NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
STATE SUPERFUND PROGRAM
ECL §27-1301 *et seq.*

In the Matter a Remedial Program for

STIPULATION AND ADMINISTRATIVE SETTLEMENT
Index No.
CO 8-2017-08-10-01

DEC Site Name: Study Area
DEC Site No.: Part of 851046 –
"The City Owned Stadium Property"
Site Address: Corning Boulevard
Corning, NY 14830
Steuben County

Hereinafter referred to as "Site"

by:

Corning Painted Post Area School District

Hereinafter referred to as "Respondent"

A. The Department is responsible for inactive hazardous waste disposal site remedial programs pursuant to Article 27, Title 13 of the Environmental Conservation Law ("ECL") and Part 375 of Title 6 of the Official Compilation of Codes, Rules and Regulations ("6 NYCRR") and may issue orders consistent with the authority granted to the Commissioner by such statute.

B. The Department is responsible for carrying out the policy of the State of New York to conserve, improve and protect its natural resources and environment and control water, land, and air pollution consistent with the authority granted to the Department and the Commissioner by Article 1, Title 3 of the ECL.

C. This Stipulation is issued pursuant to the Department's authority under, inter alia, ECL Article 27, Title 13 and ECL 3-0301, and resolves the District's liability to the State as provided at 6 NYCRR 375-1.5(b)(5).

1. The District leases Memorial Stadium (Stadium) adjacent to the District High School located at 201 Cantigney Street, Corning New York, 14830 (the "Site") on which a discrete project involving limited excavation to accommodate the installation of a fiber optic line for communication improvements at the stadium as more specifically depicted in the attached work plan is to be completed in order for the District to deliver educational services in accordance with curriculum requirements to District Students. The Site is located within an area designated by the Department as the study area which bears index number 851046 (the "Study Area") and the Study Area is not

currently listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

2. The District consents to the issuance of this Stipulation without: (i) an admission or finding of liability, fault, wrongdoing, or violation of any law, regulation, permit, order, requirement, or standard of care of any kind whatsoever; (ii) an acknowledgment that there has been a release or threatened release of hazardous waste at or from the Site; and/or (iii) an acknowledgment that a release or threatened release of hazardous waste at or from the Site constitutes a significant threat to the public health or environment.

3. Solely with regard to the matters set forth below, the District hereby waives any right to a hearing as may be provided by law, consents to the issuance and entry of this Order, and agrees to be bound by its terms. The District consents to and agrees not to contest the authority or jurisdiction of the Department to issue or enforce this Order, and agrees not to contest the validity of this or its terms or the validity of data submitted to the Department by the District pursuant to this Order.

NOW, having considered this matter and being duly advised, IT IS ORDERED THAT:

I. Real Property

The Site subject to this Order is the Memorial Stadium parcel located adjacent to the High School at 201 Cantigney Street and more specifically the area of the Site where the proposed work is to be completed as more fully described and identified in the attachments to Order which are incorporated herein by reference. The Site subject to this Order (it should be noted that only a discrete portion of the Site will be impacted by the Project) is generally described as follows:

Subject property description (Exhibit "A" is a map of the Site)

Part of Tax Map/Parcel No.: 318.05-01-068.000
201 Cantigney Street
Corning, NY 14830
Owner: City of Corning, leased to Corning Painted Post Are School District

II. Construction Project

The construction project covered under this Stipulation is limited to excavation of a limited area on the Stadium parcel as more fully described in the work plan attached as Exhibit "B."

III. Initial Work Plan

The Work Plan attached as Exhibit "B" has been approved by the Department and shall be implemented in accordance with the plan and schedule.

IV. Payment of State Costs

The Department waives its rights to collect oversight costs associated with the Site under this Order against the District, but reserves any and all rights it may have to collect any and all oversight costs against any other party.

V. Communications

A. All written communications required by this Consent Order shall be transmitted by United States Postal Service, by private courier service, by hand delivery, or by electronic mail.

1. Communication from the District shall be sent to:

Kelly Cloyd, Ph.D. (1 hard copy (unbound for work plans) & 1 electronic copy)
Department of Environmental Conservation
Division of Environmental Remediation
6274 East Avon-Lima Road
Avon, NY 14414
Cloyd, Kelly (DEC) kelly.cloyd@dec.ny.gov

Krista Anders (electronic copy only)
New York State Department of Health
Bureau of Environmental Exposure Investigation
Empire State Plaza
Corning Tower Room 1787
Albany, NY 12237
krista.anders@health.ny.00v

Ben Conlon, Esq. (correspondence only)
New York State Department of Environmental Conservation
Office of General Counsel
625 Broadway
Albany, NY 12233
Conlon, Benjamin (DEC) (benjamin.conlon@dec.ny.gov)

Communication from the Department to the District shall be sent to:

Corning-Painted Post Area School District Offices
Attn: Superintendent of Schools Michael K. Ginalski
165 Charles Street
Painted Post, NY 14870
mginalski@cppmail.com

Joseph D. Picciotti, Esq.
Harris Beach PLLC
99 Garnsey Road
Pittsford, NY 14534
jpicciotti@harrisbeach.com

Haley & Aldrich of New York
Attn. Glenn M. White, CHMM
200 Town Centre Dr. # 2
Rochester, NY 14623
gwhite@HaleyAldrich.com

B. The Department and the District reserve the right to designate additional or different addressees for communication on written notice to the other. Additionally, the Department reserves the right to request that the District provide more than one paper copy of any work plan or report.

C. Each party shall notify the other within ninety (90) days after any change in the addresses listed in this paragraph or in Paragraph I.

D. The effective date of this Order is the day it is signed by the Commissioner or the Commissioner's designee.

E. Respondent shall further comply with the standard provisions which are attached, and which constitute material and integral terms of this Order, and are hereby incorporated into this document.

Dated: ~~July~~ August 10, 2017

BASIL SEGGOS
COMMISSIONER
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

By: _____
Robert W. Schick, P.E., Director
Division of Environmental Remediation

CONSENT BY RESPONDENT

Respondent hereby consents to the issuing and entering of this Consent Order, waives Respondent's right to a hearing herein as provided by law, and agrees to be bound by this Consent Order.

Corning Painted Post Area School District

By: _____

Title: Superintendent of Schools

Date: August 10, 2017

STATE OF NEW YORK)
) ss:
COUNTY OF STEUBEN)

On the 10th day of August in the year 2017, before me, the undersigned, personally appeared _____ *(name)* personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Acknowledgment by a corporation, in New York State:

On the 10th day of August in the year 2017, before me, the undersigned, personally appeared _____ *(full name)* personally known to me who, being duly sworn, did depose and say that he/she/they reside at _____ *(full mailing address)* and that he/she/they is (are) the _____ *(president or other officer of director or attorney in fact duly appointed)* of the _____ *(full legal name of corporation)*, the corporation described in and which executed the above instrument; and that he/she/they signed his/her/their name(s) thereto by the authority of the board of directors of said corporation.

_____
Notary Public, State of New York

KAREN R. DUTCHER
NOTARY PUBLIC, STATE OF NEW YORK
STEUBEN COUNTY #01ST6012212
COMMISSION EXPIRES AUG. 24, 2018

STANDARD PROVISIONS

Payment. Any penalty assessed pursuant to the terms and conditions of this Order shall be paid by submitting a certified check, cashier's check, or money order, payable to the Department of Environmental Conservation, to: NYS Department of Environmental Conservation, Office of General Counsel, Attn: Ben Conlon, 625 Broadway, 14th Floor, Albany, New York, 12233-1500. Unpaid penalties imposed by this Order shall bear interest at the rate of 9 percent (9%) per annum for each day the penalty, or any portion thereof, remains unpaid. Payments received shall first be applied to accrued interest charges and then to the unpaid balance of the penalty.

Duration. This Order shall take effect when it is signed by the Commissioner of Environmental Conservation, or his designee, and shall expire when Respondent has fully complied with the requirements of this Order.

Access. For the purposes of monitoring or determining compliance with this Order, employees and agents of the Department shall be provided access to any facility, site, or records owned, operated, controlled or maintained by the Respondent, in order to inspect and /or perform such tests as the Department may deem appropriate, to copy such records, or to perform any other lawful duty or responsibility.

Force Majeure. If Respondent cannot comply with a deadline or requirement of this Order because of an act of God, war, strike, riot, catastrophe, or other condition that was not caused by the negligence or willful misconduct of Respondent and which could not have been avoided by the Respondent through the exercise of due care, Respondent shall apply in writing to the Department within a reasonable time after obtaining knowledge of such fact and request an extension or modification of the deadline or requirement.

Indemnity. Respondent shall indemnify and hold the Department, the State of New York, and their representatives and employees harmless for all claims, suits, actions, damages and costs resulting from the acts and/or omissions of Respondent, intentional, negligent, or otherwise, of every nature and description, arising out of or resulting from the compliance or attempted compliance with the provisions of this Order by Respondent or its employees, servants, agents, successors or assigns.

Modification. No change in this Order shall be made or become effective except as specifically set forth by written order of the Commissioner, being made either upon written application of Respondent, or upon the Commissioner's own findings after notice and opportunity to be heard have been given to Respondent. Respondent shall have the burden of proving entitlement to any modification requested pursuant to this Standard Provision or the "Force Majeure" provision, supra. Respondent's request for modification shall not be unreasonably denied by the Department, which may impose such additional conditions upon Respondent as the Department deems appropriate.

Other Rights. Nothing contained in this Order shall be construed as barring, diminishing, adjudicating or in any way affecting: (1) any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department and/or the State of New York may have against Respondent and /or anyone other than Respondent for any natural resource damage claim that the Department may have; (2) any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against anyone other than the Respondent; (3) any right of the Department to enforce administratively or at law or in equity, the terms, provisions, and conditions of this Order; (4) any right of the Department to bring any further action, either administrative or judicial, for any other violations of the ECL, the rules and regulations promulgated thereunder, or conditions contained in orders or permits, if any, issued by the Department to Respondent; (5) the summary abatement powers of the Department, either at common law or as granted pursuant to statute or regulation.

Entire Agreement. This agreement shall constitute the entire agreement of the Department and Respondent with respect to settlement of those violations specifically referenced herein.

