days after the Department's receipt of the NOI provided, that the activity is eligible for coverage under this general permit and that the Department has not informed the applicant otherwise.

Sixty (60) Day Coverage

While the Department's technical standards are appropriate statewide, it is recognized that there may be situations where stormwater management goals can best be met by alternative means that are more suitable given local conditions.

For construction projects in these situations, applicants must identify in their NOI each of the deviations from the Department's technical standards that they are seeking. Applicants must also explain why the deviations are needed or desired and what impacts to water quality, if any, can be expected if the deviation were allowed. Applicants must also explain the actions, if any, that local board(s) have taken with respect to the deviation(s). For applicants which cannot certify conformance with the Department's technical standards, the SWPPP must also be certified by a licensed/certified professional that the SWPPP has been developed in a manner which will insure compliance with water quality standards and with the substantive intent of this permit.

In cases of deviations from the Department's technical standards, applicants must allow sixty (60) business days after the receipt by the Department of a completed NOI and certification before gaining coverage under this general permit and before initiating any construction activity. During this 60 day period, the Department may conduct further review of the NOI and SWPPP. If additional information is needed to complete the review, the NOI will be considered

incomplete and the applicant will be so advised. The intent of this provision is to require conformance the Department's technical standards wherever possible and appropriate. At the same time, alternative means to address stormwater control may be allowed under this general permit where they are more suitable for the site in question and where they will not diminish water quality protection.

There are other scenarios under which coverage under this general permit will not occur until 60 business days from the receipt of a completed NOI. For example, if the construction activity or post construction runoff causes the discharge of a pollutant of concern to a water identified on the 303(d) list or a watershed with an approved TMDL for that pollutant of concern, coverage under the general permit will not occur until sixty (60) business days from the receipt by the Department of a completed NOI. For these projects the operator may be required to submit the SWPPP and/or appropriate certification(s) to the Department for review. The flowchart shown in Figure 1 on page vi will help to describe the process under which certain conditions exist that require possible further analysis and water quality/quantity considerations.

Computer Tool Available For Completion of SWPPPs and NOIs Under Development

The Department is currently developing an interactive computer software tool entitled "How to Prepare SWPPPs and Notices of Intent" to assist applicants in both developing SWPPPs and completing NOIs. This will be available in the near future for use on the Department website as well as being packaged independently on compact discs. This tool will contain guidance as well as many useful links to reference materials and documents concerning erosion and sedimentation control, as well as to the design of stormwater management practices . The Department's website will contain the latest information and guidance on the various tools available.

The Department's Technical Standards

The Department's technical standards for erosion and sediment control are contained in the document, *"New York Standards and Specifications for Erosion and Sediment Control"*[3] published by the Empire State Chapter of the Soil and Water Conservation Society. For the design of water quantity and water quality controls (post-construction stormwater control practices), the Department's technical standards are detailed in the *"New York State Stormwater Management Design Manual."* Both of these documents are available on the Department's website. If an applicant certifies that stormwater management practices will conform to the Department's technical standards, then coverage under the permit may occur sooner than otherwise would be the case if non-conformance with the manuals existed. See Figure 1 on page vi for more information.

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3 Previously, the *"New York Guidelines for Urban Erosion and Sediment Control"*, also commonly referred to as the "Blue Book".

Permit Valid for Any Size Disturbance

This permit may be used for construction activities involving any amount of disturbed acreage, provided that all other eligibility conditions in subsection B of Part I are satisfactorily met (see page 2 of this permit). Thus, this permit may apply to activities identified under 40 CFR Part 122, subsection 122.26(b)(14)(x) which are also referred to as "NPDES Phase 1 construction activities" involving soil disturbances of five (5) acres or more. This permit may also apply to activities identified under 40 CFR Part 122, subsection 122.26(b)(15) which are also referred to as "NPDES Phase 2 small construction activities" involving soil disturbances of between one (1) and five (5) acres. And, this permit may also apply to construction activities involving soil disturbances of less than one (1) acre if the Department determines that a SPDES permit is required pursuant to the ECL. In any and all cases, all of the eligibility provisions of this general permit must be met in order to gain coverage.

Notice of Termination

After construction is completed as defined in the general permit (see Part II beginning on Page 7), cancellation of coverage is accomplished by the submittal of a Notice of Termination ("NOT"). Failure to submit a NOT may result in the continued obligation to pay a yearly Regulatory Fee established pursuant to Article 72 of the ECL and/or may be cause for suspension of permit coverage.

Previous versions of NOIs, NOTs and Notices of Intent, Transfer and Termination ("NOITT"s) cannot be used in conjunction with this general permit. There is a new NOI required for obtaining coverage under this general permit. Failure to include information identified as "mandatory" entries on the new NOI form may prevent and/or delay discharge authorization being sought under this permit.

The new NOT will also include an identification of any permanent structures that are being left on the site after stabilization occurs and after termination of permit coverage under this general permit. The NOT will also include a certification that the structures were constructed as described in the SWPPP and that an Operation and Maintenance ("O&M") manual has been prepared and has been made available to the owner of such permanent structures who is expected to conduct the necessary O&M over the life of the structure(s).

Ineligible Activities

The submittal of a completed NOI and/or the payment of an annual regulatory fee by an applicant does not necessarily mean that an applicant is covered under this permit if the applicant is ineligible for coverage under this permit under the terms cited in Part I of this permit. In other words, submitting a completed NOI and paying an annual regulatory fee does not automatically gain an applicant permit coverage if the applicant is ineligible for coverage under this permit even if the Department fails to immediately inform the applicant of such ineligibility.

Permit Expiration Date

Coverage under this general permit is available January 8, 2003 and will expire five (5) years after issuance on January 8, 2008.

Activities Previously Covered Under GP-93-06

In a separate proposal, the Department is also concurrently seeking to re-issue GP-93-06 with an expiration of August 1, 2003. The purpose of this action is to provide a transition period for permittees which have had SPDES permit coverage under GP-93-06 immediately prior to January 8, 2003, the effective date of GP-02-01. **Prior to August 1, 2003**, these activities will need to:
(1) stabilize their sites in accordance with GP-93-06 and submit an NOT; or, if necessary,
(2) gain coverage under GP-02-01 by submitting a new NOI.

For **new** construction activities, coverage under GP-93-06 will not be available after the effective date of GP-02-01, January 8, 2003. Such discharges may be eligible for coverage under GP-02-01 (see Part I.B. on page 2 of this permit).

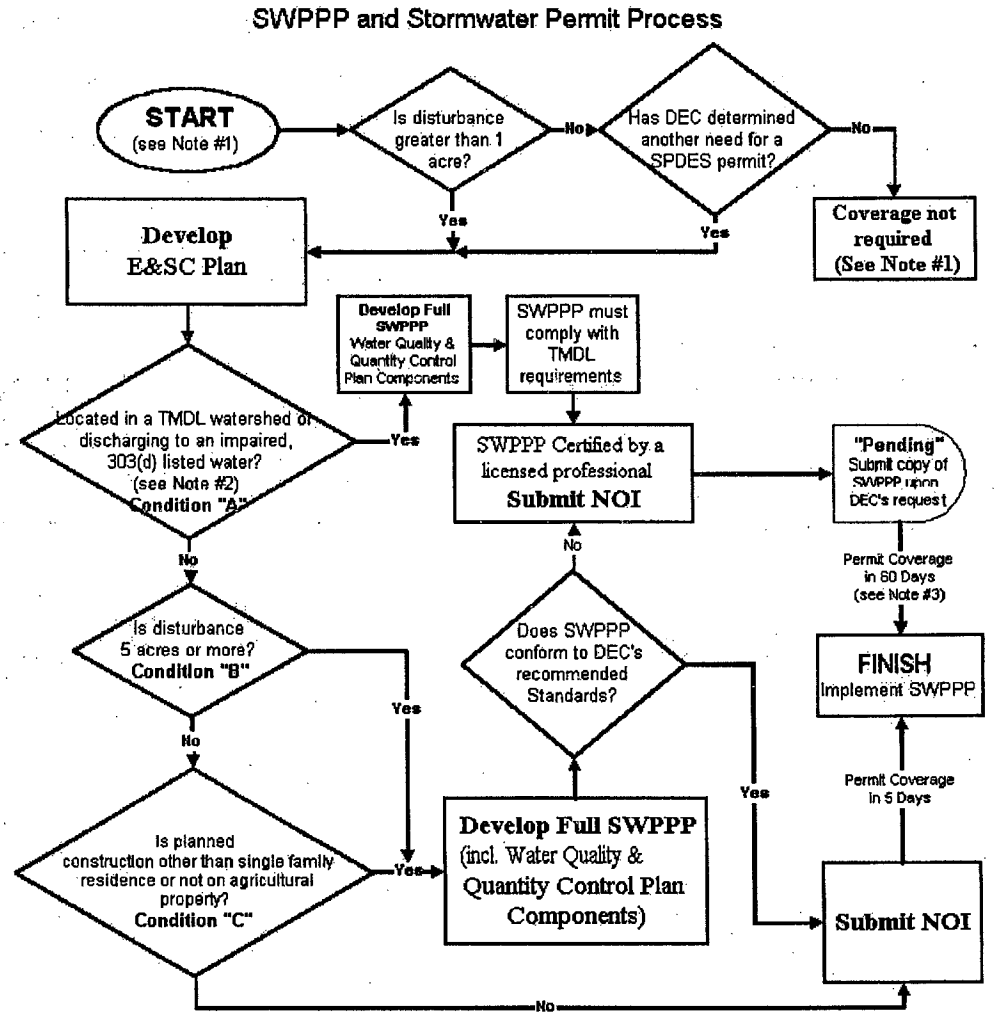
Water Quality Violations Not Permitted

This permit does not authorize any person to cause or contribute to a condition in contravention of any water quality standards that are contained in the Rules and Regulations of the State of New York (see Part I of this permit on page 2) even if the permittee is in compliance with all other provisions of this permit. Any violations of water quality standards may be considered by the Department to be violations of this permit and/or the ECL, including its accompanying regulations.

Other Department Permits

Construction activities may also require other Department permits in addition to the coverage provided by this general permit including, but not limited to, dam safety, wetlands and stream protection. Such other Department permits must be obtained separately from coverage under this general permit. Further information concerning these permits should be sought from the Regional Permit Administrator at the appropriate Department regional office (See Appendix A on page 23).

FIGURE 1



NOTES:

1. Under any of the above conditions other environmental permits may be required. DEC may require permit for construction disturbance < 1 acre on a case by case basis.
2. **and** the following exists: construction and/or stormwater discharges from the construction or post-construction site contain the pollutant of concern identified in the TMDL or 303(d) listing.
3. After receipt by DEC of completed application.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES

FROM CONSTRUCTION ACTIVITIES

TABLE OF CONTENTS

Part I. COVERAGE UNDER THIS PERMIT

A. **Maintaining Water Quality** - It shall be a violation of this general permit and the Environmental Conservation Law ("ECL") for any discharge authorized by this general permit to either cause or contribute to a violation of water quality standards as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York including, but not limited to:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;

2. There shall be no increase in suspended, colloidal and settleable solids that will cause deposition or impair the waters for their best usages; and

3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

B. **Eligibility Under This General Permit**

1. This permit may authorize all discharges of stormwater from construction activity[4] to surface waters and groundwaters except for ineligible discharges identified under subparagraph C of this Part (see below). Discharge authorization under this permit requires the submittal of a completed NOI.

2. Except for non-stormwater discharges explicitly listed in the next paragraph, this permit only authorizes stormwater discharges from construction activities.

3. Notwithstanding paragraphs B.1 and B.2 above, the following non-stormwater discharges may be authorized by this permit: discharges from fire

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[4] This includes discharges of stormwater associated with industrial activity identified under 40 CFR Part 122, subsection 122.26(b)(14)(x), small construction activities identified under 40 CFR Part 122, subsection 122.26(b)(15) or any other stormwater from construction activities that are not otherwise ineligible for coverage under this permit (See Part I, subsection B beginning on page 2).

fighting activities; fire hydrant flushings; waters to which cleansers or other components have **not** been added that are used to wash vehicles or control dust in accordance with the SWPPP, routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; and foundation or footing drains where flows are not contaminated with process materials such as solvents. For those entities required to obtain coverage under this general permit, and who discharge as noted in this paragraph, and with the exception of flows from fire fighting activities, these discharges must be identified in the SWPPP(see Part III beginning on Page 7). Under all circumstances, the permittee must still comply with water quality standards (see Part I, subsection A on Page 2).

C. **Activities Which Are Ineligible for Coverage Under This General Permit** - All of the following stormwater discharges from construction activities are **not** authorized by this permit:

1. Discharges after construction activities have been completed and the site has undergone final stabilization[5];

2. Discharges that are mixed with sources of non-stormwater other than those expressly authorized under subsection B.3. of this Part (see page 3) and identified in the SWPPP required by this permit;

3. Discharges that are subject to an existing SPDES individual or general permit or which are required to obtain an individual or alternative general permit pursuant to Part V, subparagraph K (see page 21) of this permit;

4. Discharges that are likely to adversely affect a listed, or proposed to be listed, endangered or threatened species, or its critical habitat;

5. Discharges which are subject to an existing effluent (limitation) guideline addressing stormwater and/or process wastewater unless said guidelines are contained herein; or

6. Discharges which either cause or contribute to a violation of water quality standards adopted pursuant to the ECL and its accompanying regulations (See subsection A of Part I on page 2).

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5 "Final Stabilization" means that all soil disturbing activities at the site have been completed, and that a uniform perennial vegetative cover with a density of 80% has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

D. **Authorization Under This General Permit**

1. An operator[6] must submit a completed NOI form in order to be authorized to discharge under this general permit. The NOI form shall be one which is associated with this general permit, signed in accordance with Part V. H.(see Page 19) of this permit and submitted to the address indicated on the NOI form. NOIs and NOITTs used in association with either previous or other general permits are not valid for obtaining coverage under this general permit. The submittal of an NOI is an affirmation to the operators' understanding and belief that the activity is eligible for coverage under this permit and that a SWPPP has been prepared and will be implemented in accordance with Part III of this permit.

2. All contractors and subcontractors of the operator identified under Part III.E.1 (see page 17) must provide the certification cited under Part III.E.2 (see page 17). Such certifications shall become part of the SWPPP for the construction activity covered under this general permit.