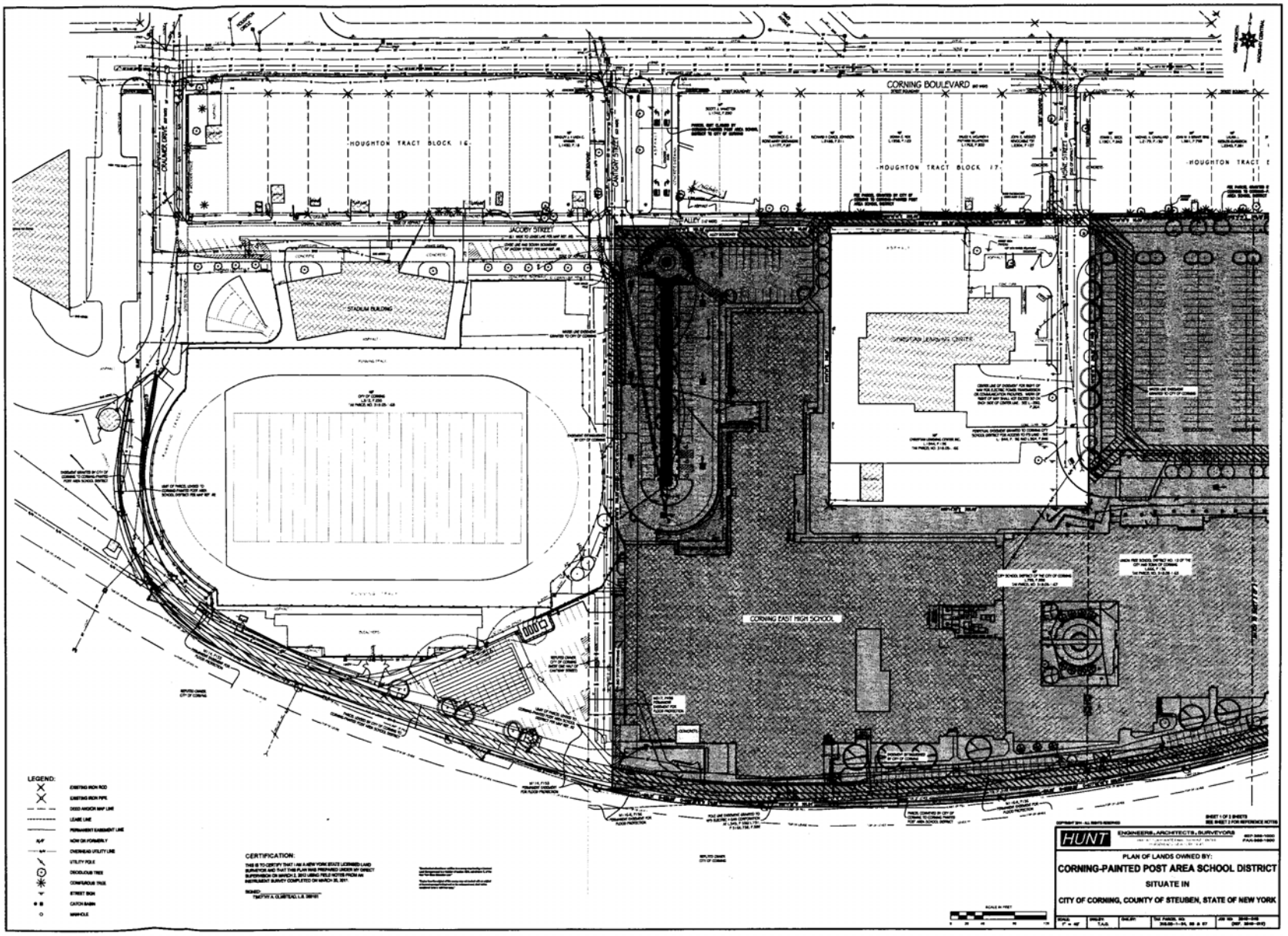
Binding Effect. The provisions, terms, and conditions of this Order shall be deemed to bind Respondent and Respondent's heirs, legal representatives, receivers, trustees in bankruptcy, successors and assigns.

Service. If Respondent is represented by an attorney with respect to the execution of this Order, service of a duly executed copy of this Order upon Respondent's attorney by ordinary mail shall be deemed good and sufficient service.

Multiple Respondents. If more than one Respondent is a signatory to this Order, use of the term "Respondent" in these Standard Provisions shall be deemed to refer to each Respondent identified in the Order

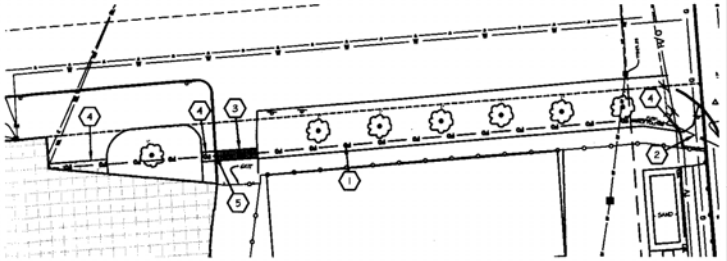
EXHIBIT "A"

Map

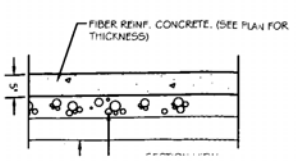

CORNING BOULEVARD
HOUGHTON TRACT BLOCK 16
HOUGHTON TRACT BLOCK 17
HOUGHTON TRACT
JACOBY STREET
ALLEY
CRANDER DRIVE
CARTER STREET
HOWE STREET
STADIUM BUILDING
CORNING EAST HIGH SCHOOL
LEGEND:
EXISTING IRON ROD
EXISTING IRON PIPE
DEED ANGLE MAP LINE
LEASE LINE
PERMANENT EASEMENT LINE
N/F
NOW OR FORMERLY
OVERHEAD UTILITY LINE
UTILITY POLE
DECIDUOUS TREE
CONIFEROUS TREE
STREET SIGN
CATCH BASIN
MANHOLE
CERTIFICATION:
SCALE IN FEET
HUNT
ENGINEERS • ARCHITECTS • SURVEYORS
PLAN OF LANDS OWNED BY:
CORNING-PAINTED POST AREA SCHOOL DISTRICT
SITUATE IN
CITY OF CORNING, COUNTY OF STEUBEN, STATE OF NEW YORK

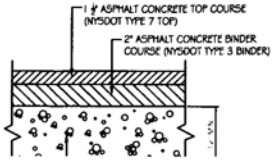
COMMUNICATION AND ELECTRICAL NOTES:

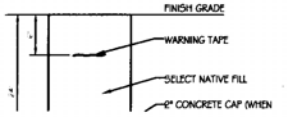
1. CONTRACTOR TO PROVIDE FIBER OPTIC CABLE ENCASED IN 2" SCH 40 PVC. SEE TRENCHING DETAIL 2/CA-L1.
2. CONTRACTOR TO PROVIDE FIBER OPTIC LINE IN EXISTING ELECTRICAL CONDUIT FROM HIGH SCHOOL BUILDING.
3. CONTRACTOR TO PROVIDE ASPHALT PATCHING AND TRENCHING WHERE INDICATED PER DETAIL 1#2/CA-L1.
4. CONTRACTOR TO PROVIDE CONCRETE REPAIR WHERE INDICATED PER DETAIL 3/CA-L1.
5. REMOVE AND REPLACE GRANITE CURB AS NECESSARY.
6. PROVIDE PULLBOX AT JUNCTION OF NEW AND EXISTING CONDUITS.



4 SITE PLAN
SCALE:1" = 30'







STALL
OL DISTRICT
AND FIELD PROJECT

EXHIBIT "B"

Work Plan

HALEY & ALDRICH OF NEW YORK
200 Town Centre Drive
Suite 2
Rochester, NY 14623
585.359.9000

25 July 2017
File No. 129334-002

Mr. Kelly Cloyd, PH.D.
NYS Department of Environmental Conservation
Division of Environmental Remediation - Region 8
6274 East Avon-Lima Road
Avon, New York 14414

Subject: Memorial Stadium Fiber Optic Line Installation Work Plan
Corning Painted Post Area School District
Corning, New York

Dear Mr. Cloyd:

This letter presents plans for improvements at the Memorial Stadium (Stadium) in Corning, NY. The Corning Painted Post Area School District (District) is planning the installation of a fiber optic line from the CPP High School entrance driveway area to the Stadium (see attached drawing showing the work area). The Stadium is owned by the City of Corning (City) and utilized and maintained by the District for student activities. The Stadium is within the New York State Department of Environmental Conservation (NYSDEC) "Study Area" NYSDEC No. 851046 currently being characterized by Corning Incorporated (Corning) under an agreement with the NYSDEC.

Scope of Work

A trench approximately 120 feet long and 2 feet wide will be excavated for the installation of a fiber optic line. The trench will not exceed 2 feet in depth. The new fiber optic line will connect to an existing fiber line near Cantigney Street and run to the Stadium (see attached drawing CA-L1). Approximately 20 tons of soil/fill material will be removed during the trenching and the same is planned to be replaced in the excavation over the new fiber optic line.

FILL MATERIAL MANAGEMENT AND MONITORING

Corning Incorporated advanced soil borings on the Stadium property as required by the NYSDEC. It has been reported to the District that the results for surface samples CMSSS003, CMSSS004, and CMSSS005 in the work area and proximate to the location of the planned trench excavation did not exceed the restricted residential soil cleanup objectives. The trench excavation will be monitored by Haley & Aldrich field personnel, and if ash, brick or glass are observed during excavation, that material will not be used as backfill and will be containerized in a DOT approved hazardous waste roll-off container which will facilitate transport to a hazardous waste disposal facility in the event the material is hazardous. A composite sample from the container will be collected for laboratory analysis, for waste profiling purposes. Samples will be analyzed for total 8 RCRA metals, PCB's and TCLP 8 RCRA metals in

accordance with Chemung County Landfill analytical requirements. The roll-off container will be covered and secured onsite pending analytical results. If the material is identified as hazardous it would be disposed at Horizon Environmental in Quebec, Canada consistent with previous hazardous fill material from the CPP High School campus. If it is necessary, the trench will be backfilled with imported fill material tested in advance in accordance with DER-10 imported material testing requirements. The area will be re-seeded upon completion.

The District's contractor will implement appropriate measures to control dust or the potential for dust using water as needed, and dust monitoring will be performed during excavation activities. Dust monitoring stations will be placed upwind and downwind of the work area. Dust monitoring stations will be equipped with continuously running DustTrak monitors programed with an action level of 150 µg/m3. Visible dust is not anticipated during excavation activities. If dust exceedances are detected, work will be stopped and appropriate actions to assess conditions and suppress dust will be implemented if any exceedance identified is related to project activities prior to resuming construction activities. Exceedances of the action levels will be reported to the NYSDEC/NYSDOH as soon as possible. See attached Dust Control Measures and Air Monitoring Plan, which is a historical document written for similar work implemented on the Corning High School property contiguous with the Memorial Stadium property and owned by the District. The procedures in the Dust Control Measures and Air Monitoring Plan are relevant to the work described herein and will be implemented. The attached Site-Specific Health & Safety Plan will be provided to the District's contractor for informational purposes.

Schedule

The above described work is being planned to begin during August 2017.

Please do not hesitate to contact the undersigned with any questions.

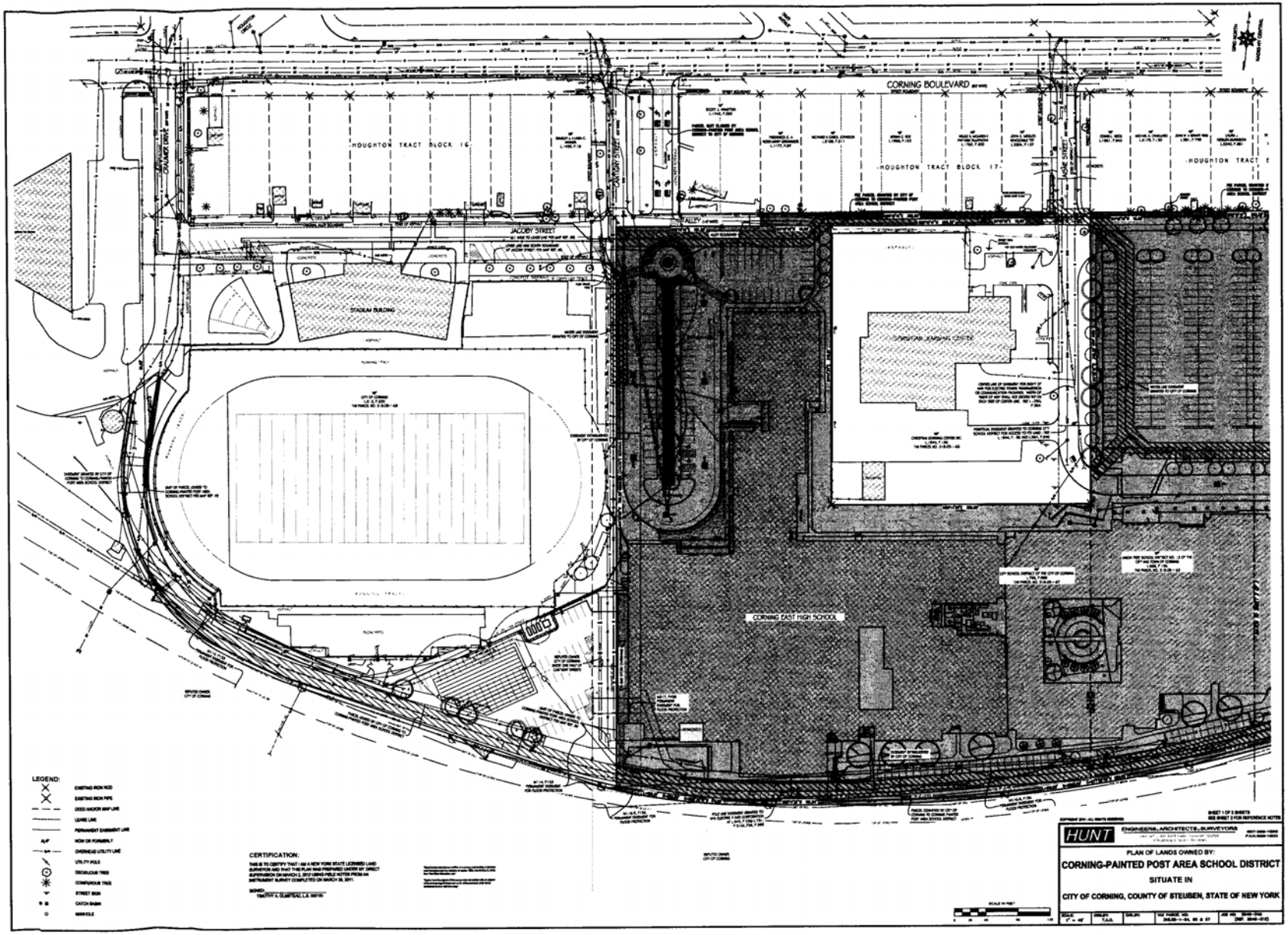
Sincerely yours,
HALEY & ALDRICH OF NEW YORK

Glenn M. White, CHMM
Associate | Senior Project Manager

Attachments:

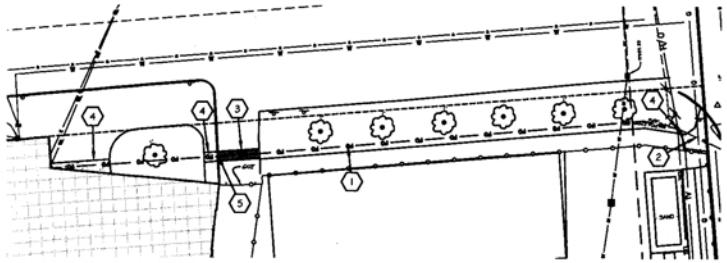
Plan of Lands Owned by Corning-Pained Post Area School District
CA-L1 – Fiber Optic Install
Dust Control Measures Plan
Site Specific Health & Safety Plan

C: Michael Ginalski, Superintendent
G:\129334 - Corning Painted Post Area School District\2017 Stadium Fiber Optic\2017_0725_Stadium Fiber Optic Line Workplan-F.docx

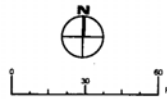

CORNING BOULEVARD
HOUGHTON TRACT BLOCK 16
HOUGHTON TRACT BLOCK 17
HOUGHTON TRACT
JACOBY STREET
ALLEY
STADIUM BUILDING
CORNING EAST HIGH SCHOOL
LEGEND:
EXISTING IRON ROD
EXISTING IRON PIPE
DEED AND/OR MAP LINE
LEASE LINE
PERMANENT EASEMENT LINE
N/F NOW OR FORMERLY
OVERHEAD UTILITY LINE
UTILITY POLE
DECIDUOUS TREE
CONIFEROUS TREE
STREET SIGN
CATCH BASIN
MANHOLE
CERTIFICATION:
HUNT ENGINEERS - ARCHITECTS - SURVEYORS
PLAN OF LANDS OWNED BY:
CORNING-PAINTED POST AREA SCHOOL DISTRICT
SITUATE IN
CITY OF CORNING, COUNTY OF STEUBEN, STATE OF NEW YORK

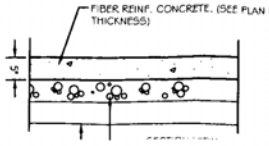
COMMUNICATION AND ELECTRICAL NOTES:

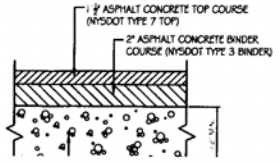
1. CONTRACTOR TO PROVIDE FIBER OPTIC CABLE ENCASED IN 2" SCH 40 PVC. SEE TRENCHING DETAIL 2/CA-L1.
2. CONTRACTOR TO PROVIDE FIBER OPTIC LINE IN EXISTING ELECTRICAL CONDUIT FROM HIGH SCHOOL BUILDING.
3. CONTRACTOR TO PROVIDE ASPHALT PATCHING AND TRENCHING WHERE INDICATED PER DETAIL 1#2/CA-L1.
4. CONTRACTOR TO PROVIDE CONCRETE REPAIR WHERE INDICATED PER DETAIL 3/CA-L1.
5. REMOVE AND REPLACE GRANITE CURB AS NECESSARY.
6. PROVIDE PULLBOX AT JUNCTION OF NEW AND EXISTING CONDUITS.

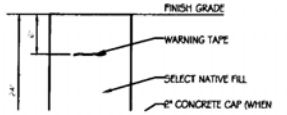


4 SITE PLAN
SCALE:1" = 30'









TALL
OOL DISTRICT
AND FIELD PROJECT

Corning-Painted Post School Area District
East High School Addition

Dust Control Measures and Air Monitoring Plan

Prepared for:
Corning-Painted Post School Area District
165 Charles Street
Painted Post, New York 14870

Prepared by:
Leader Professional Services, Inc.
271 Marsh Road, Suite 2
Pittsford, New York 14534

October 2012
Revised April 2013

469.005

INTRODUCTION AND BACKGROUND

The 2010 Capital Project and Allegations of Waste Disposal and Development Of a Contingency Plan to Address Potential Waste

As background, the Corning-Painted Post School District ("District") is constructing additions to the East High School Buildings (East High School) and undertaking renovations and additions to the East High School Campus as well as on the adjacent Kent Phillips School Campus and at other school buildings and campuses throughout the District as part of the 2010 District-wide capital project ("the Project"). During the public outreach for the Project in 2009 or 2010, there were concerns raised that there may be waste, including industrial waste buried or disposed of in or around the East High School site. Due to the concerns raised by the public of such waste disposal, the District directed its outside engineer, Hunt Engineering, to conduct an investigation of available information to determine if there was any information indicating waste was disposed in or around the East High School site. Based on review of database documents that concern waste disposal in the area, review of previous construction analyses completed on soils for earlier projects at the East High School site, based on data available for City of Corning water wells located in close proximity to East High School and based on responses it received from the manufacturing concern alleged to have disposed of waste at or in proximity to the East High School site, there was no information to conclusively show waste disposal occurred on or in proximity to such site.

Nonetheless, as part of the planning process for the Project the District developed a plan to address solid or other regulated waste which might be encountered during construction of the Project ("the contingency plan"). In addition, in order to implement the contingency plan, the District specified in its contract documents that construction firms performing work on the Corning East High School site have necessary training and plans in place to deal with regulated waste if encountered, including requiring them to have personnel with appropriate training on site to handle and remove of regulated waste if it was identified during construction. In addition, the District contracted with the environmental consulting firm of Haley & Aldrich ("H&A") to develop necessary procedures and protocols to address environmental concerns on site should regulated waste be excavated during construction of the Project.

Further, in order to implement the contingency plan in a manner consistent with applicable regulations, prior to construction activities commencing on the East High School Site for the Project, District representatives, including District staff, representatives from Haley & Aldrich and the District's outside counsel met with representatives from the New York State Department of Environmental Conservation ("DEC") including Mr. Scott Foti, the head of DEC's solid waste group to provide DEC with the District's contingency plan and obtain feedback from DEC concerning it. In addition, DEC representatives including Mr. Foti, as well as another DEC engineer, as well as DEC counsel toured the East High site prior to the initiation of construction activities to discuss how the contingency plan might be implemented. DEC representatives told District representatives that the contingency plan was acceptable to DEC. Further, in response to an inquiry, District representatives also provided the terms of the contingency plan to representatives of the United States Environmental Protection Agency (USEPA). In addition, the

District has been informed that EPA and DEC have been in communication concerning the matters associated with the Project, including the District's contingency plan.

The Initiation of Construction on the East High School Site and Waste Uncovered During Excavation

As part of the District's contingency plan, all excavated materials from construction activities completed on the East High School site and the adjacent Kent Phillips site were required to be assessed and those deemed to be waste type material were to be staged on site and tested prior to off-site disposal. As part of a soil management plan developed by H&A and implemented as part of the District's contingency plan, any such waste material that was identified as part of excavation was to be staged and tested.