3. Unless notified by the Department to the contrary, operators who are eligible for coverage under this permit **and** who submit an NOI in accordance with the requirements of this permit, may be authorized to discharge stormwater from construction activities under the terms and conditions of this permit, and in accordance with the following timetable:

a. For construction activities which:

(1) develop a SWPPP in conformance with the Department's technical standards (See subsection D of Part III on page 10), and do not or will not discharge a pollutant of concern to an impaired water or a TMDL watershed;

or

(2) as of the effective date of this general permit, GP-02-01, have obtained coverage under, and are operating in compliance with, GP-93-06; and do not or will not discharge a pollutant of concern to an impaired water or a TMDL watershed;

authorization to discharge under this permit may occur five (5) business days after the date on which the NOI is received by the Department.

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6 For the purposes of this permit, the term "operator" means the person, persons, or legal entity which owns or leases the property on which the construction activity is occurring. Also, see Part V., subsection H. on page 19 of this permit.

b. For activities which do not comply with the preceding subsection (i.e. Part I.D.3.a.), authorization to discharge under this permit will begin no sooner than sixty (60) business days from the receipt of the completed NOI unless notified differently by the Department pursuant to Part V, subsection K of this permit (see page 21). For activities not satisfying Part I.D.3.a.(1) above, or for construction site runoff subject to a TMDL (see Figure 1 on page vi), the SWPPP must be prepared by a licensed/certified professional[7] and include a certification stating that the SWPPP has been developed in a manner which will assure compliance with water quality standards (see Part I.A.) and with the substantive intent of this permit.

c. For construction activities which are subject to a sixty-day period provision identified in the preceding subparagraph b., the SWPPP shall include each of the components identified in Part III.A.1.b. (see page 8).

4. At its sole discretion, the Department may deny or terminate coverage under this permit and require coverage under another SPDES permit at any time based on a review of the NOI, the SWPPP or other relevant information (see Part V, subsection K of this permit on page 21).

5. A copy of the NOI and a brief description of the project shall be posted at the construction site in a prominent place for public viewing.

6. A signed copy of the NOI, the SWPPP, and any reports required by this permit shall also be submitted concurrently to the local governing body and any other authorized agency[8] having jurisdiction or regulatory control over the construction project.

7. New stormwater discharges from construction activities that require any other Uniform Procedures Act permit (Environmental Conservation Law, 6 NYCRR Part 621) cannot be covered under this general permit until the other required permits are obtained. Upon satisfaction of the State Environmental Quality Review Act ("SEQRA") for the proposed action and issuance of necessary permits, the applicant may submit an NOI to obtain coverage under this general

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7 A "licensed/certified professional" means a person currently licensed to practice engineering in New York State or is a Certified Professional in Erosion and Sediment Control (CPESC).

8 For the purposes of this general permit, "any other authorized agency" shall include any local, regional, or state entity or agency except the Department which has authority to review stormwater discharge from the project, including authority under any approved watershed protection plan or regulations.

permit.[9] In order to facilitate the Department's review of a multi-permitted project, an applicant should submit, at a minimum, a copy of the SWPPP which contains the information specified in Appendix B (see page 24). This information will assist the Department in determining whether or not coverage under this general permit or another SPDES permit is the more appropriate option. The Department may also require the submission of additional information in order to determine the SWPPP's conformance with the Department's technical standards.

8. Upon renewal of this general permit or issuance of a new general permit, the permittee is required to notify the Department of its intent to be covered by the new general permit. Coverage will continue under this permit for its term unless action is taken to terminate permit coverage as provided elsewhere in this permit. See also Part V. subsection B. on page 18 of this permit.

9. In the event of a transfer of ownership or responsibility for stormwater runoff, there can be no "automatic" transfer of permit coverage from one permittee to the next without appropriate notification from the dischargers. The former permittee must submit an NOT and notify the new discharger of the possible need for the new discharger to submit a new NOI (see Section E, subparagraph 2 below).

E. **Deadlines for Notification**

1. Operators who intend to obtain coverage under this general permit for stormwater runoff from construction activities must submit an NOI in accordance with the requirements of this Part at least five (5), or sixty (60) business days, as appropriately determined from Part I, Section D.3 (see page 4) prior to the commencement of construction[10] activities.

2. For stormwater runoff from construction activities where the operator changes, a new NOI must be submitted by the new operator in accordance with the requirements of this permit. The former operator must submit a NOT in accordance with Part II (see page 7) of this permit and notify the new operator of the requirement to submit a new NOI to obtain coverage under this permit. The new operator must also review and sign the SWPPP in accordance with Part III.B.(see page 9) and continue implementation of the SWPPP as required by this

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9 The purposes of this subsection is to assure that the requirements of SEQRA are fulfilled, if necessary, before any discharge authorization under this general permit is granted.

10 "Commencement of Construction" means the initial disturbance of soils associated with clearing, grading, or excavating activities, or other construction activities.

permit.

Part II. TERMINATION OF COVERAGE[11]

Where a site has been finally stabilized, the operator must submit a NOT form prescribed by the Department for use with this general permit. The NOT shall be signed in accordance with Part V. H.(see page 19) of this permit and submitted to the address indicated on the approved NOT form.

The permittee must identify all permanent stormwater management structures that have been constructed and provide the owner(s) of such structures with a manual describing the operation and maintenance practices that will be necessary in order for the structure to function as designed after the site has been stabilized. The permittee must also certify that the permanent structure(s) have been constructed as described in the SWPPP.

Part III. STORMWATER POLLUTION PREVENTION PLANS ("SWPPP"s)

A. General

1. SWPPP Preparation

a. A SWPPP shall be developed by the operator for construction activities at each site to be covered by this permit, prior to the initiation of activities requiring coverage under this permit. SWPPPs shall be prepared in accordance with sound engineering practices. The SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges. In addition, the SWPPP shall describe and ensure the implementation of practices which will be used to reduce the pollutants in stormwater discharges and to assure compliance with the terms and conditions of this permit. Operators are encouraged to have their SWPPP reviewed for adequacy and completeness by the local soil and water conservation district ("SWCD") and/or other professionals qualified in erosion and sediment control practices[12] and stormwater management. Moreover, if the construction activity is identified under Part I, subsection D.3.b. (See page 5), or for construction site runoff subject to a TMDL (see Figure 1 on page vi), the SWPPP must include a certification by a licensed/certified professional.

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11 Submittal of an NOT will terminate coverage under this general permit and will also remove the permittee from subsequent billings of the annual regulatory fee levied under Article 72 of the ECL.

12 For example, CPESC, Inc. administers a certified program of individuals under its CPESC (Certified Professional in Erosion and Sediment Control) program which is sponsored by the International Erosion Control Association (IECA) and the Soil and Water Conservation Society (SWCS) and is endorsed by USDA - Natural Resources Conservation Service. CPESC, Inc. also administers the CPSWQ (Certified Professional in Stormwater Quality) program.

b. All SWPPPs shall include erosion and sediment controls. For construction activities meeting either Condition "A", "B" or "C" described below, the SWPPP shall also include water quantity and water quality controls (post-construction stormwater control practices).(see Part III. D.).

(1) Condition A - Construction site or post construction runoff discharging a pollutant of concern to either an impaired water identified on DEC's 303(d) list or a TMDL watershed for which pollutants in stormwater have been identified as a source of the impairment.

(2) Condition B - Construction site runoff from Phase 1 construction activities (construction activities disturbing five (5) or more acres) identified under 40 CFR Part 122, §122.26(b)(14)(x).

(3) Condition C - Construction site runoff from construction activity disturbing between one (1) and five (5) acres of land during the course of the project, exclusive of the construction of single family residences and construction activities at agricultural properties.

2. **SWPPP Implementation** - Operators are responsible for implementing the provisions of the SWPPP and ensuring that all contractors and subcontractors who perform professional services at the site provide certification of the SWPPP in accordance with Part I.D.2. (see page 4) and Part III.E.2. (see page 17) of this permit. All contractors and subcontractors identified in the SWPPP in accordance with Part III.E.1. (see page 17) of this permit must agree to implement applicable provisions of the SWPPP and satisfy the certification requirement of Part III.E.2. (see page17). However, contractors and subcontractors who are not operators, as defined in this permit (see page 4), are not required to submit a NOI in addition to the NOI submitted by the operator.

3. **Deadlines for SWPPP Preparation and Compliance** - The SWPPP must be developed prior to the submittal of an NOI and provide for compliance with the terms and schedule of the SWPPP beginning with the initiation of construction activities. The operator shall also certify in the SWPPP that all appropriate stormwater control measures will be in place before commencement of construction of any segment of the project that requires such measures.

4. **Local Requirements** - Developing a SWPPP that complies with the requirements listed herein does not relieve an operator from the obligation of complying with stormwater management requirements of the local government having jurisdiction over the project.

5. **Activities Previously Covered Under GP-93-06** - For construction activities which are covered by GP-93-06 as of the effective date of this permit (GP-02-01), the continued implementation of their SWPPP that was developed and implemented in accordance with GP-93-06 is acceptable until such time as:

(a) an NOT is submitted;

(b) the Department notifies them otherwise in accordance with this permit, including Part V, subsection K (see page 21); or

(c) this permit expires.

B. **Signature and SWPPP Review**

1. The SWPPP shall be signed in accordance with Part V. H.(see page 19), and be retained at the site where the construction activity occurs in accordance with Part IV (see retention of records on page 17) of this permit.

2. The permittee shall submit a copy of the SWPPP and any amendments thereto to the local governing body and any other authorized agency having jurisdiction or regulatory control over the construction activity. The operator shall make SWPPPs available upon request to the Department and any local agency having jurisdiction; or in the case of a stormwater discharge associated with industrial activity which discharges through a municipal separate storm sewer system, to the municipal operator of the system.

3. The Department, or its authorized representative, may notify the permittee at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. Such notification shall identify those provisions of the permit which are not being met by the SWPPP and identify which provisions of the SWPPP require modifications in order to meet the minimum requirements of this permit. Within seven (7) days of such notification, (or as otherwise provided by the Department) the permittee shall make the required changes to the SWPPP and shall submit to the Department a written certification that the requested changes have been made. Notwithstanding the foregoing, the Department reserves all rights to enforce the terms of the ECL.

C. **Keeping SWPPPs Current** - The permittee shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or

2. The SWPPP proves to be ineffective in:

   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP required by this permit, or

   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity.

3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP (see Part III.E, page 17 below). Amendments to the SWPPP may be reviewed by the Department in the same manner as provided by Part III.B (see page 9 above).

D. **General Contents of SWPPPs** -

1. Standards for construction activities covered under this permit - The Department's technical standards for erosion and sediment controls are detailed in the "*New York Standards and Specifications for Erosion and Sediment Control*"[13] published by the Empire State Chapter of the Soil and Water Conservation Society. For the design of water quality and water quantity controls (post-construction stormwater control practices), the Department's technical standards are detailed in the "*New York State Stormwater Management Design Manual.*"

If an operator certifies that the SWPPP has been developed in conformance with the Department's technical standards referenced above, they may obtain coverage under this general permit in five (5) business days from the Department's receipt of the NOI, provided the construction activity does not meet Condition A in Part III.A.1.b. For SWPPPs which will not conform with the Department's technical standards, the SWPPP must be prepared by a licensed/certified professional and include a certification stating that the SWPPP has been developed in a manner which will assure compliance with the State's water quality standards and with the substantive intent of this permit. In addition, coverage under this general permit will not begin until sixty (60) business days from the receipt of a completed NOI.

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13 Previously, the "*New York Guidelines for Urban Erosion and Sediment Control*," also commonly referred to as the "Blue Book."

2. **Minimum SWPPP Components** SWPPPs prepared pursuant to this general permit shall present fully designed and engineered stormwater management practices with all necessary maps, plans and construction drawings. The SWPPP must, at a minimum, include the following:

a. For all construction activities subject to this general permit -

(1). provide background information about the scope of the project, including the location, type and size of project.

(2) provide a site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map should show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s), wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of off-site material, waste, borrow or equipment storage areas; and location(s) of the stormwater discharge(s);

(3) provide a description of the soil(s) present at the site;

(4) provide a construction phasing plan describing the intended sequence of construction activities, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance. Consistent with the New York Guidelines for Urban Erosion and Sediment Control, there shall not be more than five (5) acres of disturbed soil at any one time without prior written approval from the Department;

(5) provide a description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in the storm water discharges;

(6) provide a description of construction and waste materials expected to be stored on-site with updates as appropriate, and a description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to storm water, and spill prevention and response;

(7) describe the temporary and permanent structural and vegetative measures to be used for soil stabilization, runoff control and sediment control for each stage of the project from initial land

clearing and grubbing to project close-out;

(8) identify and show on a site map/construction drawing(s) the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

(9) provide the dimensions, material specifications and installation details for all erosion and sediment control practices, including the siting and sizing of any temporary sediment basins;

(10) identify temporary practices that will be converted to permanent control measures;

(11) provide an implementation schedule for staging temporary erosion and sediment control practices, including the timing of initial placement and the duration that each practice should remain in place;

(12) provide a maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practices;

(13) provide the names(s) of the receiving water(s);

(14) provide a delineation of SWPPP implementation responsibilities for each part of the site;

(15) provide a description of structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable; and

(16) provide any existing data that describes the stormwater runoff characteristics at the site.

b. For construction activities meeting Condition A, B or C in Part III.A.1.b.

(1) provide all the information required in Parts III.D.2.a.1 - 16 above;

(2) provide a description of each post-construction stormwater control practice;

(3) identify and show on a site map/construction drawing(s) the specific location(s) and size(s) of each post-construction stormwater control practice;

(4) provide a hydrologic and hydraulic analysis for all structural components of the stormwater control system for the applicable design storms;

(5) provide a comparison of post-development stormwater runoff conditions with pre-development conditions;

(6) provide the dimensions, material specifications and installation details for each post-construction stormwater control practice;

(7) provide a maintenance schedule to ensure continuous and effective operation of each post-construction stormwater control practice.

The following three subsections, Part III.D. 3. through Part III.D. 5., apply only to construction activities covered under this general permit which meet Conditions "A" , "B"[14] or "C" in Part III. A.1.b. Beginning with Part III.E. below (see page 17) the requirements set forth therein apply to all permittees covered under this permit.

3. **Site Assessment and Inspections** -

a. The operator shall have a qualified professional[15] conduct an assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment controls described in the SWPPP and required by Part III.D. (see page 10) of this permit have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction. Following the commencement of construction, site inspections shall be conducted by the qualified professional at least every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. During each inspection, the qualified professional shall record the following information:

(1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;

(2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;

(3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;

(4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of the sediment storage volume (for example, 10 percent, 20 percent, 50 percent);

(5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and

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14 Condition "B" includes construction activities covered under GP-93-06 and, therefore, are subject to Part III.D.3 through Part III.D. 5.