Construction activities, including excavation, were initiated at the East High School site in June 2012. This included excavation required for new drainage conveyances, building foundation work, and upgraded parking facilities on both the East High School Site as well as the adjacent Kent Phillips site. As construction commenced, materials consisting primarily of industrial or commercial type waste including waste glass material, refractory block material and some kind of ash (hereinafter collectively referred to as "waste fill") were identified and excavated and the requirements of the contingency plan were followed concerning waste fill including the segregation, staging, and handling. Analysis of samples taken of the waste fill excavated through mid- July 2012 found it to be non-hazardous solid waste, as such pursuant to the contingency plan and as required by applicable regulations, the District arranged to have it handled and transported as solid waste and arranged for its disposal at one or more local DEC-permitted landfills as solid waste.

Test results received on July 25, 2012 indicated some waste fill material contained more concentrated levels of lead which resulted in the waste fill meeting hazardous waste criteria under applicable regulations and requiring more expensive measures for transporting and disposal of the waste fill. District representatives have been communicating with DEC about the construction operations at the East High School Site and adjacent Kent Phillips site, and have communicated to DEC that waste fill has been excavated which meets both solid waste and hazardous waste criteria. DEC has also had representatives come to the construction areas associated with the East High School and DEC has confirmed that the measures being implemented by the District to handle and dispose of the waste fill are appropriate under the circumstances.

PURPOSE

This Dust Control Measures/Air Monitoring Plan supplements the existing dust control measures already in place together with supplementing pre-existing air monitoring to provide additional overall site safety and public safety beyond that which is required. The dust control measures and monitoring activities described in this plan are intended to be conducted during excavation activity and loading of waste materials for disposal only.

As background, a Health and Safety Plan ("HASP") has been implemented by Haley & Aldrich ("H&A") for this site and is designed for the protection of H&A site workers in proximity to construction. H&A has made their HASP available to site contractors and others. The HASP addresses among other things, protective actions to be taken during activities anticipated to result in potential contact with excavated hazardous waste material.

The project Soil Management Plan (SMP) prepared by H&A and Hunt includes among other components measures to be followed for excavation of waste fill, staging the fill, and loading/unloading activities related to such material (these measures were also developed as part of the District's contingency plan). In addition, as required per the contract for construction of the Project as pertains to the East High School site and adjacent site (and designed and implemented as part of the District's contingency plan) the onsite contractor has also implemented a health and safety plan as required by applicable law for the protection of construction workers potentially coming in contact with regulated waste material.

DUST CONTROL MEASURES

Controlling dust during the construction of the addition to the East High School building is a high priority, and this document provides a number of precautionary measures to minimize dust generation from the various site activities, including excavation. It should be noted that dust suppression methods are already in place and have been so from the onset of the excavation activities.

General Site Activity Work

Fugitive dust emissions from general site work will continue to be controlled using the following methods as well as certain enhancements set forth below.

1. Enhancements include fabric covers along fencing at the tennis courts, in proximity to residential areas, and the Christian School. Additional water supplies are available for dust suppression. The staged piles continue to be securely covered using plastic sheeting.

2. For earth-moving activity, maintain soil moisture levels sufficient to minimize fugitive dust creation. For construction fill areas which have an optimum moisture content for compaction, completion of the compaction process will be performed as expeditiously as possible to minimize fugitive dust.

3. For disturbed surface areas, apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind-driven dust, must have an application of water necessary to suppress dust.

4. During high wind events (i.e., wind conditions exceeding 25 mph), earth-moving activities will cease or water will be applied as necessary.

5. On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for more than four consecutive days: apply water. Assure all staged soil piles are adequately covered.

All wet methods should be applied without generating excess water and surface-water runoff.

Excavation Activities

Excavation activities will be both visually and instrument monitored daily for the generation of fugitive dust and in accordance with the Dust Control Measures and Air Monitoring Plan. If dust is being generated, water will be applied as necessary to the point of excavation to control dust without generating runoff.

Loading and Unloading Activities

Dust production will be mitigated during loading and unloading operations by the use of water spray. Materials that must be excavated and loaded using conventional methods will be monitored for dust creation. Possible techniques for controlling dust during vehicle loading and unloading include application of water and reducing the speed at which loading and unloading activities occur.

Material Stockpiles

Fugitive dust emissions from storage piles will be controlled by using a secured temporary cover.

Construction Security and Fencing

The continued use of construction fabric on the tennis courts fencing will provide a visible separation to the excavation activities and also provide additional dust control, as this area is located next to the active construction activities.

For the Christian School located adjacent to the existing Corning High School building and next to the location of the new addition, additional fencing has previously been supplemented to provide security around the construction site. There is also a new barrier at the newly installed parking lot (located next to the Christian school) to the separate and provide security from construction activities. Increasing the height of this

fence with some type of fabric/privacy ribbing has provided increased fugitive dust control.

Preventing Vehicles from Generating Excessive Dust

Excessive fugitive dust from construction traffic traveling on unpaved surfaces will continue to be controlled as needed by applying water

In addition, the following measures shall continue to be implemented (and supplemented as appropriate) for the transportation of waste fill material to the landfill:

- Covering haulage trucks
- Wetting material, if needed, prior to loading vehicles
- Ensuring appropriate freeboard of material in the vehicles
- Keeping vehicle speeds below 10 miles per hour

Monitoring site conditions

Dust is monitored visually site wide, and with instrumentation proximate to site boundaries. Using NYSDEC DER-10[1] as guidance, dust has been monitored during excavation and soil handling activities, and since August 2012, dust monitoring at the project site has been assessed both visually and through real-time instrumentation. This document identifies the use of real-time air monitoring equipment for PM10 dust levels (particles 10 microns and smaller).

Dust suppression methods are already in place and will continue to be used on the project site, the following action level can be followed:

- If the PM-10 particulate levels are greater than 150 $\mu g/m^3$ over a 15-minute sampling average, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 $\mu g/m^3$ sampling average and in preventing visible dust migration.

While NYSDEC DER-10 is not applicable to this location because the site has not been identified by a regulatory agency as a site subject to a remediation program or order such as for the remediation of hazardous waste, but it does provide guidance and best management practices to assess and control the dust levels from excavation. In this case, the 150 $\mu g/m^3$ action level is not compared to an upwind concentration; therefore, this monitoring plan is more conservative than NYSDEC DER-10 guidance.

[1] New York State Department of Environmental Conservation ("NYSDEC") Program Policy administered by the Division of Environmental Remediation ("DER"): *DER-10 / Technical Guidance for Site Investigation and Remediation*, May 3, 2010.

AIR MONITORING PLAN

As soil is excavated or otherwise disturbed during construction, dust can be generated. Throughout the excavation activities, dust generation will continue to be monitored visually and this has been enhanced by adding the use of direct-reading "real-time" particulate monitors. Handheld monitoring equipment will be used to monitor excavation areas, and fixed monitors will be placed adjacent to property boundaries.

Fugitive Dust and Particulate Matter Monitoring

Air monitoring of particulate matter will be performed using a hand-held particulate detector with the capability of a continuous sampling system. These dust monitors have been placed at the following locations:

1. Trucking Gate
2. Closest to Residential Properties (within the new parking lot)
3. Near Tennis Courts
4. Near the Christian Academy

A hand-held particulate detector, DataRAM (or equivalent), is designed to detect concentrations of airborne PM10. The hand-held PM monitor passes infrared light through a sample of ambient air and correlates the amount of light scatter to the concentration of particulate matter. The particulate monitors are able to detect Total Suspended Particulates and PM10 particulate matter concentrations. The monitors will be operated at four (4) locations throughout the work site and a handheld monitor will be used at the excavation area for the duration of each work day to adequately assess active excavation and soil moving activities.

Fugitive Dust Action Levels

The National Ambient Air Quality Standard (NAAQS) for PM10 is 150 microgram per cubic meter ($\mu g/m^3$) based on a 24-hour average. The USEPA's health-based national air quality standard for PM10 is 50 $\mu g/m^3$ (measured as an annual mean) and 150 $\mu g/m^3$ (measured as a daily concentration).

The action level will be the 150 $\mu g/m^3$ over a 15-minute sampling average, a much more conservative level to assure site and community safety.

If fugitive dust monitoring demonstrates that the action level of 150 $\mu g/m^3$ (15-minute average) is exceeded, H&A and the Construction Manager (or his designee) shall review sources of fugitive dust and modify the mitigation measures to reduce fugitive dust emissions. If sufficient reductions in fugitive dust emissions cannot be effected to reduce dust concentrations below the action level, work activities will be suspended until the cause of the dust is better understood.

ALERT

This Health and Safety Plan (HASP) is provided for information only. Note that the standard procedures attached to this HASP are copyrighted. Every contractor must create and use the contractor's own site-specific Health and Safety Plan. For the subject site, the contractor's site-specific HASP must, at minimum, comply with 40 CFR 1910.120 and, as applicable based on the nature of work activities conducted, to any other local, state, or federal health and safety requirement including under 40 CFR 1926 Subpart D.

HALEY& ALDRICH

HALEY & ALDRICH, INC.
SITE-SPECIFIC HEALTH & SAFETY PLAN

For

Facilities Expansion Project and Stadium Maintenance - Corning East High School

201 Cantigney Street, Corning, NY 14830-2097

Project/File No. 37990-012

Prepared by: Michael G. Nickelsen Date: May 19, 2011

Revised by: Santa McKenna Date: June 13, 2016

APPROVALS: The following signatures constitute approval of this Health & Safety Plan

6/15/16

Margaret B. Holt – Regional H&S Coordinator Date

Glenn M. White - Project Manager Date 6/16/16

Note: This HASP has been developed for Haley & Aldrich purposes only and is not for use by others.

TABLE OF CONTENTS

Note: This HASP has been developed for Haley & Aldrich purposes only and is not for use by others.

1. PROJECT INFORMATION AND EMERGENCY RESOURCES

Project Name: Ongoing Facilities Enhancements and Stadium Maintenance - Corning East High School	**H&A File No.: 37990-012**
Location: 201 Cantigney Street, Corning, NY 14830-2097	
Client/Site Contact: Phone Number: Site Superintendant: Cell Phone Number:	Joe Picciotti, Esq. (Harris Beach PLLC.) 585-419-8629 Russ Robinson (Welliver) 607-426-6921
Other Entity: Phone Number:	Eric Wierson Manager, LRS Companies, LLC 607-533-4889
H&A Project Manager: Phone Number: Emergency Phone Number:	Glenn M. White 585-321-4239 585-370-2412
Local Health & Safety Coordinator: Phone Number: Emergency Phone Number:	Margaret B. Holt 585-321-4214 585-721-2426
Nearest Hospital: Address: (see map on next page) Phone Number:	Guthrie Corning Hospital 1 Guthrie Road Corning, NY 14830 607-937-7200
Emergency Response Number:	**911**
Non-emergency Clinic: **Haley & Aldrich Worker's Comp Insurance Policy #: WC2-Z11-254100-032**	One Call Medical 751 E Church St Elmira, NY 14901 Phone: 800-872-2875 Fax: 973-257-0044
Other Ambulance, Fire, Police, or Environmental Emergency Resources:	911 Corning Ambulance Service (dba Rural Metro) 25 E. Pultney Street Corning, NY

Work Scope:

This Site-Specific Health and Safety Plan addresses the health and safety practices and procedures that will be employed by all Haley & Aldrich employees participating in the site characterization of the Project Site. This plan is based on an assessment of the site-specific health and safety risks available to Haley & Aldrich and Haley & Aldrich's experience with other project sites. The scope of work for the Site Characterization includes:

- Documentation of activities including construction and maintenance projects;
- Assist contractor with proper soil segregation;

Note: This HASP has been developed for Haley & Aldrich purposes only and is not for use by others.

- Field monitoring during site excavation and soil movement visually and with perimeter dust monitoring, and;
- Collection of soil samples for analysis at an off-site commercial laboratory.

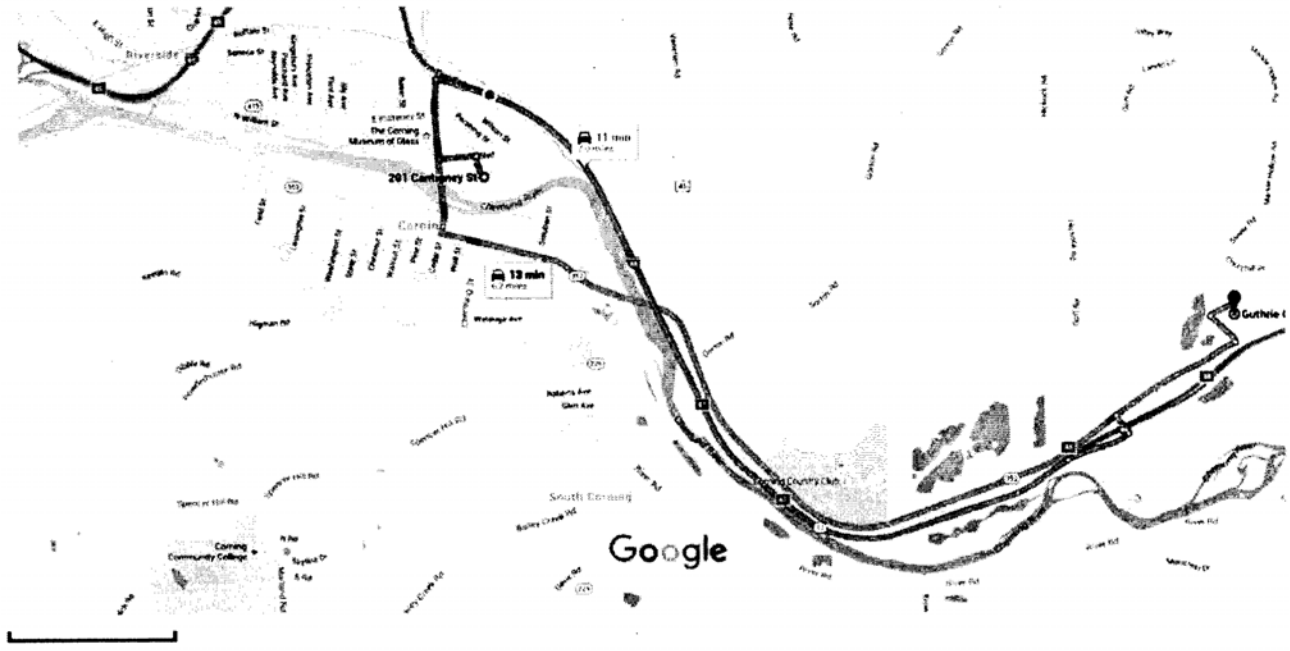
Subcontractor(s) to be involved in on-site activities:

Firm Name	Work Activity
Welliver	Construction Management
LRS Excavating	General Contractor/Excavators
Hunt Engineers and Architects	Site Planning and Engineering

Projected Start Date: 3/4/2013

Projected Completion Date: ongoing

Directions to the Nearest Hospital:



Map data ©2016 Google 2000 ft

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

201 Cantigney St
Corning, NY 14830

Get on I-86 E/NY-17 E from Center Way

3 min (1.0 mi)

1. Head north on Cantigney St toward Jacoby Blvd

0.1 mi

2. Turn left onto Corning Blvd

0.2 mi

3. Turn right onto Center Way

0.4 mi

4. Turn right to merge onto I-86 E/NY-17 E

0.3 mi

Follow I-86 E/NY-17 E to NY-352 W in Corning. Take exit 48 from I-86 E/NY-17 E

4 min (4.8 mi)

5. Merge onto I-86 E/NY-17 E

4.4 mi

6. Take exit 48 for NY-352 toward E Corning

0.4 mi

Take E Corning Rd to your destination

3 min (1.2 mi)

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

2. SITE DESCRIPTION

Site Classification:

☐ Industrial	☐ Commercial	☑ Other Corning-Painted Post High School, Memorial Stadium

General Description, Site Usage, Project Scope:

The site is currently occupied by a public school building, athletic fields, parking lots and other facilities associated with the school operation and student activities. Previous work at the site included construction of several building renovations and upgrade of the school's athletic fields. During the course of the previous work it was determined that the site was impacted by historic fill (bricks, glass and ash) which was contaminated to varying degrees with lead, cadmium, and arsenic. The property was included in a consent order issued to Corning Incorporated and activities on the site continue to be under NYSDEC review. During the construction a large volume of waste fill was removed from the site. The remaining fill is generally covered by a geotextile fabric and a minimum one foot of cover. If activities are conducted which will disturb the fill remaining on the site, appropriate precautions should be taken due to potential for existing contamination.

In 2016 further renovations at the site will be conducted at the Memorial Stadium (District) and CPP High School athletic field. The work in the athletic field includes two foundation sleeves for the installation of a new electronic scoreboard. A directional drill will install an electrical conduit from the existing electrical box across the baseball field to connect to the new scoreboard. The conduit will be installed in cover material and will not disturb the underlying geotextile fabric. One shallow pit at the electrical connection south of the tennis courts will be excavated to accommodate temporary equipment used for directional drilling. The proposed Stadium work will consist of a trench approximately 120 feet long, 2 feet wide and 2 feet deep that will be excavated for the installation of a fiber optic line. The work will be conducted as separate scheduled events and will be described in work plans approved by the NYSDEC.

Haley & Aldrich Project Scope:

Haley & Aldrich personnel to conduct field monitoring during soil excavation activities, including:

- Documentation of site activities during a soil excavation program;.
- Preparation of field logs, sample logs;
- Collection of soil samples for analysis at an off-site commercial laboratory
- Operation and data collection for perimeter dust monitoring devices.

Overview of Hazards:

Hazards associated with working around excavation equipment, and exposure to heavy metals (lead and others) during soil sampling activities. Hazards associated with glass and industrial debris in the soil.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

Site Status: Indicate current activity status and describe operations at the site.

☑ Active High School ☐ Inactive
☐ Partially active ☐ Other

Site Plan:

Is a site plan or sketch available? ☑ Y ☐ N

Work Areas:

List/identify each specific work area(s) on the job site and indicate its location(s) on the site plan:

1. See Figures in associated workplans

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

3.. PROJECT TASK BREAKDOWN

List and describe each distinct work task below.

Task No.	Detailed Task Description	Employee(s)	Work Date(s) or Duration
1	Field monitoring during excavation and operation of perimeter dust monitors	TBD	Varies depending on project
2	Environmental sampling of soil	TBD	1 day
3			
4			

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

4. HAZARD ASSESSMENT

Material Safety Data Sheets (MSDS) of hazardous materials used during the execution of work shall be available on site. MSDSs are required for chemicals used to prepare samples, calibration gases, etc.

Chemical Hazards:

Does chemical analysis data indicate that the site is potentially contaminated? ☑ Y ☐ N

Indicate the potential physical state of the hazardous materials at the site.

☐ Gas/Vapor	☐ Sludge
☐ Liquid	☑ Solid/Particulate

Indicate the anticipated or actual class of compounds at the site.

☐ Asbestos	☑ Inorganics
☐ BTEX	☐ Pesticides
☐ Chlorinated Solvents	☐ Petroleum products
☑ Heavy Metals	☐ Other

Impacted Environments:

Indicate media in which contamination is expected.

☐ Air	☐ Groundwater
☑ Soil	☐ Sediment
☐ Surface water	☑ Other Airborne Dust

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

Estimated concentrations:

Indicate medium of major chemicals expected to be encountered by onsite personnel.

Work Activity	Media	Chemical	Anticipated Concentration
Observation of ongoing site intrusive work	A, SO	Metals	0-1000 lead 0-300 Cadmium 0-300 arsenic
Soil sample collection	SO	metals, inorganics	1-500 ppm
Observation of waste materials	A	metals	Negligible in airborne dust

(Media key: A = Air; GW = Groundwater; SW = Surface Water; SO = Soil; SE = Sediment)

Chemicals of Concern:

Arsenic

The Occupational Safety and Health Administration has set limits of 10 microgram arsenic per cubic meter of workplace air (10 µg/m3) for 8 hour shifts and 40 hour work weeks. Several studies have shown that inorganic arsenic can increase the risk of lung cancer, skin cancer, bladder cancer, liver cancer, kidney cancer, and prostate cancer. The World Health Organization (WHO), the Department of Health and Human Services (DHHS), and the EPA have determined that inorganic arsenic is a human carcinogen.

Breathing high levels of inorganic arsenic can give you a sore throat or irritated lungs. Ingesting high levels of inorganic arsenic can result in death. Lower levels of arsenic can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet.

Lead

The Occupational Safety and Health Administration (OSHA) limits the concentration of lead in work place air to 50 µg/cubic meter for an 8-hour workday. Action levels are set at 30 ug/m3 of lead. Lead can be present in airborne and settled dusts. Lead can affect almost every organ and system in your body. The most sensitive is the central nervous system, particularly in children. Lead also damages kidneys and the immune system. The effects are the same whether it is breathed or swallowed. Exposure to lead is more dangerous for young and unborn children. Unborn children can be exposed to lead through their mothers. Harmful effects include premature births, smaller babies, decreased mental ability in the infant, learning difficulties, and reduced growth in young children. These effects are more common after exposure to high levels of lead. In adults, lead may decrease reaction time, cause weakness in fingers, wrists, or ankles, and possibly affect the memory. Lead may cause anemia, a disorder of the blood. It can cause abortion and damage the male reproductive system. The connection between these effects and exposure to low levels of lead is uncertain.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

Cadmium

Workers in many industries face potential exposure to cadmium. The potential for exposure is highest among workers in electroplating, metal machining, plastics, ceramics, paint, and welding operations. The main exposure routes are through inhalation of dust and fumes and the incidental ingestion of dust from contaminated hands, food, or cigarettes.