15 "Qualified professional" means a person knowledgeable in the principles and practice of erosion and sediment controls, such as a licensed professional engineer, Certified Professional in Erosion and Sediment Control (CPESC), or soil scientist.

containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water;
and

(6) All deficiencies that are identified with the implementation of the SWPPP.

b. The operator shall maintain a record of all inspection reports in a site log book. The site log book shall be maintained on site and be made available to the permitting authority upon request. Prior to the commencement of construction,[16] the operator shall certify in the site log book that the SWPPP, prepared in accordance with Part III.D. (see page 10) of this permit, meets all Federal, State and local erosion and sediment control requirements.

The operator shall post at the site, in a publicly-accessible location, a summary of the site inspection activities on a monthly basis.

c. Prior to filing of the Notice of Termination or the end of permit term, the operator shall have the qualified professional perform a final site inspection. The qualified professional shall certify that the site has undergone final stabilization[17] using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed.

d. The operator shall certify that the requirements of Parts III.D.3., III.D.4. and III.D.5 of this permit have been satisfied within 48 hours of actually meeting such requirements.

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16 "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.

17 "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

4. **Stabilization**[18] - The operator shall initiate stabilization measures as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. This requirement does not apply in the following instances:

a. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceased is precluded by snow cover or frozen ground conditions, stabilization measures shall be initiated as soon as practicable;

b. Where construction activity on a portion of the site is temporarily ceased, and earth-disturbing activities will be resumed within twenty-one (21) days, temporary stabilization measures need not be initiated on that portion of the site.

5. **Maintenance** - Sediment shall be removed from sediment traps or sediment ponds whenever their capacity has been reduced by fifty (50) percent from the design capacity.

18 "Stabilization" means covering or maintaining an existing cover over soil. Cover can be vegetative (e.g. grass, trees, seed and mulch, shrubs, or turf) or non-vegetative (e.g. geotextiles, riprap, or gabions).

E. **Contractors**

1. The SWPPP must clearly identify for each measure identified in the SWPPP, the contractor(s) and subcontractor(s) that will implement the measure. All contractors and subcontractors identified in the SWPPP must sign a copy of the certification statement in Part III.E.2 (see below) of this permit in accordance with Part V.H.(see page 19) of this permit. All certifications must be included in the SWPPP. Additionally, new contractors and subcontractors (see subsection C.3. above) need to similarly certify.

2. **Certification Statement** - All contractors and subcontractors identified in a SWPPP in accordance with Part III.E.1 (see above) of this permit shall sign a copy of the following certification statement before undertaking any construction activity at the site identified in the SWPPP:

> "I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction site identified in such SWPPP as a condition of authorization to discharge stormwater. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards."

The certification must include the name and title of the person providing the signature in accordance with Part V.H.(see page 19) of this permit; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification is made.

Part IV. MONITORING, REPORTING AND RETENTION OF RECORDS

A. The Department may, at its sole discretion, require monitoring of discharge(s) from the permitted construction activity after notifying the permittee in writing of the basis for such monitoring, the parameters and frequency at which monitoring shall occur and the associated reporting requirements, if any.

B. The operator shall retain copies of SWPPPs and any reports submitted in conjunction with this permit, and records of all data used to complete the NOI to be covered by this permit, for a period of at least three years from the date that the site is finally stabilized. This period may be extended by the Department, in its sole discretion, at any time upon written notification.

C. The operator shall retain a copy of the SWPPP required by this permit at the construction site from the date of initiation of construction activities to the date of final

stabilization.

D. The operator shall also prepare a written summary of its status with respect to compliance with this general permit at a minimum frequency of every three months during which coverage under this permit exists. The summary should address the status of achieving each component of the SWPPP . This summary shall be handled in the same manner as prescribed for SWPPPs under Part III, subsection B (see Page 9).

E. **Addresses** - Except for the submittal of NOIs and NOTs, all written correspondence under this permit directed to the Department, including the submittal of individual permit applications, shall be sent to the address of the appropriate Department Office as listed in Appendix A (see page 23).

Part V. STANDARD PERMIT CONDITIONS

A. **Duty to Comply** - The operator must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the ECL and is grounds for an enforcement action against either the operator or the contractor/subcontractor; permit revocation or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all construction activity at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the operator or the operator's on-site representative.

B. **Continuation of the Expired General Permit** - This permit expires five (5) years after issuance on January 8, 2008. However, coverage may be obtained under the expired general permit which will continue in force and effect until a new general permit is issued. After issuance of a new general permit, those with coverage under GP-02-01 will have six (6) months from the effective date of the new general permit to complete their project or obtain coverage under the new permit. Unless otherwise notified by the Department in writing, operators seeking authorization under a new general permit must submit a new NOI in accordance with the terms of such new general permit. See also Part I, subsection D.8. on page 6.

C. **Penalties for Violations of Permit Conditions** - There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $25,000 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. **Need to halt or reduce activity not a defense** - It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the construction activity in order to maintain compliance with the conditions of this permit.

E. **Duty to Mitigate** - The permittee and its contractors and subcontractors shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. **Duty to Provide Information** - The permittee shall furnish any information requested by any agency with regulatory or review authority over this project for the purpose of determining compliance with this permit or compliance with any other regulatory requirements placed on the project in conjunction with this permit. Failure to provide requested information shall be a violation of this permit. Such regulating agencies include but are not limited to the Department, SWCDs,[19] local planning, zoning, health, and building departments that review and approve erosion and sediment control plans, grading plans, and Stormwater Management Plans, as well as MS4s into whose system runoff from the permitted project or activity discharges. The SWPPP and inspection reports required by this general permit are public documents that the operator must make available for inspection, review and copying by any person within five (5) business days of the operator receiving a written request by any such person to review the SWPPP and/or the inspection reports. Copying of documents will be done at the requester's expense.

G. **Other Information** - When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI or in any other report to the Department, he or she shall promptly submit such facts or information.

H. **Signatory Requirements** - All NOIs, NOTs, SWPPPs, reports, certifications or information required by this permit or submitted pursuant to this permit, shall be signed as follows:

1. All NOIs and NOTs shall be signed as follows:

   a. For a corporation: by (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person authorized to and who performs similar policy or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25,000,000 (in second-quarter 1980 dollars) if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

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19 "SWCD" means Soil and Water Conservation District

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. The SWPPP and all reports required by the permit and other information requested by the Department or local agency shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described above and submitted to the Department.

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

c. **Certification** - Except for NOIs and NOTs, any person signing documents in accordance with this Part shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a class A misdemeanor pursuant to Section 210.45 of the Penal Law."

I. **Property Rights** - The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

J. **Severability** - The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. **Denial of Coverage Under This Permit**

1. At its sole discretion, the Department may require any person authorized by this permit to apply for and/or obtain either an individual SPDES permit or an alternative SPDES general permit. Where the Department requires a discharger authorized to discharge under this permit to apply for an individual SPDES permit, the Department shall notify the discharger in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application, and a statement that on the effective date of issuance or denial of the individual SPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Applications shall be submitted to the appropriate Department Office indicated in Appendix A of this permit. The Department may grant additional time to submit the application upon request of the applicant. If a discharger fails to submit in a timely manner an individual SPDES permit application as required by the Department under this paragraph, then the applicability of this permit to the individual SPDES permittee is automatically terminated at the end of the day specified by the Department for application submittal.

2. Any discharger authorized by this permit may request to be excluded from the coverage under this permit by applying for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii) and 6 NYCRR Part 621, with reasons supporting the request, to the Department at the address for the appropriate Department Office (see addresses in Appendix A on page 23 of this permit). The request may be granted by issuance of an individual permit or an alternative general permit at the discretion of the Department.

3. When an individual SPDES permit is issued to a discharger covered by this permit, or the discharger is authorized to discharge under an alternative SPDES general permit, the applicability of this permit to the individual SPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual SPDES permit is denied to an operator otherwise subject to this permit, or the operator is denied for coverage under an alternative SPDES general permit, the applicability of this permit to the individual SPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by the Department.

L. **Proper Operation and Maintenance** - The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of SWPPPs. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

M. **Inspection and Entry** - The permittee shall allow the Department or an authorized representative of EPA, the State, or, in the case of a construction site which discharges through an MS4, an authorized representative of the MS4 receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

N. **Permit Actions** - At the Department's sole discretion, this permit may, at any time, be modified, revoked, or renewed. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not stay compliance with any terms of this permit.

APPENDIX A

List of NYS DEC Regional Offices

Region	Covering the following counties:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators	DIVISION OF WATER (DOW) Water (SPDES) Program
1	Nassau and Suffolk	Bldg 40 - SUNY @ Stony Brook Stony Brook, NY 11790-2356 Tel. (631) 444-0365	Bldg 40 - SUNY @ Stony Brook Stony Brook, NY 11790-2356 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	200 White Plains Road, 5th Floor Tarrytown, NY 10591-5805 Tel. (845) 332-1835
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1150 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1150 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	Route 86, PO Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Hudson Street Warrensburg, NY 12885-0220 Tel. (518) 623-1200
6	Herkimer, Jefferson, Lewis, Oneida and St. Lawrence	State Office Building 317 Washington Street Watertown, NY 13601-3787 Tel. (315) 785-2245	State Office Building 207 Genesee Street Utica, NY 13501-2885 Tel. (315) 793-2554
7	Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga and Tompkins	615 Erie Blvd. West Syracuse, NY 13204-2400 Tel. (315) 426-7438	615 Erie Blvd. West Syracuse, NY 13204-2400 Tel. (315) 426-7500
8	Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne and Yates	6274 East Avon-Lima Road Avon, NY 14414-9519 Tel. (585) 226-2466	6274 East Avon-Lima Rd. Avon, NY 14414-9519 Tel. (585) 226-2466
9	Allegany, Cattaraugus, Chautauqua, Erie, Niagara and Wyoming	270 Michigan Avenue Buffalo, NY 14203-2999 Tel. (716) 851-7165	270 Michigan Ave. Buffalo, NY 14203-2999 Tel. (716) 851-7070

APPENDIX B

Information Required of Construction Activities Which Are Identified Under Part I, subsection D.7. (see page 5)

A. The location (including a map) and the nature of the construction activity;

B. The total area of the site and the area of the site that is expected to undergo excavation during the life of the permit;

C. Proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a brief description of applicable State and local erosion and sediment control requirements;

D. Proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a brief description of applicable State or local erosion and sediment control requirements;

E. An estimate of the runoff coefficient of the site and the increase in impervious area after the construction addressed in the permit application is completed, the nature of the fill material and existing data describing the soil or the quality of the discharge; and

F. The name of the receiving water(s).

ATTACHMENT A2-2
EROSION CONTROL DETAILS

1. Silt Fence
2. Straw Bale Dike
3. Perimeter Dike/Swale
4. Temporary Swale
5. Sediment Trap for Drop Inlet

STANDARD AND SPECIFICATIONS FOR STRAW BALE DIKE

Definition

A temporary barrier of straw or similar material used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

The purpose of a bale dike is to reduce runoff velocity and effect deposition of the transported sediment load. Straw bale dikes are to be used for no more than three (3) months.

Conditions Where Practice Applies

The straw bale dike is used where:

1. No other practice is feasible.
2. There is no concentration of water in a channel or other drainage way above the barrier.
3. Erosion would occur in the form of sheet erosion.
4. Length of slope above the straw bale dike does not exceed these limits:

Constructed Slope	Percent Slope	Slope Length (feet)
2:1	50	25
2-1/2:1	40	50
3:1	33	75
3-1/2:1	30	100
4:1	25	125

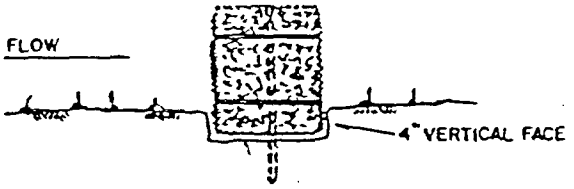
Where slope gradient changes through the drainage area, steepness refers to the steepest slope section contributing to the straw bale dike.

The practice may also be used for a single family lot if the slope is less than 15 percent. The contributing drainage area in this instance shall be less than one acre and the length of slope above the dike shall be less than 200 feet.

Design Criteria

A design is not required. All bales shall be placed on the contour with cut edge of bale adhering to the ground. See Figure 4.3 on page 4.10 or details.

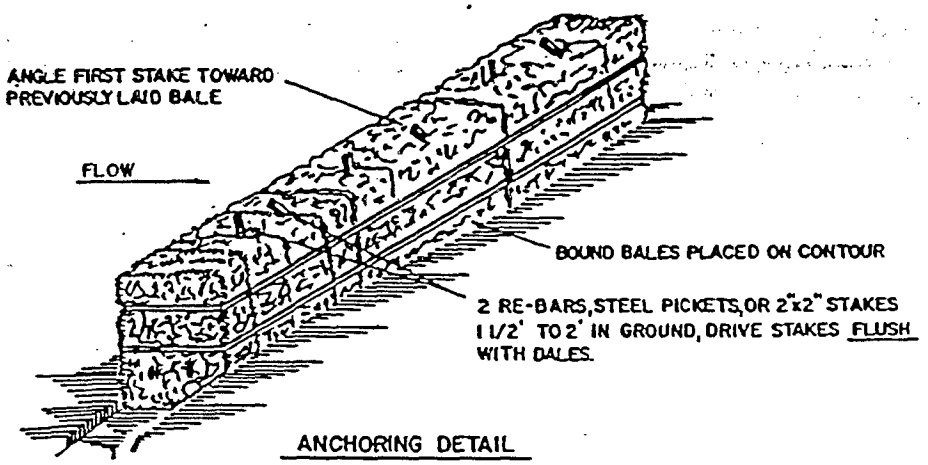
Figure 4.3
Straw Bale Dike Details



BEDDING DETAIL

STANDARD SYMBOL

SBD — DRAINAGE AREA NO MORE THAN 1/4 ac. PER 100 FEET OF STRAW BALE DIKE FOR SLOPES LESS THAN 25%



ANCHORING DETAIL

CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	STRAW BALE DIKE	STANDARD DRAWING SBD-1

STANDARD AND SPECIFICATIONS FOR SILT FENCE

Definition

A temporary barrier of geotextile fabric (filter cloth) used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

The purpose of a silt fence is to reduce runoff velocity and effect deposition of transported sediment load. Limits imposed by ultraviolet stability of the fabric will dictate the maximum period the silt fence may be used.