The primary and most serious adverse health effects of longterm exposure to cadmium include kidney dysfunction, lung cancer, and prostate cancer. Cadmium may cause local skin or eye irritation and can affect long-term health if inhaled or ingested. Workers face a greater danger of cadmium exposure from inhalation than from ingestion. Exposure to cadmium that may be dangerous to life or health may occur in jobs in which workers are exposed to cadmium dust or fumes.

The action level, or AL, which is defined as the airborne level of cadmium that creates a need for airborne exposure monitoring, a medical surveillance program for employees who are at or above the AL on 30 or more days per year, and the provision of a respirator to any employee that requests one. The action level for workplace exposure to cadmium is 2.5 micrograms per cubic meter of air (2.5 µg/m3) calculated as an 8-hour time-weighted average (TWA) exposure.

The PEL is a time-weighted average concentration that must not be exceeded during any 8-hour work shift of a 40-hour work week. The standard sets a PEL of 5 micrograms of cadmium per cubic meter of air (5 µg/m3) for all cadmium compounds, dust, and fumes.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

TABLE 1
OCCUPATIONAL EXPOSURE LIMITS (CONCENTRATIONS IN AIR)

(CIRCLE CONTAMINANTS OF CONCERN, WRITE ADDITIONAL CONTAMINANTS AND EXPOSURE ON LAST PAGE)

CHEMICAL	ROUTES OF EXPOSURE	IDLH	Ceiling	STEL	PEL	TLV	REL	PID (IP eV)	FID	ODOR THRES-HOLD	IRRITATION THRESHOLD	ODOR DESCRIPTION
VAPORS & GASES												
Acetone	R, I, C	2500	-	750 [ACGIH]	1000	500	250	9.69	60	13	-	fragrent, mint-like
Ammonia	R, I, C	300	-	35 [NIOSH, ACGIH]	50	25	25	10.18**	-	0.5-2	10	Pungent suffocating odor
Benzene	R,A,I,C	Ca [500]	-	1 [NIOSH]; 2.5 [ACGIH]	1	0.5	0.1	9.24	150	4.68	-	Solvent, aromatic
Carbon tetrachloride (Tetrachloromethane)	R,A,I,C	Ca [200]	25 [instantaneous] 200 [5 min peak in any 4 hrs]	2 [NIOSH, 60-min]; 10 [ACGIH]	2	5	Ca	11.47**	10	50	-	Sweet, pungent, ether-like
Chlorobenzene	R,I,C	1000	-	-	75	10	-	9.07	200	0.68	-	Almond-like
Chloroform	R,I,C	Ca [500]	50 [OSHA]	2 [NIOSH, 60-min]	-	10	-	11.42**	65	50	-	Sweet, pleasant
o-Dichlorobenzene	R,A,I,C	200	50 [NIOSH, OSHA]	50 [ACGIH]	-	25	-	9.06	50	0.3	E 20-30	Pleasant, aromatic
p-Dichlorobenzene	R,A,I,C	Ca [150]	-	-	75	10	Ca	8.98	-	0.18	E 80-160	Distinct, aromatic, mothball-like
Dichlorodifluoromethane (Freon 12)	R,C	15000	-	-	1000	1000	1000	11.75**	15	-	-	Ether-like when at very high concs.
1,1-Dichloroethane	R,I,C	3000	-	-	100	100	100	11.06**	80	200	-	Distinct, chloroform-like
1,2-Dichloroethane (Ethylene dichloride)	R,I,A,C	Ca [50]	100 [OSHA]	2 ppm [NIOSH]; 200 ppm [OSHA, 5-min max peak in any 3 hours]	50	10	1	11.05**	80	88	-	Chloroform-like
1,1-Dichloroethylene (1,1-DCE, Vinylidene chloride)	R,A,I,C	Ca [ND]	-	-	-	5	Ca	10.00**	40	190	-	Chloroform-like
1,2-Dichloroethylene	R,I,C	1000	-	-	200	200	200	9.65	50	0.85	-	Bitter, chloroform-like
Ethanol	R,I,C	3300	-	-	1000	1000	1000	10.47**	25	10	-	Weak, ether-like, wine-like
Ethylbenzene	R,I,C	800	-	125 [NIOSH, ACGIH]	100	100	100	8.76	100	2.3	E 200	Aromatic
Ethylene Glycol	R,I,C	ND	50 [OSHA]; 100 mg/m^3 [ACGIH]	-	-	-	-	-	-	-	-	Odorless
Formaldehyde	I,C	Ca [20]	0.1 [NIOSH, 15-min]; 0.3 [ACGIH]	2	0.75	-	Ca [0.016]	10.88**	-	0.83	-	Pungent, suffocating
Gasoline	R,I,A,C	Ca [ND]	-	500 [OSHA, ACGIH]	300	300	-	-	-	-	E 0.5	Petroleum-like
n-Hexane	R,I,C	1100	-	-	500	50	50	10.18	70	130	E.T 1400-1500	Gasoline-like
Hydrogen Cyanide	R,A,I,C	50	4.7 [ACGIH, skin]	4.7 [NIOSH - skin]	10 [skin]		-	-	-	0.58	-	Bitter almond
Hydrogen peroxide	R,I,C	75	-	-	1	1	1	10.54**	-	-	-	Sharp
Methanol	R,I,A,C	6000	-	250 [NIOSH, ACGIH, skin]	200	200 [skin]	200	10.84**	12	1000	-	Pungent
Methyl Ethyl Ketone Peroxide	R,I,C	ND	0.2 [NIOSH, ACGIH]; 0.7 [OSHA]	-	-	-	-	-	-	-	-	Characteristic odor
Methyl Chloroform (1,1,1-TCA)	R,I,C	700	350 [NIOSH, 15-min]	450 [ACGIH]	350	350	Ca	11.00**	105	20-100	-	Chloroform-like
Methylene Chloride (Dichloromethane, Methylene dichloride)	R,I,A,C	Ca [2300]	-	125	25	50	Ca	11.32**	100	25-50	E 5000	Chloroform-like
Methyl Mercaptan	R,C	150	10 [OSHA]; 0.5 [NIOSH, 15-min]	-	-	0.5	-	9.44	-	-	-	Garlic, rotten cabbage
MIBK (Hexone)	R,I,C	500	-	75 [NIOSH, ACGIH]	100	50	50	9.30	-	-	-	Pleasant
Naptha (coal tar)	R,I,C	1000	-	-	100	400	100	-	-	-	-	Aromatic
Naphthalene	R,A,I,C	250	-	15 [NIOSH, ACGIH]	10	10	10	8.12	-	0.3	E 15	Mothball-like
Octane	R,I,C	1000	385 [NIOSH, 15-min]	-	500	300	75	9.82	80	48	-	Gasoline-like
Pentachlorophenol	R,A,I,C	2.5 mg/m^3	-	-	0.5 mg/m^3 [skin]	0.5 mg/m^3 [skin]	0.5 mg/m^3 [skin]	-	-	-	-	Pungent when hot, benzene-like
Phenol	R,A,I,C	250	15.6 [NIOSH, 15-min]	-	5 [skin]	5 [skin]	5 [skin]	8.50	-	0.04	E.N.T. 68	Sweet, acrid
Propane	R,C	2100	-	-	1000	1000	1000	11.07**	80	1600	-	Odorless (commonly smells foul due to additive for odor detection)
Stoddard Solvent (Mineral Sprits)	R,CI,I	20000 mg/m^3	1800 mg/m^3 [NIOSH, 15-min]	-	500	100	350 mg/m^3	-	-	1	E 400	Kerosene-like
Styrene	R,I,A,C	700	200 [OSHA]	100 [NIOSH]; 600 [OSHA, 5-min max peak in any 3 hours]; 40 [ACGIH]	100	20	50	8.40	85	0.047	E 200-400	Sweet, floral
1,1,2,2-Tetrachloroethane	R,I,A,C	Ca [100]	-	-	5 [skin]	1 [skin]	1 [skin]	11.10**	100	1.5	-	Pungent, chloroform-like
Tetrachloroethylene (Perchloroethylene, Perc, PCE)	R,I,A,C	Ca [150]	200 [OSHA]	300 [OSHA, 5-min max peak in any 3-hours]; 100 [ACGIH]	100	25	Ca	9.32	70	4.68	N.T513-690	Chloroform-like
Toluene	R,A,I,C	500	300 [OSHA]	150 [NIOSH]; 500 [OSHA, 10-min max peak]	200	50	100	8.82	110	2.14	E300-400	Sweet, pungent, benzene-like
Trichloroethylene (TCE)	R,I,A,C	Ca [1000]	200 [OSHA]	300 [OSHA, 5-min max peak in any 2-hours]; 100 [ACGIH]	100	50	Ca	9.45	70	21.4	-	Chloroform-like
1,2,3-Trimethylbenzene	R,I,C	ND	-	-	-	-	25	8.48	-	-	-	Distinctive, aromatic
1,2,4-Trimethylbenzene	R,I,C	ND	-	-	-	-	25	8.27	-	-	-	Distinctive, aromatic
1,3,5-Trimethylbenzene	R,I,C	ND	-	-	-	-	25	8.39	-	-	-	Distinctive, aromatic
Turpentine	R,A,I,C	800	-	-	100	20	100	-	-	200	E.N 200	Pine-like
Vinyl Chloride	R,C	Ca [ND]	5 [OSHA, 15-min]	-	1	1	Ca	9.99	-	3000	-	Pleasant odor at high concs.
Xylenes	R,A,I,C	900	-	150 [NIOSH, ACGIH]	100	100	100	8.56 (m- and o-); 8.44 (p-)	111/116	1.1	E.N.T. 200	Aromatic

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

TABLE 1
OCCUPATIONAL EXPOSURE LIMITS (CONCENTRATIONS IN AIR)

(CIRCLE CONTAMINANTS OF CONCERN, WRITE ADDITIONAL CONTAMINANTS AND EXPOSURE ON LAST PAGE)

CHEMICAL	ROUTES OF EXPOSURE	IDLH	Ceiling	STEL	PEL	TLV	REL	PID (IP eV)	FID	ODOR THRES-HOLD	IRRITATION THRESHOLD	ODOR DESCRIPTION
DUSTS, MISTS, FUMES, AND MISCELLANEOUS COMPOUNDS												
Asbestos	R	Ca (ND)	-	-	0.1 fiber/cc	0.1 fiber/cc	0.1 fiber/cc	-	-	-	-	-
PCBs-42% Chlorine	R,A,I,C	Ca [5 mg/m³]	-	-	1 mg/m³ [skin]	1 mg/m³ [skin]	0.001 mg/m³	-	-	-	-	Mild, hydrocarbon
PCBs-54% Chlorine	R,A,I,C	Ca [5 mg/m³]	-	-	0.5 mg/m³ [skin]	0.5 mg/m³ [skin]	0.001 mg/m³	-	-	-	-	Mild, hydrocarbon
Aluminum - metal dust	R,C	ND	-	-	15 mg/m³ (total); 5 mg/m³ (respirable)	10 mg/m³	10 mg/m³ (total); 5 mg/m³	-	-	-	-	-
Aluminum - soluble salts	R,I,C	ND	-	-	2 mg/m³	2 mg/m³	2 mg/m³	-	-	-	-	-
Arsenic- inorganic	R,A,I,C	Ca [5 mg/m³]	0.002 mg/m³ [NIOSH, 15-min]	-	0.01 mg/m³	0.01 mg/m³	Ca	-	-	-	-	-
Barium soluble compounds	R,I,C	50 mg/m³	-	-	0.5 mg/m³	0.5 mg/m³	0.5 mg/m³	-	-	-	-	-
Beryllium	R,C	Ca [4 mg/m³]	0.005 mg/m³ [OSHA]; 0.025 mg/m³ [OSHA, 30-min max peak]; 0.0005 mg/m³	0.01 mg/m³ [ACGIH]	0.002 mg/m³	0.002 mg/m³	Ca	-	-	-	-	-
Cadmium dusts	R,I	Ca [9 mg/m³]	-	-	0.005 mg/m³	0.01 mg/m³	Ca	-	-	-	-	-
Chromates (Cr(VI) Compounds) & Chromic Acid	R,I,C	Ca [15 mg/m³]	0.1 mg/m³ [OSHA]	-	0.001 mg/m³	0.05 mg/m³ [water soluble]; 0.01 mg/m³	Ca	-	-	-	-	-
Chromium (III) Compounds	R,I,C	25 mg/m³	-	-	0.5 mg/m³	0.5 mg/m³	0.5 mg/m³	-	-	-	-	-
Chromium Metal	R,I,C	250 mg/m³	-	-	1 mg/m³	0.5 mg/m³	0.5 mg/m³	-	-	-	-	-
Copper - dust & mist	R,I,C	100 mg/m³	-	-	1 mg/m³	1 mg/m³	1 mg/m³	-	-	-	-	-
Lead	R,I,C	100 mg/m³	-	-	0.050 mg/m³	0.05 mg/m³	0.050 mg/m³	-	-	-	-	-
Manganese (compounds and fume)	R,I	500 mg/m³	5 mg/m³ [OSHA]	3 mg/m³ [NIOSH]	-	0.2 mg/m³	1 mg/m³	-	-	-	-	-
Mercury & Inorganic Mercury Compounds	R,I,A,C	10 mg/m³	0.1 mg/m³ [NIOSH, Skin]; 0.1 mg/m³ [OSHA]	-	-	0.025 mg/m³	0.05 mg/m³ [skin]	-	-	-	-	-
Organo-Mercury Compounds	R,A,I,C	2 mg/m³	0.04 mg/m³ [OSHA]	0.03 mg/m³ [NIOSH]	0.01 mg/m³	0.01 mg/m³ [alkyl]; 0.1 mg/m³ [aryl]	0.01 mg/m³	-	-	-	-	-
Nickel (metal and compounds)	R,I,C	Ca [10 mg/m³]	-	-	1 mg/m³	1.5 mg/m³ [metal]; 1 mg/m³ [soluble inorganic compounds]; 1 mg/m³ [insoluble]	0.015 mg/m³	-	-	-	-	-
Particulate (Not otherwise regulated)	R, C	ND	-	-	15 mg/m³ (total); 5 mg/m³ (respirable)	10 mg/m³ (inhalable); 3 mg/m³ (respirable)	-	-	-	-	-	-
Portland cement	R,I,C	5000 mg/m³	-	-	50 mppcf	10 mg/m³	10 mg/m³ (total); 5 mg/m³	-	-	-	-	-
Selenium compounds	R,I,C	1 mg/m³	-	-	0.2 mg/m³	0.2 mg/m³	0.2 mg/m³	-	-	-	-	-
Silica, crystalline	R, C	Ca [25 mg/m³ (cristobalite, tridymite); 50 mg/m³ (quartz, tripoli)]	-	-	Dependent on silicon dioxide content of silica (see Appendix C of the NIOSH Pocket Guide to Chemical Hazards, 2004)	Dependent on minerology (see ACGIH 2005 TLVs and BEIs Handbook)	0.05 mg/m³	-	-	-	-	-
Silver (metal and soluble compounds)	R,I,C	10 mg/m³	-	-	0.01 mg/m³	0.1 mg/m³	0.01 mg/m³	-	-	-	-	-
Thallium, soluble	R,A,I,C	15 mg/m³	-	-	0.1 mg/m³ [skin]	0.1 mg/m³ [skin]	0.1 mg/m³ [skin]	-	-	-	-	-
Tin (metal)	R,C	100 mg/m³	-	-	2 mg/m³	2	2 mg/m³	-	-	-	-	-
Tin (organic compounds)	R,A,I,C	25 mg/m³	-	-	0.1 mg/m³	0.1 mg/m³ [skin]	0.1 mg/m³ [skin]	-	-	-	-	-
Zinc oxide dust & fume	R	500 mg/m³	15 mg/m³ [NIOSH, dust]	10 mg/m³ [NIOSH, ACGIH, fume]	15 mg/m³ (total dust); 5 mg/m³ (respirable dust); 5 mg/m³ [fume]	2 mg/m³ (respirable)	5 mg/m³ (total dust); 5 mg/m³ [fume]	-	-	-	-	-

NOTES & ABBREVIATIONS:

All units in parts per million (ppm) unless otherwise noted.

R = Respiratory (Inhalation)

I = Ingestion

A = Skin Absorption

C = Skin Contact

-: Not available

ND: Not detectable.

Ca = Carcinogen

** = Use 11.7 eV lamp

IP: Ionization potential

eV: Electrovolts

IDLH: Immediately dangerous to life and health

Ceiling: Highest allowable instantaneous C = Skin and/or Eye Contact

STEL: Short-term exposure limit. Exposure period is 15 minutes unless otherwise indicated

PEL: OSHA Permissible Exposure Limit (legally-enforceable)

REL: NIOSH Recommended Exposure Limit

PID: Photoionization Detector

OSHA: United States Occupational Safety and Health Administration

NIOSH: National Institute of Occupational Safety and Health

TLV: ACGIH Threshold Limit Value

ACGIH: American Conference of Governmental Industrial Hygienists

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

Physical Hazards:

Indicate all hazards that may be present for each task. If any of these potential hazards are checked, it is the project manager's responsibility to determine how to eliminate/minimize the hazard to protect onsite personnel.

Copy and paste a checkmark "✓"into appropriate boxes.

Physical Hazard Checklist				
Potential Job Hazards	**Task 1** Excavation Monitoring, Soil Delineation	**Task 2*** Soil Sampling	**Task 3**	**Task 4**
Confined space entry*				
Underground utilities	√			
Overhead utilities	√			
Electrical hazards				
Excavations greater than 4' depth	√	√		
Open excavation fall hazards	√	√		
Heavy equipment	√	√		
Drilling hazards				
Noise (above 85 dBA)	√			
Traffic concerns	√	√		
Extreme weather conditions	√	√		
Rough terrain for drilling equipment				
Buried drums				
Heavy lifting (more than 50 lbs)				
High risk fire hazard				
Poisonous insects or plants				
Water hazards				
Use of a boat				
Lockout/Tagout requirements				
Other: Specify				

***CONFINED SPACE ENTRY REQUIRES SPECIAL PROCEDURES, PERMITS AND TRAINING AND MUST BE APPROVED BY THE CORPORATE HEALTH & SAFETY MANAGER.**

***EXCAVATED SOIL WILL BE CONTAINED ONSITE. HALEY AND ALDRICH STAFF WILL NOT ENTER CONTAINERS TO COLLECT SAMPLES.**

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

Potential Activity Hazards and Hazard Controls:

Copy and paste a checkmark "✓" adjacent to potential activity hazards and relevant hazard controls.

POTENTIAL ACTIVITY HAZARDS

Abrasions and Cuts ✓
Access
Asphyxiation
Bacteria
Biological Hazards
Bloodborne Pathogens
Cave Ins
Chemical/Thermal Burns
Chemicals
Cold Stress
Compressed Gases
Confined Spaces
Congestion ✓
Defective Equipment
Dermatitis
Dropping Materials/Tools to Lower Levels
Drowning or Flowing Water
Electrical Shock
Energized Equipment
Equipment Misuse ✓
Ergonomics
Excavations✓
Explosions
Fatigue
Fire Flammability
Flying debris ✓
Foreign Body in Eye ✓
Frostbite/Cold
Fueling and Fuel Storage
Fugitive Dust ✓
Fumes ✓
Generated Wastes ✓
Guards removed
Hazardous Materials ✓
Heat Stress -
(cramps, exhaustion, stroke) ✓
Heavy Equipment Operation ✓
Heavy Equipment/Stability ✓
Heavy Lifting ✓
High crime area (violence)
High Winds
Hoists, Rigging, Slings, Cables
Housekeeping – Improper ✓
Illumination - Poor
Impact
Inability to Maintain Communication
Inclement Weather
Inclines
Insects/Reptiles
Mold
Moving Equipment, Conveyors or Vehicles ✓
Muddy Site Conditions
New Personnel
Noise ✓
Odor ✓
Overhead Utilities ✓
Overhead Work
Overloaded Equipment
Oxygen deficiency
Pinch Points ✓
Poisonous Plants
Pressure
Pressurized Lines
Radiation
Repetitive Motion
Rigging - Improper ✓
Sharp Objects ✓
Silicosis
Slips, Trips, and Falls ✓
Sprains and Strains Steam
Sunburn ✓
Surface Water Run-off
Toxicity
Traffic ✓
Underground Utilities ✓
Uneven Terrain
Unsafe Atmosphere
Vibration
Visibility - Poor
Visitors Known/Unknown ✓
VOC Emissions
Weight ✓
Work at Depth
Work at Heights
Work over Water
Working on Ice

HAZARD CONTROLS

Air Monitoring ✓
Appropriate Clothing/Monitoring Of Weather
Appropriate Labels/Signage
Barricades/Fencing/Silt Fencing ✓
Buddy System - Attendant
Chock Blocks
Confined Space Procedures
Decontamination Procedures
Derived Waste Management Plan
Drinking Water/Fluids
Dust Abatement Measures ✓
Emergency Action Plan Procedures
Equipment Inspection
Equipment Manuals/Training
Exclusion/Work Zones
Exhaust Ventilation
Eye Protection ✓
Fall Protection
Fire Extinguisher
Flotation Devices/Lifelines
Gloves ✓
Ground Fault Interrupter
Grounded Hydraulic Attachments
Grounded Equipment/Tanks
Hand Signal Communication
Hard Hat ✓
Hazardous/Flammable Material Storage
Hearing Protection ✓
High Visibility Safety Vest ✓
Hoses, Access to Water
Hotwork Procedures
Isolation of Energy Sources(Lockout/Tagout)
Machine/Equipment Guards
Manual Lifting Equipment
Police Detail
Proper Lifting Techniques
Proper Tool for Job
Proper Work Position/Tools ✓
Protective Equipment
Radio Communication
Respirator, (Full face dust)
Safety Harness /Lanyard/Scaffold
Security Escort
Sloping, Shoring, Trench Box
Spill Prevention Measures
Spill Kits
Stormwater Control
Traffic Controls ✓
Procedures/Methods
Vehicle Inspection
Visitor Orientation Escort✓
Window Cleaning/Defrost

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

Specific Activity Hazards and Precautions

Safety Meetings

All H&A personnel visiting the site will be given an orientation safety meeting and are required to read and sign this HASP. Daily safety meetings will be conducted onsite with contractors and documented on a Health & Safety Tailgate Meeting Form.