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope lengths contributing runoff to a silt fence are:

Slope Steepness	Maximum Slope Length (Ft)
2:1	50
3:1	75
4:1	125
5:1	175
Flatter than 5:1	200

2. Maximum drainage area for overland flow to a silt fence shall not exceed 1/2 acre per 100 feet of fence; and
3. Erosion would occur in the form of sheet erosion; and
4. There is no concentration of water flowing to the barrier.

Design Criteria

Design computations are not required. All silt fences shall be placed as close to the area as possible, and the area below the fence must be undisturbed or stabilized.

A detail of the silt fence shall be shown on the plan, and contain the following minimum requirements:

1. The type, size, and spacing of fence posts.
2. The size of woven wire support fences. (OPTIONAL)
3. The type of filter cloth used.
4. The method of anchoring the filter cloth.
5. The method of fastening the filter cloth to the fencing support.

Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. See Figure 4.4 on page 4.12 for details.

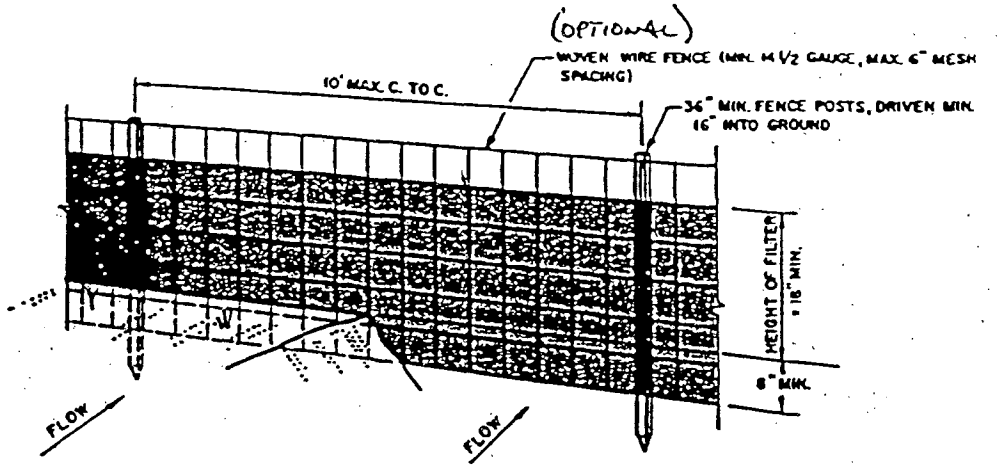
Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance. Statewide acceptability shall depend on in field and/or laboratory observations and evaluations.

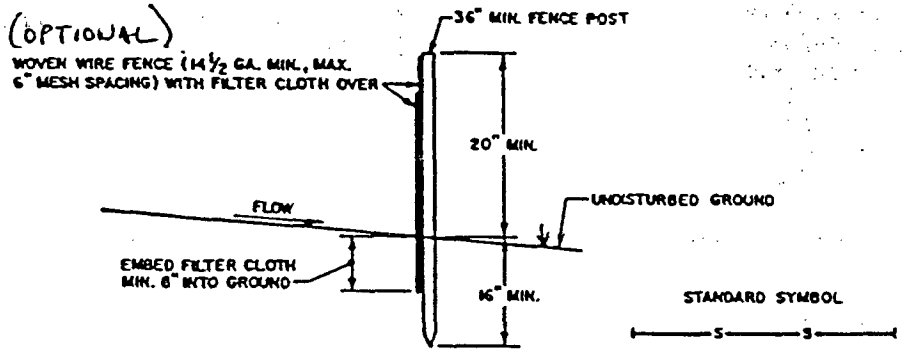
Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	90	ASTM D1682
Elongation at Failure (%)	50	ASTM D1682
Mullen Burst Strength (PSI)	190	ASTM D3786
Puncture Strength (lbs)	40	ASTM D751 (modified)
Slurry Flow Rate (gal/min/sf)	0.3	
Equivalent Opening Sizw	40-80	US Std Sieve CW-02215
Ultraviolet Radiation Stability (%)	90	ASTM G-26

2. Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3.0 square inches. Steel posts will be standard T and U section weighing not less than 1.00 pound per linear foot.
3. Wire Fence (for fabricated units): Wire fencing shall be a minimum 14-1/2 gage with a maximum 6 in. mesh opening, or as approved. (OPTIONAL)
4. Prefabricated Units: Envirofence or approved equal may be used in lieu of the above method providing the unit is installed per manufacturer's instructions.

Figure 4.4
Silt Fence Details



PERSPECTIVE VIEW



SECTION

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

(OPTIONAL)

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FENCE: WOVEN WIRE, 14½ GA. 6" MAX. MESH OPENING (OPTIONAL)

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	SILT FENCE	STANDARD DRAWING SF-1

STANDARD AND SPECIFICATION FOR TEMPORARY SWALE

Definition

A temporary excavated drainage way.

Purpose

The purpose of a temporary swale is to prevent runoff from entering disturbed areas by intercepting and diverting it to a stabilized outlet or to intercept sediment laden water and divert it to a sediment trapping device.

Conditions Where Practice Applies

Temporary Swales are constructed:

1. To divert flows from a disturbed area.
2. Intermittently across disturbed areas to shorten overland flow distances.
3. To direct sediment laden water along the base of slopes to a trapping device.
4. To transport offsite flows across disturbed areas such as rights-of-way.

Swales collecting runoff from disturbed areas shall remain in place until the disturbed areas are permanently stabilized.

Design Criteria

See Figure 4.5 on page 4.14 for details.

	Swale A	Swale B
Drainage Area	<5 Ac	5-10 Ac
Bottom Width of Flow Channel	4 ft	6 ft
Depth of Flow Channel	1 ft	1 ft
Side Slopes	2:1 or Flatter	2:1 or Flatter
Grade	0.5% Min. 20% Max.	0.5% Min. 20% Max.

For drainage areas larger than 10 acres, refer to the Standard and Specifications for Waterways on page 4.91.

Stabilization

Stabilization of the swale shall be completed within 10 days of installation in accordance with the appropriate standard and specifications for vegetative stabilization or stabilization with mulch as determined by the time of year. The flow channel shall be stabilized as per the following criteria:

		FLOW CHANNEL	
Type of Treatment	Channel Grade	A ≤5 Ac	B 5-10 Ac
1	0.5-3.0%	Seed & Straw Mulch	Seed & Straw Mulch
2	3.1-5.0%	Seed & Straw Mulch	Seed and cover with Jute or Excelsior; Sod, or lined with 2 in. stone
3	5.1-8.0%	Seed and cover with Jute or Excelsior, Sod line with 2 in. stone	Line with 4-8 in. stone or Recycled Concrete Equivalent
4	8.1-20%	Line with 4-8 in. stone or Recycled Concrete Equivalent[1]	Engineering Design

In highly erodible soils, as defined by local approving agency, refer to the next higher slope grade for type of stabilization.

[1] Recycled Concrete Equivalent shall be concrete broken into the required size, and shall contain no steel reinforcement.

Outlet

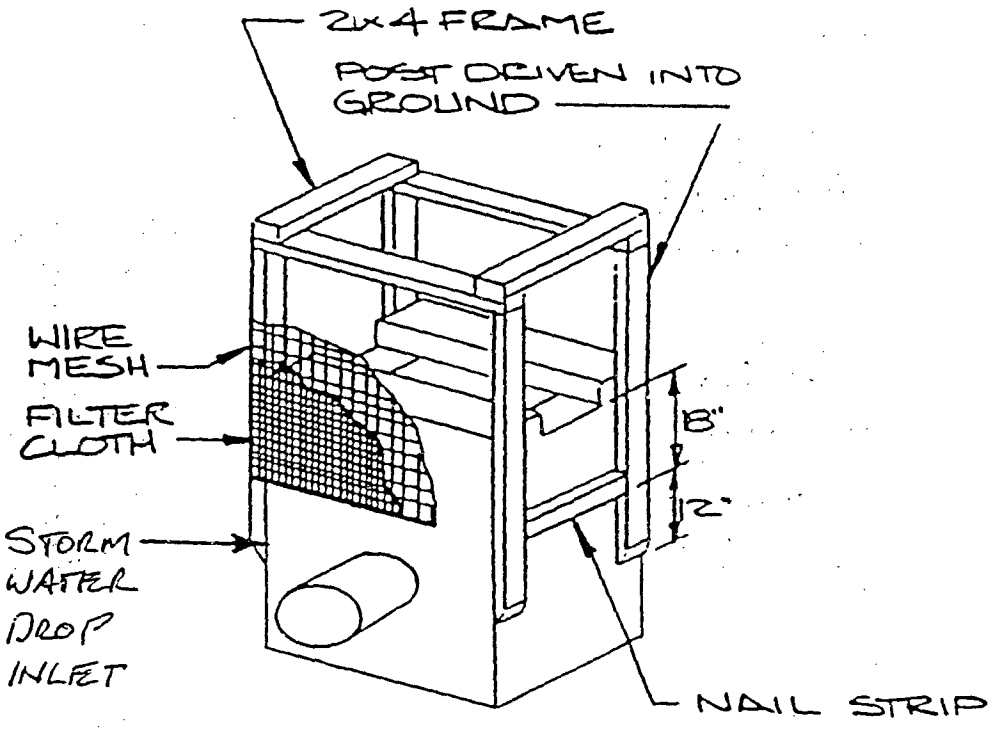
Swale shall have an outlet that functions with a minimum of erosion, and dissipates runoff velocity prior to discharge off the site.

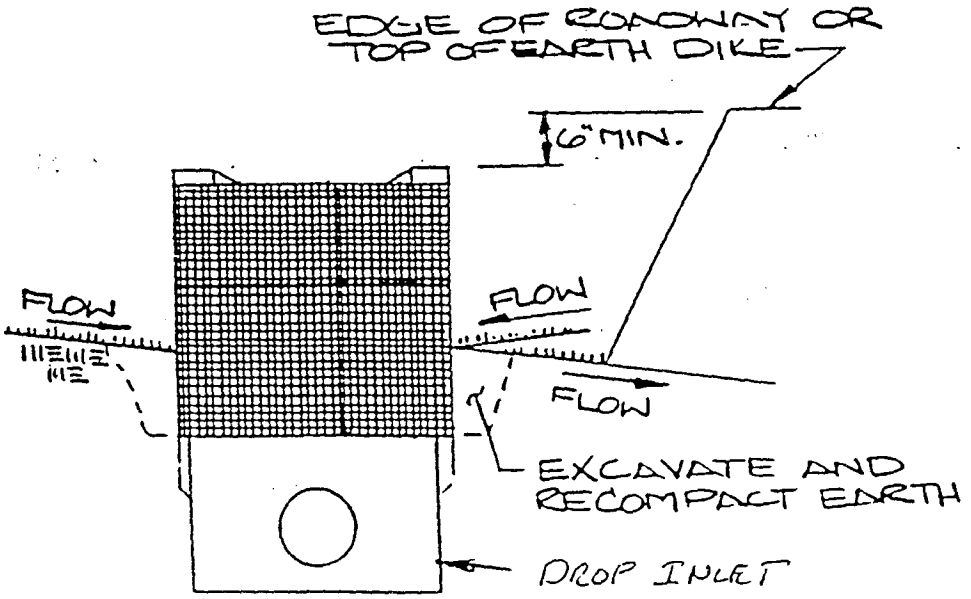
Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin until the drainage area above the swale is adequately stabilized.

The on-site location may need to be adjusted to meet field conditions in order to utilize the most suitable outlet condition.

If swale is used to divert flows from entering a disturbed area, a sediment trapping device may not be needed.

SEDIMENT TRAP FOR DROP INLETS





STANDARD AND SPECIFICATIONS FOR PERIMETER DIKE/SWALE

Definition

A temporary ridge of soil excavated from an adjoining swale located along the perimeter of the site or disturbed area.

Purpose

The purpose of a perimeter dike/swale is to prevent off site storm runoff from entering a disturbed area and to prevent sediment laden storm runoff from leaving the construction site or disturbed area.

Conditions Where Practice Applies

Perimeter dike/swale is constructed to divert flows from entering a disturbed area, or along tops of slopes to prevent flows from eroding the slope, or along base of slopes to direct sediment laden flows to a trapping device.

The perimeter dike/swale shall remain in place until the disturbed areas are permanently stabilized.

Design Criteria

See Figure 4.16 on page 4.34 for details.

The perimeter dike/swale shall not be constructed outside the property lines without obtaining legal easements from effected adjacent property owners. A design is not required for perimeter dike/swale. The following criteria shall be used:

Drainage area - Less than 2 acres (for drainage areas larger than 2 acres but less than 10 acres see earth dike; for drainage areas larger than 10 acres, see standard and specifications for diversion).

Height - 18 inches minimum from bottom of swale to top of dike evenly divided between dike height and swale depth.

Bottom width of dike - 2 feet minimum.

Width of swale - 2 feet minimum.

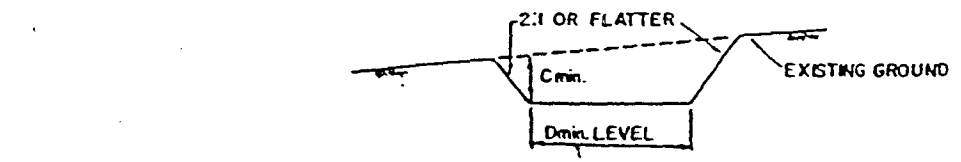
Grade - Dependent upon topography, but shall have positive drainage (sufficient grade to drain) to an adequate outlet. Maximum allowable grade not to exceed 20 percent.

Stabilization - The disturbed area of the dike and swale shall be stabilized within 10 days of installation, in accordance with the standard and specifications for seed and straw mulch or straw mulch only if not in the seeding season.

Outlet

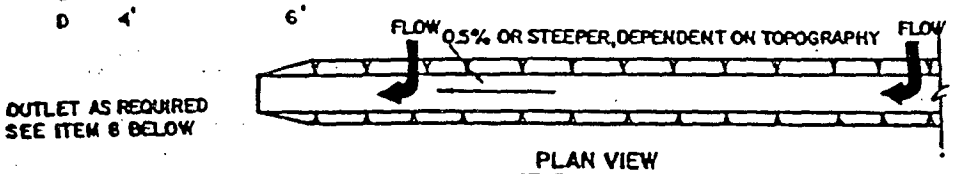
1. Perimeter dike/swale shall have an outlet that functions with a minimum of erosion.
2. Diverted runoff from a protected or stabilized upland area shall outlet directly onto an undisturbed stabilized area.
3. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as a sediment trap, sediment basin, or to an area protected by any of these practices.
4. The on-site location may need to be adjusted to meet field conditions in order to utilize the most suitable outlet.