Utility Locators and Underground Hazards

Prior to drilling or excavating, Haley & Aldrich staff members or contractors as appropriate will ensure that permission has been gained from the property owner to access the property. Contact site facilities personnel to assist with location of underground utilities. Before marking any proposed exploration location, it is critical that all readily available information on underground utilities and structures be obtained. The estimated location of utility installations, such as gas, electric, fuel, steam, sewer, telephone, fiber optic, water, drainage or any other underground installation that may be expected to be encountered during drilling work, will be identified with the appropriate authority. Appropriate authorities include client representatives, utility companies, nonprofit organizations (e.g., "Dig-Safe), and others.

Heavy Equipment

Staff Members must be especially careful and alert when working with contractors who use heavy equipment, since equipment failure or breakage can lead to accidents and worker injury. Cranes and equipment for drilling, pile driving, test pitting and coring is of special concern. Should these devices fail during operation the likelihood of worker injury is high. Equipment of this nature should be visually inspected and checked for proper working order prior to the commencement of field work. Those that operate heavy equipment must meet all of the requirements to operate heavy equipment. Haley & Aldrich, Inc. staff members that supervise projects or are associated with such high risk projects that involve digging should use due diligence when working with a construction firm. Maintain visual contact with operators at all times and keep out of the strike zone whenever possible. Always approach heavy equipment with an awareness of the swing radius and traffic routes of each piece of equipment and never go beneath a hoisted load. High-visibility safety vests must be worn onsite at all times. Avoid fumes created by heavy equipment exhaust.

Noise Reduction

Site activities in proximity to heavy equipment often expose workers to excessive noise. It is anticipated that situations may arise when noise levels may exceed the OSHA Action Level of 85 dBA in an 8-hour time-weighted average (TWA). An example of this possibility is working in close proximity to the subcontractor during drilling activities onsite. If excessive noise levels occur, efforts will be made to control this by issuance of earplugs to all personnel and by implementing a system of hand signals understood by all.

Work Site Access & Controls (Standard Precautions)

The work area is restricted to authorized personnel. Clearly define the work area before beginning activities for the day. Caution tape and safety cones must be provided as necessary for vehicular traffic concerns and to protect passers-by. Proper housekeeping is essential to avoid creating hazards to pedestrian and vehicular traffic. Excavations in progress will not be left unattended at any time. Running equipment will not be left unattended at any time. Test borings and test pits will be backfilled upon completion and the area restored.

Site Security

Access to client property is dependent upon site-specific conditions under owner permission and will be controlled by the Client Project Manager. It will be the Contractor Project Manager's responsibility to control access to a site by means of temporary barriers such as flagging tape or fencing. The barrier will be inspected daily for integrity and adequacy by the Contractor Site Coordinator.

Weather Related Hazards

H&A employees and their subcontractors should be aware of potential health effects and/or physical hazards of working during inclement weather. Refer to OP1003-Cold Stress and OP1015-Heat Stress for discussion on weather hazards.

Heat Stress

Heat stress on hazardous waste sites or construction sites usually is a result of protective clothing decreasing natural body ventilation, although it may occur at any time work is being performed at elevated ambient temperatures. Because heat stress is one of the most common and potentially serious illnesses associated with hazardous waste site work, regular monitoring and other preventative measures are vital.

Site workers must learn to recognize and treat the various forms of heat stress.

The best approach is preventative heat stress management. In general:

- Workers should drink 16 ounces of water before beginning work, such as in the morning or after lunch. The water should be maintained at 50 to 60°F. Workers should drink 1 to 2 4-ounce cups of water every 30-60 minutes. A cool area for rest breaks should be designated, preferably air-conditioned. The use of alcohol during non-working hours and the intake of caffeine during working hours can lead to an increase in susceptibility to heat stress. Monitor for signs of heat stress.

- Workers should acclimate to site work conditions by slowly increasing workloads, i.e., do not begin site work activities with extremely demanding activities. This acclimation process may require up to two weeks for completion.

- Cooling devices should be used to aid natural body ventilation. These devices, however, add weight, and their use should be balanced against worker efficiency. An example of a cooling aid is long cotton underwear, which acts as a wick to help absorb moisture and protect the skin from direct contact with heat-absorbing protective clothing.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

- Installed mobile showers and/or hose-down facilities should be used to reduce body temperature and cool protective clothing in serious heat stress situations.

- In hot weather, field activities should be conducted in the early morning or evening.

- Adequate shelter should be available to protect personnel from heat, as well as cold, rain, snow, etc., which can decrease physical efficiency and increase the probability of both heat and cold stress. Set up a command post in the shade or erect temporary shade at the workstation if practical.

- In hot weather, rotate shifts of workers with potential heat stress exposure.

- Good hygienic standards must be maintained by frequent changes of clothing and showering. Clothing should be permitted to dry during rest periods. Persons who develop skin problems should immediately consult medical personnel.

Effects of Heat Stress

If the body's physiological process fail to maintain a normal body temperature because of excessive heat, a number of physical reactions can occur ranging from mild (such as fatigue, irritability, anxiety, and decreased concentration, dexterity, or movement) to fatal.

Heat-related problems are:

HEAT STROKE: An acute and dangerous reaction to heat exposure caused by failure of heat regulating mechanisms of the body; the individual's temperature control system that causes sweating stops working correctly. Body temperature rises so high that brain damage and death will result if the person is not cooled quickly.

Symptoms: Red, hot, dry skin, although person may have been sweating earlier; nausea; dizziness; confusion; extremely high body temperature; rapid respiratory and pulse rate; unconsciousness or coma.

Treatment: Cool the victim quickly and obtain immediate medical assistance. If the body temperature is not brought down fast, permanent brain damage or death may result. Soak the victim in cool but not cold water, sponge the body with rubbing alcohol or cool water, or pour water on the body to reduce the temperature to a safe level (102oF). Observe the victim and obtain medical help. Do not give coffee, tea or alcoholic beverages.

HEAT EXHAUSTION: A state of definite weakness or exhaustion caused by the loss of fluids from the body. This condition is much less dangerous than heat stroke, but it nonetheless must be treated.

Symptoms: Pale, clammy, moist skin, profuse perspiration and extreme weakness. Body temperature is normal, pulse is weak and rapid, and breathing is shallow. The person may have a headache, may vomit, and may be dizzy.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

Treatment: Remove the person to a cool place, loosen clothing, and place in a head-low position. Provide bed rest. Consult physician, especially in severe cases. The normal thirst mechanism is not sensitive enough to ensure body fluid replacement. Have patient drink 1 to 2 cups water immediately and every 20 minutes thereafter until symptoms subside. Total water consumption should be 1 to 2 gallons per day.

HEAT CRAMPS: Caused by perspiration that is not balanced by adequate fluid intake. Heat cramps are often the first sign of a condition that can lead to heat stroke.

Symptoms: Acute painful spasms of voluntary muscles (e.g., abdomen and extremities).

Treatment: Remove the victim to a cool area and loosen clothing. Have the patient drink 1 to 2 cups water immediately, and every 20 minutes thereafter until symptoms subside. Total water consumption should be 1 to gallons per day.

HEAT RASH: Caused by continuous exposure to heat and humid air and aggravated by chaffing clothes. Decreases ability to tolerate heat.

Symptoms: Mild red rash, especially in areas of the body on contract with protective gear.

Treatment: Decrease amount of time in protective gear, and provide powder to help absorb moisture and decrease chaffing.

Lightning

- Always pay attention to the weather conditions. You are responsible for your own safety. Use common sense and do not feel pressure to continue to work if you feel there is a threat and others don't, such as contractors and co-workers.
- If you are using conductive tools and equipment, separate yourself from them as far as practical.
- If you are near a drilling rig, lower the mast and move away from the rig.
- Rule of thumb- wait until 30 minutes after the last observed lightning strike or thunderclap before resuming your outdoor activities, warns the National Lightning Safety Institute.
- Protect yourself by taking cover in the best shelter you can find.
- If you are in or near the water, go to land immediately and find shelter. Take extra precaution when on the water and in a boat.
- If choosing between a building and a car, choose the building.
- If choosing between a hardtop and a convertible, choose the hardtop.
- If you're in a car, keep the windows closed.
- If there is no shelter, find a low-lying, open place that is a safe distance from trees, poles, or metal objects that can conduct electricity. Make sure it is not likely to flood.
  Assume a tucked position: Squat low to the ground. Place your hands on your knees with your head tucked between them. Try to touch as little of your body to the ground as possible.
- Do not lie flat on the ground, as your fully extended body will provide a larger surface to conduct electricity. Stay in a tuck position well after the storm passes.
- Watch for local flooding you may have to move if water begins to accumulate.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

- If you feel your hair stand on end in a storm, drop into the tuck position **immediately.** This sensation means electric charges are already rushing up your body from the ground toward an electrically charged cloud. Minimize your contact with the ground to minimize your injury.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

5. PROTECTIVE MEASURES

Personal Protective Equipment Requirements:

Copy and paste a checkmark "✓"into appropriate boxes.

Required PPE	Task 1	Task 2	Task 3	Task 4
	Excavation Monitoring, Soil Delineation	Soil Sampling		
Hard hat	√	√		
Safety glasses w/side shields	√	√		
Steel-toe footwear	√	√		
Hearing protection (plugs, muffs)	√			
Tyvek ™ coveralls				
PE-coated Tyvek™ coveralls				
Boots, chemical resistant				
Boot covers, disposable				
Leather work gloves				
Inner gloves - Nitrile		√		
Outer gloves - nitrile				
Tape all wrist/ankle interfaces				
Half-face respirator*				
Full-face respirator* (if action levels sustained)				
Organic vapor cartridges				
Acid gas cartridges				