Figure 4.5
Temporary Swale Detail



CROSS SECTION

	SWALE A	SWALE B
C	1'	1'
D	4'	6'



PLAN VIEW

STANDARD SYMBOL A-2 B-3

CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. STABILIZATION SHALL BE AS PER THE CHART BELOW:

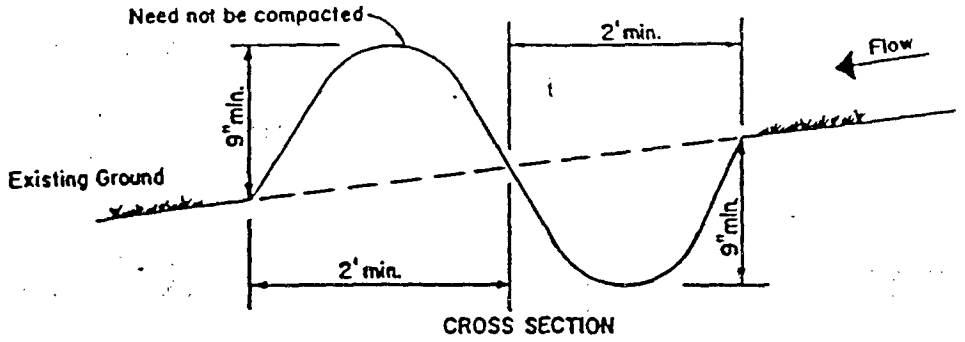
FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	A (5 AC OR LESS)	B (5 AC - 10 AC)
1	0.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELSIOR
3	5.1-8.0%	SEED WITH JUTE OR EXCELSIOR; SOD	LINED RIP-RAP 4-8" RECYCLED CONCRETE EQUIVALENT
4	8.1-20%	LINED 4-8" RIP-RAP	ENGINEERED DESIGN

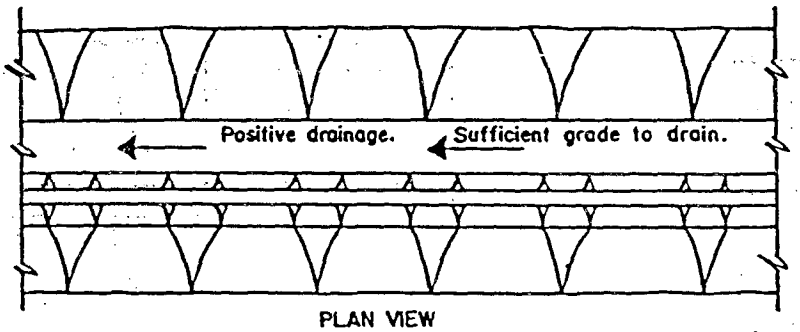
9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	TEMPORARY SWALE	STANDARD DRAWING TS-1

Figure 4.16
Perimeter Swale Dike Detail



CROSS SECTION



PLAN VIEW

STANDARD SYMBOL

CONSTRUCTION SPECIFICATIONS

1. ALL PERIMETER DIKE/SWALE SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTRUBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSION VELOCITY.
4. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED IN THE STANDARD.
5. STABILIZATION OF THE AREA DISTURBED BY THE DIKE AND SWALE SHALL BE DONE IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SEED AND STRAW MULCH, AND SHALL BE DONE WITHIN 10 DAYS.
6. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

Max. Drainage Area Limit: 2 Acres

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PERIMETER DIKE/SWALE	Standard Drawing PDS-1

ATTACHMENT A2-3
MONITORING, INSPECTION AND MAINTENANCE PLAN

MONITORING, INSPECTION, AND MAINTENANCE PLAN

IMPLEMENTATION

A. The Contractor at this site shall at all times, properly construct, operate and maintain all erosion controls and features, as part of the closure construction activities, in accordance with regulatory requirements, and with good engineering and construction practices. Erosion control measures and activities will be in accordance with currently accepted Best Management Practices (BMPs).

B. This erosion control monitoring, inspection, and maintenance plan has been developed to achieve compliance with the requirements of this construction site storm water and erosion control plan. The key elements of the monitoring effort include the following:

- Site Inspections and Maintenance;
- BMPs Monitoring;
- Recordkeeping;
- Review and Modifications; and
- Certification of Compliance.

SITE INSPECTIONS AND MAINTENANCE PRACTICES

A. The temporary erosion control features installed by the Contractor will be maintained by the contractor until no longer needed or permanent erosion control methods are installed.

Site inspections are required every seven days or within 24 hours of a rainfall of 0.5 inches or greater. All disturbed areas, areas for material storage, locations where vehicles enter or exit the site, and all of the erosion and sediment controls that are identified as part of this site's construction storm water and erosion control plan must be inspected. Controls must be in good operating condition until the affected area they protect has been completely stabilized and the construction activity is complete. If a repair is necessary, it must be completed within seven (7) days of receipt of a report or notice, if

practical. Inspection for specific erosion and sediment controls will include the following:

- Silt fence will be inspected to determine the following:

  1) depth;

  2) condition of fabric;

  3) that the fabric is attached to the posts; and

  4) that the fence posts are firmly in the ground.

- The silt fences will be inspected weekly and within 24 hours of a 0.5 inch or greater storm event.

- Diversion berms, if used, will be inspected and any breaches promptly repaired.

- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and other potential erosion control problems.

- The Contractor shall designate individual(s) that will be responsible for erosion control, maintenance, and repair activities. The designated individual will also be responsible for inspecting the site and filling out the inspection and maintenance report.

- Personnel selected for inspection and maintenance responsibilities will receive training as directed by the Engineer. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

B. The individual inspecting the site must record any damages or deficiencies on an inspection form (attached). These forms can be used to request maintenance and repair and to document inspection and maintenance activities. Damages or deficiencies must be corrected as soon as possible after the inspection. Any changes that may be required to correct deficiencies in the Erosion Control Plan should also be made as soon as possible, but in no case later than seven days after the inspection.

C. An Inspection and Maintenance Report Form is attached to record the inspection and assessment.

D. The Contractor's erosion control inspection records must be presented to the Engineer at the site.

RECORDKEEPING

A. Records Retention

A copy of the Storm Water Management and Erosion Control Plan and inspection and maintenance records must be kept at the construction site from the time construction begins until the site is stabilized.

The Plan and related records will be made available upon request to any regulatory agency representatives or members of the public.

MODIFICATIONS TO THE STORM WATER MANAGEMENT AND EROSION CONTROL PLAN

A. During the course of construction, unanticipated changes may occur which affect this plan such as schedule changes, phasing changes, staging area modifications, offsite drainage impacts and repeated failures of designed controls. Any changes to the activities and controls identified in this plan must be documented and the Plan revised accordingly.

B. Certification of revisions to this plan shall be included at the end of the document.

CONSTRUCTION SITE STORM WATER CONTROL PLAN
INSPECTION AND MAINTENANCE REPORT FORM

To be completed every 7 days and within 24 hours of a rainfall event of 0.5 inches or more

Regular Inspector:_____Rainfall Event Inspector:_____Rainfall (inches):_____

Contractor Activities	OK	NO	N/A	Notes
Are construction onsite traffic routes, parking, and storage of equipment and supplies restricted to areas specifically designated for those uses?				
Are locations of temporary soil stock piles of construction materials in approved areas?				
Is there any evidence of spills and resulting cleanup procedures?				
General Erosion & Sediment Controls				
Are sediment and erosion BMPs installed in the proper location and according to the specifications set out in the SWM & ECP?				
Are all operational storm drain inlets protected from sediment inflow?				
Do any seeded or landscaped areas require maintenance, irrigation, fertilization, seeding or mulching?				
Is there any evidence that sediment is leaving the site?				
Is there any evidence of erosion or cut fill slopes?				
Perimeter Road Use				
Does much sediment get tracked on to the perimeter road? Is the gravel clean or is it filled with sediment? Does all traffic use the perimeter road to leave the site? Is maintenance or repair required for the perimeter road?				

_____ _____

Inspected by (Signature) Date

CONSTRUCTION SITE STORM WATER CONTROL PLAN
INSPECTION AND MAINTENANCE REPORT FORM

To be completed every 7 days and within 24 hours of a rainfall event of 0.5 inches or more

Inspector:_____

STABILIZATION MEASURES					
Area	Date Since Last Disturbed	Date of Next Disturbance	Stabilized? Yes/No	Stabilized with	Condition

Stabilization Required: _____

_____

_____

_____

_____

_____

To be performed by: _____ On or before: _____

PART III

ENVIRONMENTAL EASEMENTS

ENVIRONMENTAL EASEMENT

THIS INDENTURE made this ____day of _____, 2007, between **HYDRO-AIR COMPONENTS, INC.** (the "Grantor"), with offices at 100 Rittling Boulevard, Buffalo, New York 14220, and **THE PEOPLE OF THE STATE OF NEW YORK** (the "Grantee"), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("brownfield sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of environmental easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and of ensuring the potential restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that environmental easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a brownfield site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and;

WHEREAS, Grantor, is the owner of real property located in the City of Buffalo, Erie County, New York known and designated as tax map number 132.12-1-9.121, being the same as that property conveyed to Grantor by deed recorded on August 4, 2006, in the Land Records of the Erie County Clerk at page 4659, liber 11117 of Deeds, which is comprised of approximately 30.91 acres of land and hereinafter more fully described in Schedule A - Description attached hereto and made a part hereof (the "Controlled Property"); and;

WHEREAS, the Commissioner does hereby acknowledge that the Department accepts this Environmental Easement in order to ensure the protection of human health and the environment and to achieve the requirements for remediation established at this Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36;and

NOW THEREFORE, in consideration of the covenants and mutual promises contained herein and the terms and conditions of Brownfield Cleanup Agreement Number B9-0716-06-05, Grantor grants, conveys and releases to Grantee a permanent Environmental Easement pursuant to Article 71, Title 36 of the ECL in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the potential restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The following controls apply to the use of the Controlled Property, run with the land are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees, and any person using the Controlled Property:

A. The Controlled Property may be used for industrial use as long as the following long-term engineering controls are employed:

(i) until the remedial goals for the Controlled Property are attained or deemed complete by the Department, the Department-approved Site Management Plan (SMP) for the implemented remedy must be adhered to.

(ii) a soil cover system and vegetation in accordance with the Soil/Fill Management Plan in the SMP shall be maintained over undeveloped portions of the Controlled Property.

(iii) an active subslab depressurization system (ASD) to eliminate potential soil vapor intrusion shall be installed, operated and maintained in all new buildings and building additions in accordance with the standards and procedures specified in the SMP and the ASD already installed in the existing building shall continue to be operated and maintained in accordance with the SMP, unless the Department determines that ASD is not necessary based on the results of a Department-approved evaluation of potential sub-slab vapor impacts.

(iv) the groundwater beneath the Controlled Property cannot be used as a potable water source or for any other use without prior written permission of the Department.

(v) groundwater monitoring in accordance with the SMP shall continue until the Department determines that continued monitoring is unnecessary.

(vi) the in-situ treatment of residual contamination in native soils using oxygen release compounds (ORC) shall be maintained and monitored in accordance with the SMP until the Department determines that continued maintenance and monitoring of ORC is unnecessary.

(vii) in areas of the Controlled Property with known groundwater impacts, storm water injection (drywells) will be prohibited and storm water conveyance pipes will be required to have gasketed joints for water tightness to prevent the infiltration of impacted groundwater into the collection system.

B. The Controlled Property may not be used for a higher level of use such as unrestricted/ residential / commercial use and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant of Title 36 to Article 71 of the Environmental Conservation Law.

D. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

E. Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury that the controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls employed at the Controlled Property were approved by the NYSDEC, and that nothing has occurred that would impair the ability of such

control to protect the public health and environment or constitute a violation or failure to comply with any Site Management Plan for such controls and giving access to such Controlled Property to evaluate continued maintenance of such controls.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Controlled Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer the underlying fee interest to the Controlled Property by operation of law, by deed, or by indenture, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this environmental easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person intentionally violates this Environmental Easement, the Grantee may revoke the Certificate of Completion provided under ECL Article 27, Title 14, or the Satisfactory Completion of Project provided under ECL Article 56, Title 5 with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time

from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach. Grantor shall then have a reasonable amount of time from receipt of such notice to cure. At the expiration of said second period, Grantee may commence any proceedings and take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement in accordance with applicable law to require compliance with the terms of this Environmental Easement.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar its enforcement rights in the event of a subsequent breach of or noncompliance with any of the terms of this Environmental Easement.

6. Notice. Whenever notice to the State (other than the annual certification) or approval from the State is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing its County tax map number or the Liber and Page or computerized system tracking/ identification number and address correspondence to:

Division of Environmental Enforcement
Office of General Counsel
New York State Department of Environmental Conservation
625 Broadway
Albany New York 12233-5500

Such correspondence shall be delivered by hand, or by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. This Environmental Easement may be amended only by an amendment executed by the Commissioner of the New York State Department of Environmental Conservation and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

HYDRO-AIR COMPONENTS, INC.

By: _____

Title: President

Date: 10/18/07

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation

By: _____
Alexander B. Grannis, Commissioner

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF)

KEVIN T. KOCH
Notary Public, State of New York
No. 01KO5058983
Qualified in Erie County
My Commission Expires Apr. 22, 2010

On the 18 day of October, in the year 2007, before me, the undersigned, personally appeared Walter T. Zmuda personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public - State of New York

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF)

On the _____ day of _____, in the year 2007, before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

Schedule A – Description

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of the Ogden Gore Lot No. 17, and being more particularly described as follows:

BEGINNING at a point in the westerly line of Abby Street with the northerly line of Providence Street, which point is northerly 364.68 feet more or less measured along the westerly line of Abby Street from its intersection with the northerly line of Tifft Street and which point is also the southeasterly corner of Subdivision Lot No. 87 as shown on a map filed in the Erie County Clerk's Office under Cover No. 589; thence northerly along the westerly line of Abby Street, a distance of 879.14 feet more or less to the southeasterly corner of lands conveyed by Bethlehem Steel Corporation to Republic Steel Corporation under deed dated June 24, 1968 and recorded June 27, 1968 in the Erie County Clerk's Office in Liber 7482 of Deeds at page 400; thence westerly and along the southerly line of lands of aforesaid Republic Steel Corporation, 1635.95 feet more or less to the southeasterly corner of land conveyed by Krull to McClintic Marshall Construction Co. by deed recorded in the Erie County Clerk's Office in Liber 2070 of Deeds at page 130; thence continuing westerly along the south line of said land conveyed by Krull to McClintic Marshall Construction Co. to a point 77 feet easterly of the center line of the main track of the South Buffalo Railway as measured along said south line of land conveyed by Krull to McClintic Marshall Construction Co.; thence southerly along a line drawn parallel with and 77 feet easterly of the center line of the main track of the south Buffalo Railway 1163 feet to the northerly line of Tifft Street; thence easterly along the northerly line of Tifft Street 156.84 feet to a point in the northerly line of Tifft Street, 1142 feet west of the intersection of the northerly line of Tifft Street with the westerly line of Abby Street, as measured along the northerly line of Tifft Street; thence northerly 137.85 feet along the west line of Subdivision Lot No. 39 as

shown under map filed in the Erie County Clerk's Office under Cover No. 589; thence westerly along a line drawn parallel to the north line of Tifft Street 45.45 feet; thence northerly at right angles and along the west line of Subdivision Lot No. 46, as shown under Map Cover No. 589 as filed in the Erie County Clerk's Office, a distance of 170.85 to a point; thence easterly and parallel with the northerly line of Tifft Street 8.23 feet to the west line of Subdivision Lot No. 130 as shown under map filed in the Erie County Clerk's Office under Cover No. 589, as extended southerly, thence northerly at right angles and along said west line of Subdivision Lot No. 130 extended southerly, 33.00 feet more or less to the southwest corner of said Subdivision Lot No. 130 and the northerly line of Providence Street; thence easterly along the northerly line of Providence Street which is also the southerly line of Subdivision Lots 87, and 91 through 130 inclusive as shown on a map filed in the Erie County Clerk's Office under Cover No. 589, a distance of 1307.43 feet to point in the westerly line of Abby Street at the point of beginning.

Together with the rights and subject to the burdens of an Access Easement Agreement between Hydro-Air Components, Inc. and Steelfields, LTD dated July 28, 2006 and recorded August 14, 2006 in liber 11117 of Deeds at page 4670.

PART IV

SMP AMENDMENT – 2014

TABLE OF CONTENTS

LIST OF FIGURES

1. INTRODUCTION

Observations made during an annual Engineering Control inspection of the site (C915204) in 2011 indicated that alkaline groundwater from the upgradient Steelfields III Area was surfacing and entering the stormwater pond. Because a cover system is to be maintained to isolate below-surface contaminants per the Soil/Fill Management Plan (included in the Site Management Plan (SMP) appended to the Final Engineering Report dated September 2007), corrective measures were required to be implemented at the site. The corrective measures to be implemented were set forth in the Corrective Measures Work Plan dated 17 November 2011 which was approved by the NYSDEC in a letter dated 29 December 2011. Those measures are also described in the Corrective Measures Report dated 14 December 2012 which was approved by the NYSDEC in a letter dated 3 January 2014, included as Attachment 1 to this SMP Amendment.

This SMP Amendment briefly summarizes the condition that warranted the corrective measures, describes the required additional monitoring going forward, and then, sets forth certain response actions to be implemented if the monitoring demonstrates that the corrective measures implemented are not preventing the upgradient alkaline groundwater from surfacing and/or entering the stormwater pond.

2. GROUNDWATER CONDITIONS PROXIMATE TO THE NORTHEASTERN PROPERTY BOUNDARY

In 2008, NYSDEC informally requested that Hydro-Air Components, Inc. evaluate the observed discoloration of the stormwater pond at the site. Initial investigations during 2008 identified the presence of white flocculent (precipitate) and elevated pH in the northern settling basin of the pond. Subsequent investigation to identify and better understand the source of the flocculent and alkaline water was conducted in 2009.

The discoloration of the stormwater pond was attributed to pH conditions associated with groundwater containing calcium-hydroxide (Ca-OH) from the upgradient Steelfields III Area property, where wastes related to regional historical steel production and steel slag were in contact with groundwater. Historical steel production on adjacent upgradient properties to the north and a substantial quantity of steel slag fill material beneath the adjacent property is believed to have resulted in the regional highly alkaline groundwater condition. Investigations determined that Ca-OH containing groundwater had migrated onto the site and was being conveyed to the storm water pond by preferential pathways causing elevated pH conditions and discolorations in part of the pond.

Investigations determined that the site stormwater piping connected to the pond was contributing to discharge of Ca-OH impacted groundwater from the north portion of the site into the stormwater pond via preferential flow pathways. The pathways were created in connection with buried catch basins/pipes/granular pipe bedding. Groundwater was also discharged to the northern basin in the stormwater pond via inadvertent pumping of water from loading dock catch basins that, to a certain extent, take on groundwater. Actions, as documented in the Corrective Measures Report, were taken to mitigate these conditions including elimination of the preferential groundwater flow pathways and adjusting the pumping at the loading dock to minimize groundwater collection.

Subsequent to eliminating the preferential groundwater flow pathways to the pond, groundwater began to surface near the toe of the slope along the northern property boundary. Water that accumulated on the surface migrated into the catch basin and was also transmitted to the northern basin of the pond. In

response, the rim of the catch basin was raised and gravel was added to the northern access road until groundwater no longer surfaced or otherwise entered the catch basin.

3. ALKALINE GROUNDWATER OPERATION, MONITORING & MAINTENANCE

The following activities shall be conducted in order to maintain effective site cover, to monitor the continued effectiveness of the above-described corrective measures, and to provide basis for the annual IC/EC certification for the site.

3.1 Gravel Cover Inspections

Quarterly monitoring of conditions in the gravel cover on the surface of the northern access road shall be documented to verify that groundwater is not surfacing and the cover engineering control continues to be effective. Should observations of groundwater surfacing be made, the gravel cover will be enhanced to mitigate the condition.

3.1 Loading Dock Pump Operation & Maintenance

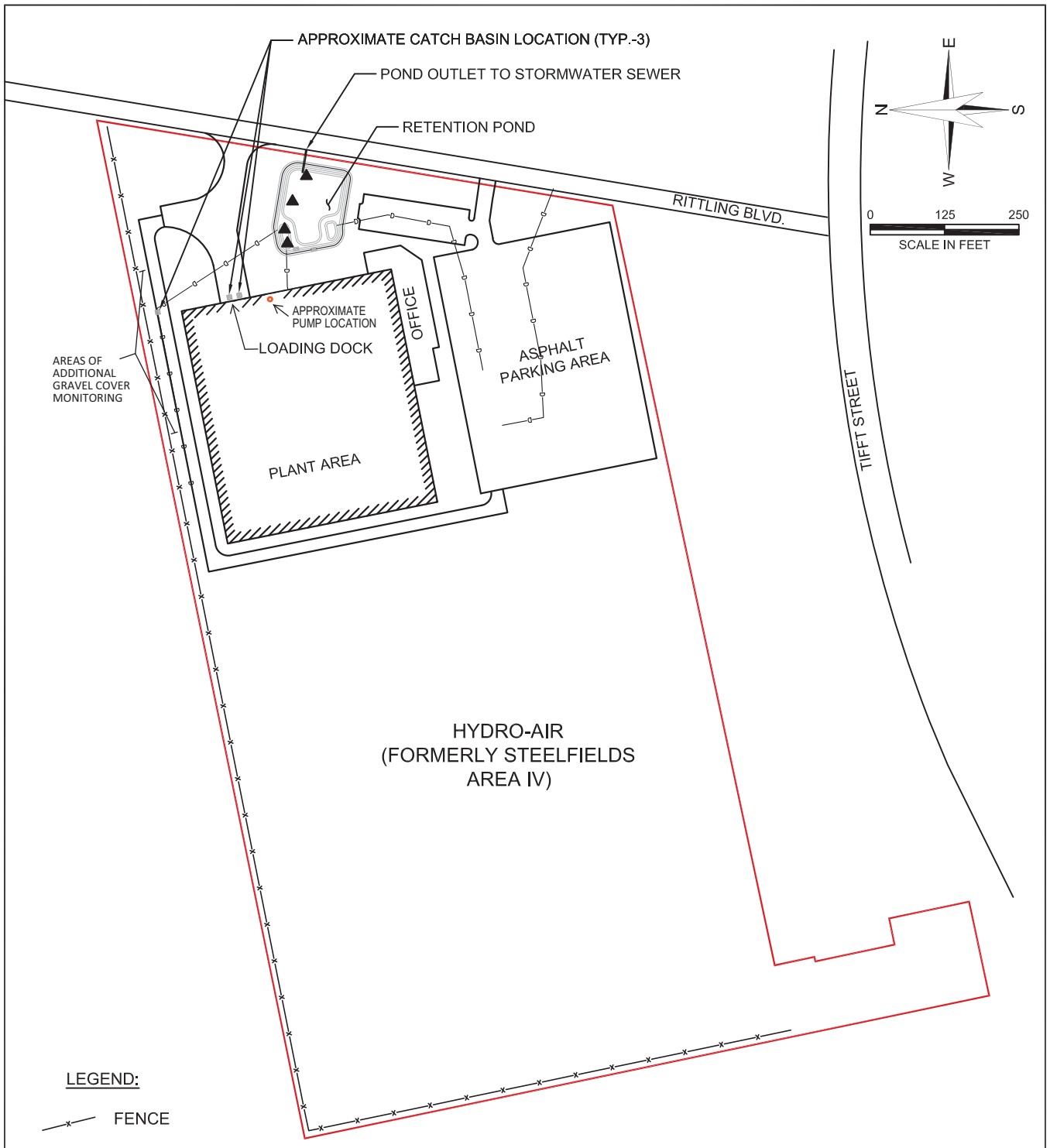
To minimize the inadvertent pumping of groundwater to the pond, the loading dock pump was set to pump automatically with the float set-point within the sump set high enough to maintain dry conditions in the loading ramp and minimize pumping of groundwater. The pump shall continue to be operated as described above and maintained as necessary to provide for continuous operation. Volumes of water pumped shall be recorded regularly.

3.2 Stormwater Pond Monitoring

Monitoring of pH and water temperature shall be conducted in the stormwater pond to verify that corrective measures and conditions remain protective. These measurements shall be obtained on a monthly basis, unless the pond is frozen. Monitoring locations are shown on Figure 1 and include the inlet, northern embayment, the midpoint at the main pond, and a point near the discharge pipe from the pond to the storm sewer. The two main pond samples are to be combined in the field to provide a representative pH value for the main pond area. The pH measurements will be compared to the NYSDEC TOGS 1.1.1 ambient water quality guidance value of pH 8.5. Exceedance of this value for more than three consecutive monitoring events shall trigger placement of fencing to prevent contact/access to all or part of the pond exceeding the pH criterion. The fencing will meet the City of Buffalo's building code for fencing off outdoor swimming pools and will be maintained in such a state.

HydroAir shall record monthly pH and temperature readings on the standard monitoring forms (See Attachment 2) and results will be reported in the Corrective Action Certification section of the annual PRR and IC/EC certification.

FIGURE 1



NOTE:
BASEMAP IS MODIFIED FROM A DRAWING ENTITLED "SITE PLAN" PROVIDED BY BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC. DATED JULY 2007. ALL LOCATIONS ARE APPROXIMATE.

HALEY & ALDRICH

HYDRO AIR COMPONENTS, INC.
BUFFALO, NEW YORK

MONITORING LOCATIONS

SCALE: AS SHOWN
JANUARY 2014

FIGURE 1

G:\34858_HYDROAIR\007\2014 SMP AMMENDMENT & REVISIONS\DRAWINGS\34858-007_SITE PLAN MONITORING LOCATIONS.DWG

ATTACHMENT 1

Corrective Measures Report dated 14 December 2012 and NYSDEC Letter dated 3 January 2014

Haley & Aldrich of New York
200 Town Centre Drive
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Tel: 585.359.9000
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14 December 2012
File No. 34858-007

Mr. David Szymanski
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue
Buffalo, NY 14203-2999

Subject: **Corrective Measures Report**
Hydro-Air Components, Inc. Property (formerly Steelfields Area IV)
BCP Site # C915204, Buffalo, New York

Dear Mr. Szymanski:

Haley and Aldrich of New York (Haley & Aldrich) has prepared this Corrective Measures Report on behalf of HydroAir Components, Inc. (HydroAir) for the above-referenced site (Site). This report summarizes the findings of the site inspections and monitoring activities completed in accordance with the Corrective Measures Work Plan (Work Plan), dated 17 November 2011, which was approved by the New York State Department of Environmental Conservation (Department) by a letter dated 29 December 2011.

Corrective measures were required by the Department after Haley & Aldrich determined, during the annual Engineering Control certification for 2011, that the Site Cover System was not completely protective of human health and the environment because of indications that groundwater with elevated pH (alkaline water) was surfacing, and accumulating on a section of the northern access road and other areas along the northern boundary of the Site. The cover system is maintained to isolate below-surface contaminants in accordance with the Soil/Fill Management Plan included in the Site Management Plan, as contained in the Final Engineering Report, dated September 2007 (SMP).

Based on the results of site inspections and continuous monitoring conducted to date by HydroAir, and the corrective measures previously implemented, Haley & Aldrich anticipates being able to provide a qualified annual Engineering Control certification for 2012 when the time comes.

The following sections of this report include the background of the alkaline groundwater conditions that are migrating onto the HydroAir property from the adjacent property to the north, a discussion of the mitigation measures implemented to address surfacing of alkaline groundwater on HydroAir property, the results of monitoring activities specified by the Work Plan to assess the mitigation measures, and our recommendations for future Site management.

Background

A plume of alkaline groundwater originating on the upgradient Steelfields Area III property to the north of the Site has been a concern in three locations on the Site: along the northern property boundary including the northern access road, in the recessed loading dock area, and in the stormwater pond. The alkaline condition was first observed in the stormwater pond, and then traced back to the plume of groundwater entering the Site along the northern property boundary. The conditions and mitigation efforts taken are summarized below and are more fully documented by work plans and reports that have been submitted to the Department and identified in the References attached to this letter.

Pond

A discoloration of the water in the stormwater pond was observed during 2008 (principally in the pond's northern settling basin). It was determined that the discoloration was caused by alkaline groundwater and its associated calcite flocculent that had accumulated in the settling basin. The origin of the alkaline water was determined by a 2008/2009 investigation program (as fully documented in a letter to the Department dated 30 August 2010) to be the apparent result of the migration of alkaline groundwater from the adjacent Steelfields Area III property onto the northern area of the HydroAir property. The alkaline conditions in the pond were exacerbated by the inadvertent conveyance of alkaline groundwater migrating from the adjacent property to HydroAir's stormwater pond during high groundwater conditions. The alkaline groundwater was conveyed through catch basins and piping and pipe bedding associated with HydroAir's stormwater collection system. The stormwater pond and interconnected conveyances in this area of the HydroAir property are shown on Figure 1.

These conditions have been documented in prior annual PPRs dating back to 2009 which describe the work planning, investigations, and response actions that have been undertaken by HydroAir to define the nature of the transport of alkaline groundwater onto HydroAir property and the corrective actions HydroAir has taken to mitigate the effects of this condition. Listed below are the efforts that have been made to limit alkaline groundwater from entering the pond:

- Sealing of the perforation in the northern catch basin to prevent alkaline groundwater from directly entering the stormwater system and pond;
- Installing trench collars along the length of piping between the catch basin and stormwater pond to reduce preferential migration of alkaline groundwater through the pipe bedding (Figure 1).

Northern Property Boundary

Subsequent to completion of the above efforts, alkaline groundwater began to discharge to the surface of the HydroAir property at the toe of slope located along the Site's northern property boundary. The groundwater discharge accumulated on the surface in this area until it was inadvertantly captured by stormwater catch basins and conveyed to the pond. In response to the condition, HydroAir raised the inlet of the catch basin and the surface of the surrounding access road by adding a layer of gravel. These actions prevented the alkaline groundwater discharge from entering the stormwater system and pond and the discoloration of the pond subsided. However, it was evident by the presence of residual calcite flocculent on the surface of the gravel access road that alkaline groundwater had continued to accumulate on the

surface and subsided over time requiring placement of additional gravel as described below to keep the alkaline groundwater from surfacing.

Loading Dock

Calcite flocculent has also been present in the recessed loading dock area. Stormwater runoff collected in the loading dock is removed by pumping from a sump located in the bottom of the dock, through buried pipes to the stormwater pond. Higher rates of pumping are necessary to maintain a dry loading dock not only during storm events, but also when the groundwater table is high, indicating that the sump collects groundwater as well as stormwater. The presence of alkaline water collecting in the loading dock is indicated by residual calcite flocculent on the surface of the pavement.
In response to conditions along the northern access road and in the loading dock, HydroAir implemented the following:

- Enhanced the Site cover system engineering control by placing additional gravel along the northern portion of the access road to inhibit the surfacing groundwater (a total of approximately 9 to 11 inches of gravel have been added); and
- Changed the automatic operation of the pump that drains the catch basins in the loading dock to manually activated operation. This change in pump operation was intended to reduce the possibility of creating a cone of depression in the shallow groundwater table around the sump which may have inadvertently captured or enhanced the natural flow of alkaline groundwater toward the loading dock during high groundwater conditions.

Corrective Measures Work Plan

The Corrective Measures Plan was implemented from January to October 2012 and further assessed the effectiveness of the above described engineering controls over time in support of PRR and annual institutional and engineering controls certification involving the following elements:

- Monitoring the continuing efficacy of the gravel cover by undertaking three separate visits, one each in March, April, and May of 2012 coincident with the anticipated seasonal high water table, to observe whether this is any evidence that the alkaline water is surfacing; and,

- Monitoring of the water pumped from the loading dock area to assess the quantity, and measure the pH prior to each discharge event over the 2012 PRR time period, and record the information collected.

Corrective Measures Findings

Gravel Ground Cover

Haley & Aldrich monitored the continued efficacy of the additional gravel cover over three separate site visits (29 March, 27 April, and 18 May 2012). These visits were timed to be coincident with the anticipated seasonal high water table. During all three site visits there was no evidence observed of alkaline water surfacing and accumulating in this area, indicating that the additional gravel cover is

sufficiently preventing surfacing of groundwater in this area of the property and potential for inadvertent human contact.

Loading Dock Monitoring & Pumping

Subsequent to Department approval of the Work Plan, and under the direction of Haley & Aldrich, HydroAir conducted 10 complete months of monitoring of the loading dock water (January through October 2012). As water accumulated in the dock, a measurement of pH was taken, using a hand held probe, and then the accumulated water was pumped via the stormwater piping, to the pond. Table 1 summarizes the pH monitoring results and also includes an estimate of the volume of accumulated water that was transferred to the pond during each pumping event. The range of pH observed during this period was from 8.01 in October to 12.28 in February. Variability of pH conditions was created by groundwater inflow. The volume of water pumped from the loading dock to the stormwater pond was not significant relative to the capacity of the pond and adverse impact (i.e. discoloration) was not observed in the pond over this time period.

HydroAir has recently reconfigured the loading dock pump system back to automatic operation. The operation of the pump has been further modified by adjusting (raising) the float set-point to enable sufficient pumping to maintain dry conditions within the recessed loading ramp while reducing excess pumping of groundwater below the loading dock that may have been inducing a flow of alkaline groundwater to this area from the adjacent property. Operation of the pump in this manner will mitigate accumulation of groundwater and potential for inadvertent human exposure to alkaline water in the loading dock.

Recommendations for Future Site Management

Corrective actions have been implemented and appear to be protective of human health and the environment. It is proposed that required Site Management Plan activities be revised to include documentation in future annual PRRs to confirm these corrective actions remain effective in the future. The following activities are recommended:

- Quarterly monitoring of conditions in the gravel cover area to verify that groundwater is not surfacing and this engineering control continues to be effective. Should observations of groundwater surfacing be observed, the engineering control (i.e. gravel cover) will be enhanced to mitigate the condition.
- Automatic operation of the pump at the loading dock to manage collection of water within the recessed loading dock ramp. The pump will continue to be operated as described above and maintained as necessary to provide for continuous availability for operation.
- Measurement of pH in the stormwater pond to verify that conditions remain protective. These measurements will be obtained on a monthly basis (or as otherwise possible based on winter/freezing conditions) by collection of field pH and temperature readings to monitor conditions at locations within the small embayment, containing the stormwater inlet pipe from the loading dock, and within the main pond area. Sampling locations are shown on Figure 1 and include the inlet, northern embayment, and in the main pond at the midpoint and near the discharge pipe. The main pond samples will be combined in the field to provide a representative pH value for the main pond area. These values will be conservatively evaluated by comparison to

the Department TOGS 1.1.1 ambient guidance water quality value of pH 8.5 selected for protection of public health. Exceedance of this value for more than three consecutive monitoring events will trigger enhancements as a precaution to mitigate potential for an inadvertent exposure. These enhancements will likely involve placement of fencing to prevent contact/access to all or part of the pond exceeding the pH criterion. The fencing will meet the City of Buffalo's building code for fencing off outdoor swimming pools. The Department will be notified of these conditions and provided a work plan describing location and procedure for installation and management.

- Per the Work Plan, the SMP be amended to acknowledge the existence of the regional alkaline groundwater condition related to the upgradient Steelfields Area III site and require the continued monitoring of the northern access road area and the stormwater pond as part of the annual certification process.

Should you have any questions or concerns regarding this Corrective Measures Report, please do not hesitate to contact us.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK

Bethany J. Zinni, P.G.
Sr. Geologist

Glenn M. White
Sr. Scientist/Project Manager

Edward L. Hynes
Vice President

c: HydroAir; A. Lennartz
DEC Region 9; M. Moore
T. Walsh; H&B

Attachments:
References
Figure 1. Proposed Retention Pond Monitoring Locations
Table 1. Loading Dock Discharge Monitoring Data

G:\34858_HydroAir\007\2012 Corrective Measures Report\2012-1210-ltr-hydro-air- corrective measures report_formated_FD.docx

REFERENCES

1. Voluntary Cleanup Program & Brownfields Cleanup Program, Final Engineering Report For Area IV (Former Donner-Hanna Coke Yard Parcel), TurnKey Environmental Restoration, LLC., September 2007.

2. Sewer Use Regulations, Buffalo Sewer Authority, December 2007.

3. Site Management Annual Review Report & Institutional Controls & Engineering Controls (lC/EC) Certification, HydroAir Components, Inc. Property (Formerly Steelfields Area IV), Brownfield Cleanup Program (BCP) Site #C915204, Haley & Aldrich of New York, 1 July 2009.

4. Work Plan for the Installation of Soil-Bentonite-Cement Collars, Hydro-Air Components, Inc. Site (Formerly Steelfields Area IV), Brownfield Cleanup Program (BCP) Site #C915204, Buffalo, New York, Haley & Aldrich of New York, 21 August 2009.

5. Work Plan for the Installation of Soil-Bentonite-Cement Collars (approval letter), Hydro-Air Components, Inc. Site (Formerly Steelfields Area IV), Brownfield Cleanup Program (BCP) Site #C915204, Buffalo, New York, New York State Department of Environmental Conservation, September 2, 2009.

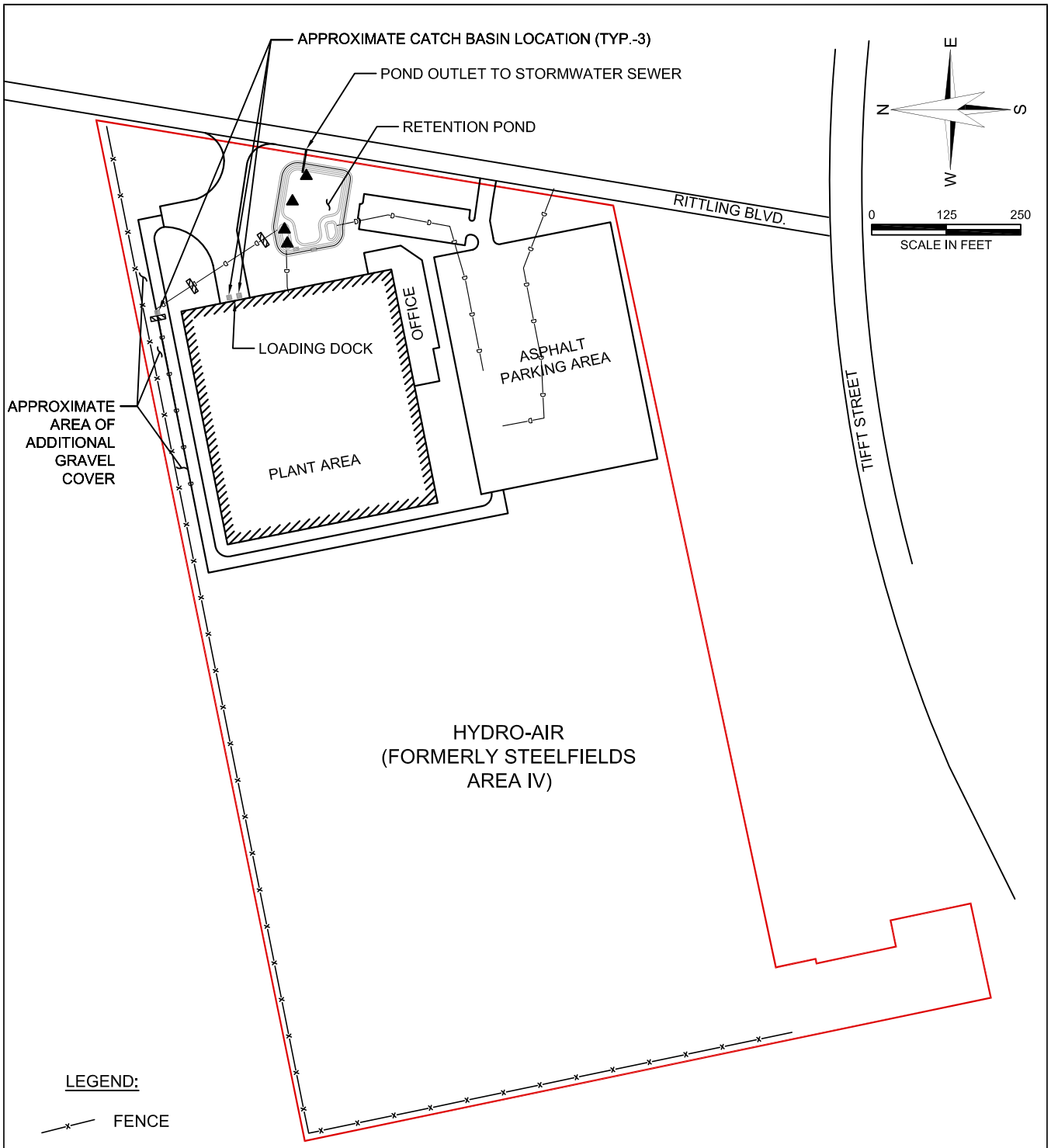
6. Letter to the Department re: Stormwater Pond – Alkalinity, HydroAir Components, Inc. Property (formerly Steelfields Area IV), Brownfield Cleanup Program (BCP) Site #C915204, Buffalo, New York, Haley & Aldrich of New York, 30 August 2010.

7. Site Management Annual Review Report & Institutional Controls & Engineering Controls (lC/EC) Certification, HydroAir Components, Inc. Property (Formerly Steelfields Area IV), Brownfield Cleanup Program (BCP) Site #C915204, Haley & Aldrich of New York, 1 September 2010.

8. Site Management Annual Review Report & Institutional Controls & Engineering Controls (lC/EC) Certification, HydroAir Components, Inc. Property (Formerly Steelfields Area IV), Brownfield Cleanup Program (BCP) Site #C915204, Haley & Aldrich of New York, 4 August 2011.

9. Corrective Measures Work Plan, 17 November 2011, Haley & Aldrich of New York

10. Corrective Measures Work Plan (approval letter), Steelfields Area IV, Buffalo, Erie County, Site No.: C915204, New York State Department of Environmental Conservation, 29 December 2011.



LEGEND:

- FENCE
- BCP PROPERTY BOUNDARY
- APPROXIMATE TRENCH COLLAR INSTALLATION LOCATION
- D — STORM WATER PIPE
- ▲ PROPOSED RETENTION POND MONITORING LOCATION
- APPROXIMATE CATCH BASIN LOCATION

NOTE:
BASEMAP IS MODIFIED FROM A DRAWING ENTITLED "SITE PLAN" PROVIDED BY BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC. DATED JULY 2007. ALL LOCATIONS ARE APPROXIMATE.

HALEY & ALDRICH

HYDRO AIR COMPONENTS, INC.
BUFFALO, NEW YORK

PROPOSED RETENTION POND MONITORING LOCATIONS

SCALE: AS SHOWN
DECEMBER 2012

FIGURE 1

\\ROC\COMMON\34858_HYDROAIR\007\2012 CORRECTIVE MEASURES REPORT\DRAWINGS\34858-002_SITE PLAN TRENCH COLLAR LOCATIONS.DWG

Table 1.
Loading Dock Discharge Monitoring Data
Hydro-Air Components, Inc.
BCP Site #C915204, Buffalo, New York

Data Collection Completed By:	Date/Time of Measurement	pH	Est. Quantity of Water	Date/Time of Discharge	Comments (e.g., weather conditions, method of measurement, etc)
TBS	1/6/12 9:00	11	400	1/6/12 9:00	dry, sunny
TBS	1/10/12 10:00	10.5	315	1/10/12 10:00	dry, sunny
TBS	1/11/12 6:00	11.5	210	1/11/12 6:00	dry, sunny
TBS	1/12/12 8:00	9	1,290	1/12/12 8:00	rain
TBS	1/12/12 15:00	9	690	1/12/12 15:00	rain
TBS	1/13/12 5:00	9	1,590	1/13/12 5:00	snow
TBS	1/16/12 5:00	9.5	330	1/16/12 5:00	top frozen, light snow
TBS	1/17/12 5:00	9.5	1,140	1/17/12 5:00	light rain
TBS	1/17/12 11:00	9.5	720	1/17/12 11:00	light rain
TBS	1/18/12 5:00	9.5	1,560	1/18/12 5:00	light snow
TBS	1/19/12 7:00	12.01	690	1/19/12 7:00	top frozen, Extech digital Meter
TBS	1/19/12 14:00	11.53	540	1/19/12 15:00	top frozen
TBS	1/23/12 5:00	9.96	2,190	1/23/12 6:00	rain, melting snow
TBS	1/23/12 14:00	10.01	1,290	1/23/12 15:00	rain, melting snow
TBS	1/24/12 5:00	9.93	2,040	1/24/12 6:00	light rain
TBS	1/25/12 5:00	10.78	930	1/25/12 6:00	cloudy, dry
TBS	1/26/12 5:00	10.82	960	1/26/12 7:00	melting snow
TBS	1/27/12 5:00	10.01	1,644	1/27/12 7:00	rain
TBS	1/30/12 6:00	10.56	680	1/30/12 8:00	light snow
TBS	1/31/12 5:00	11.07	990	1/31/12 9:00	melting snow
TBS	1/31/12 14:00	10.92	1,020	1/31/12 15:00	melting snow
TBS	2/1/12 5:00	9.16	3,100	2/1/12 7:00	heavy rain
TBS	2/2/12 5:00	10.02	350	2/2/12 8:00	cold, dry
TBS	2/3/12 5:00	11.03	370	2/3/12 6:00	cold, dry
TBS	2/6/12 5:00	11.07	1,470	2/6/12 8:00	cold, dry
TBS	2/7/12 5:00	11.54	360	2/7/12 7:00	cold, dry
TBS	2/7/12 14:00	11.439	270	2/7/12 15:00	cold, dry
TBS	2/8/12 5:00	12.03	360	2/8/12 7:00	cold, dry
TBS	2/13/12 6:00	12.01	410	2/13/12 8:00	light snow
TBS	2/14/12 5:00	12.28	600	2/14/12 7:00	melting snow
TBS	2/15/12 5:00	11.96	960	2/15/12 6:00	light rain
TBS	2/16/12 4:00	11.77	1,410	2/16/12 6:00	light rain
TBS	2/17/12 13:00	12.11	960	2/17/12 15:00	light rain
EG	2/20/12 14:00	11.87	900	2/20/12 15:00	cool, dry
EG	2/21/12 13:00	12.01	300	2/21/12 14:00	cool, dry
EG	2/22/12 7:00	10.61	600	2/22/12 9:00	light rain
EG	2/23/12 9:00	11.92	1,350	2/23/12 11:00	melting snow
EG	2/24/12 8:00	9.83	1,530	2/24/12 10:00	light rain
TBS	2/27/12 4:00	10.51	1,890	2/27/12 6:00	rain
TBS	2/28/12 4:00	10.55	630	2/28/12 6:00	mild, dry
TBS	2/29/12 5:00	10.23	480	2/29/12 7:00	mild, dry
TBS	3/1/12 5:00	10.64	288	3/1/12 7:00	rain, cold
EG	3/2/12 9:00	11.04	90	3/2/12 11:00	dry
EG	3/5/12 13:00	11.86	210	3/5/12 15:00	cold
EG	3/6/12 12:00	11.38	180	3/6/12 14:00	cool, dry
EG	3/7/12 8:00	11.57	90	3/7/12 10:00	mild, dry
EG	3/8/12 8:00	11.79	120	3/8/12 10:00	mild, dry
EG	3/9/12 8:00	9.53	210	3/9/12 10:00	cool, overnight rain
EG	3/12/12 9:00	12.01	180	3/12/12 11:00	mild, dry
EG	3/13/12 8:00	11.35	270	3/13/12 10:00	mild, rain

Table 1.
Loading Dock Discharge Monitoring Data
Hydro-Air Components, Inc.
BCP Site #C915204, Buffalo, New York

Data Collection Completed By:	Date/Time of Measurement	pH	Est. Quantity of Water	Date/Time of Discharge	Comments (e.g., weather conditions, method of measurement, etc)
EG	3/14/12 8:00	11.9	90	3/14/12 10:00	mild, dry
MK	3/15/12 8:00	11.88	90	3/15/12 10:00	mild, dry
MK	3/16/12 8:00	11.63	90	3/16/12 10:00	cool, rain
MK	3/19/12 8:00	11.43	120	3/19/12 10:00	mild, dry
EG	3/20/12 8:00	9.04	60	3/20/12 10:00	mild, dry
EG	3/21/12 8:00	11.16	60	3/21/12 10:00	mild, dry
EG	3/22/12 8:00	12.01	60	3/22/12 10:00	mild, dry
EG	3/23/12 8:00	12.04	30	3/23/12 10:00	mild, dry
EG	3/26/12 8:00	11.19	240	3/26/12 10:00	rain over weekend
EG	3/27/12 12:00	11.97	60	3/27/12 14:00	cool, dry
EG	3/28/12 8:00	11.98	60	3/28/12 10:00	mild, dry
EG	3/29/12 8:00	11.47	120	3/29/12 10:00	cool, dry
EG	3/30/12 8:00	11.93	60	3/30/12 10:00	cool, dry
EG	4/2/12 8:00	10.99	1,200	4/2/12 10:00	cool, rain over weekend
EG	4/3/12 8:00	11.81	450	4/3/12 10:00	light rain
EG	4/4/12 8:00	11.95	150	4/4/12 10:00	warmer, dry
EG	4/5/12 8:00	12.04	300	4/5/12 10:00	cool, dry
EG	4/9/12 8:00	11.92	300	4/9/12 10:00	cool, dry
EG	4/10/12 8:00	11.84	150	4/10/12 10:00	cool, dry
EG	4/11/12 8:00	12.01	300	4/11/12 10:00	cool, dry
EG	4/12/12 8:00	11.94	300	4/12/12 10:00	cool, dry
EG	4/13/12 8:00	12.11	160	4/13/12 10:00	cool, dry
EG	4/16/12 8:00	11.3	300	4/16/12 10:00	light rain, warm
EG	4/17/12 8:00	12.02	150	4/17/12 10:00	cool, dry
EG	4/18/12 8:00	11.99	150	4/18/12 11:00	warmer, dry
EG	4/19/12 8:00	11.91	300	4/19/12 10:00	warmer, dry
EG	4/20/12 8:00	12.02	150	4/20/12 10:00	warmer, dry
EG	4/24/12 8:00	9.22	1,350	4/24/12 10:00	cold, snow, rain
EG	4/25/12 8:00	11.24	600	4/25/12 10:00	cool, dry
EG	4/26/12 8:00	11.14	300	4/26/12 10:00	cool, dry
EG	4/27/12 8:00	11.22	300	4/27/12 10:00	cool, dry
EG	4/30/12 8:00	11.42	600	4/30/12 10:00	cool, dry
EG	5/1/12 8:00	8.86	1,050	5/1/12 10:00	mild, rain
EG	5/2/12 8:00	11.22	900	5/2/12 10:00	mild, rain
EG	5/3/12 8:00	10.4	600	5/3/12 10:00	mild, dry
EG	5/7/12 8:00	11.39	600	5/7/12 10:00	mild, dry
EG	5/8/12 12:00	11.74	1,800	5/8/12 14:00	mild, rain
EG	5/9/12 8:00	10.71	450	5/9/12 10:00	mild, dry
EG	5/10/12 8:00	11.27	300	5/10/12 10:00	mild, dry
EG	5/11/12 8:00	11.67	300	5/11/12 10:00	warm, dry
EG	5/14/12 8:00	11.72	450	5/14/12 10:00	warm, dry
EG	5/15/12 8:00	12	450	5/15/12 10:00	warm, dry
EG	5/16/12 8:00	12.03	300	5/16/12 10:00	warm, dry
EG	5/17/12 8:00	12.13	150	5/17/12 10:00	cool, dry
EG	5/18/12 8:00	12	150	5/18/12 10:00	cool, dry
EG	5/21/12 8:00	11.88	300	5/21/12 10:00	warm, dry
EG	5/22/12 8:00	11.96	300	5/22/12 10:00	warm, dry
EG	5/23/12 10:00	11.71	800	5/23/12 12:00	warm, dry
EG	5/25/12 7:00	11.82	150	5/25/12 9:00	warm, dry
EG	5/29/12 7:00	11.81	900	2/29/12 9:00	warm, dry

Table 1.
Loading Dock Discharge Monitoring Data
Hydro-Air Components, Inc.
BCP Site #C915204, Buffalo, New York

Data Collection Completed By:	Date/Time of Measurement	pH	Est. Quantity of Water	Date/Time of Discharge	Comments (e.g., weather conditions, method of measurement, etc)
EG	5/30/12 8:00	11.77	600	5/30/12 10:00	warm, dry
EG	6/1/12 8:00	11.85	600	6/1/12 10:00	cool, dry
TBS	6/4/12 5:00	8.89	1,650	6/4/12 6:00	heavy rain
EG	6/5/12 8:00	11.02	150	6/5/12 10:00	cool, dry
TBS	6/6/12 5:00	11.79	300	6/6/12 7:00	cool, dry
EG	6/8/12 8:00	11.71	150	6/8/12 10:00	mild, dry
EG	6/11/12 8:00	8.87	150	6/11/12 10:00	mild, dry / weekend rain
TBS	6/12/12 5:00	8.68	840	6/12/12 6:00	overnight light rain
EG	6/13/12 8:00	9.88	450	6/13/12 10:00	cool, overnight light rain
TBS	6/18/12 5:00	9.93	510	6/18/12 7:00	light rain
TBS	6/19/12 5:00	9.14	660	6/19/12 7:00	warm, dry
TBS	7/1/12 0:00	-	0	7/1/12 0:00	No discharge for July
TBS	7/31/12 0:00	-	0	7/31/12 0:00	No discharge for July
TBS	8/6/12 8:00	8.76	900	8/6/12 10:00	rain over weekend
TBS	9/5/12 5:00	8.66	900	9/5/12 6:00	light rain
TBS	9/10/12 5:00	8.54	1,440	9/10/12 6:00	light rain
TBS	9/17/12 5:00	8.62	1,050	9/17/12 7:00	weekend rain
TBS	9/24/12 4:00	9.01	720	9/24/12 5:00	weekend rain
TBS	10/2/12 4:00	8.73	1,170	10/2/12 5:00	rain
TBS	10/3/12 5:00	8.82	630	10/3/12 6:00	clear
TBS	10/8/12 4:00	9.02	1,470	10/8/12 6:00	rain
TBS	10/15/12 8:00	8.63	600	10/15/12 10:00	rain
TBS	10/19/12 5:00	8.01	780	10/19/12 6:00	light rain
TBS	10/23/12 6:00	8.56	1,170	10/23/12 8:00	light rain
TBS	10/25/12 7:00	8.43	630	10/25/12 9:00	light rain
TBS	10/28/12 10:00	8.51	1,440	10/28/12 11:00	rain
TBS	10/29/12 5:00	8.56	2,100	10/29/12 6:00	rain
TBS	10/30/12 4:00	8.42	1,650	10/30/12 5:00	light rain
TBS	10/31/12 4:00	8.56	1,470	10/31/12 0:00	light rain

Notes:
All water was pumped to the retention pond. pH measurements were collected using a hand held probe.
TBS = Thomas B. Shaus
EG = Ed Gary
MK = Mark Kozlowski

New York State Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Ave, Buffalo, New York 14203-2915
Phone: (716) 851-7220; Fax: (716) 851-7226
Website: www.dec.ny.gov

Joe Martens
Commissioner

January 3, 2014

Hydro-Air Components, Inc.
Attn: Mr. Andrew Lennartz
100 Rittling Boulevard
Buffalo, New York 14220

Dear Mr. Lennartz (as the Certifying Party):

Site Management - 2013 Periodic Review Report (PRR)
Steelfields Area IV, Buffalo
Erie County, Site No.: C915204

The Department has reviewed your Periodic Review Report (PRR) and IC/EC Certification for following period: May 5, 2010 to December 15, 2012.

The Department hereby accepts the PRR and associated Certification. The frequency of Periodic Reviews for this site is one year, and your next PRR is due on February 14, 2014. You will receive a reminder letter and updated certification form prior to the due date.

Please note: The Department accepts the submitted Corrective Measures Report (dated December 14, 2012). Please ensure that inspection and maintenance of appurtenances employed as part of Corrective Measures are appended to the Site Management Plan and documented in future PRR's.

If you have any questions or comments, please contact me at 716-851-7220 or e-mail: dsszyman@gw.dec.state.ny.us.

Sincerely,

David Szymanski
Project Manager

DS:sz

ec: Mr. Martin Doster - NYSDEC
Mr. Maurice Moore - NYSDEC
Mr. Glenn White - Haley & Aldrich
Thomas Walsh, Esq. - Hiscock & Barclay, LLP

ATTACHMENT 2

Stormwater Pond Monitoring Form

Stormwater Pond Monitoring Form
HydroAir Components, Inc.
BCP Site #C915204, Buffalo, New York

Data Collection Completed By:	Date of Measurment (DD/MM/YR)	Time of Measurement	Measurement Location						Conditions at Pond (color, vegetation, odor, frozen, etc.)	General Comments (weather conditions, etc)
			Discharge Pipe		Northern Embayment		Midpoint Pond (Combined Sample)			
			pH	Temp (F)	pH	Temp (F)	pH	Temp (F)		

All pH values will be evaluated against the NYSDEC TOGS 1.1.1 ambient water quality guidance value of pH 8.5 selected for protection of public health.
Exceedance of the guidance value (8.5) for > 3 consecutive monitoring events will trigger enhancements as descirbed in Section IV of the SMP.

Notes or Other Observations:

Page _____ of ______

Prepared By: Date:
Checked By: Date: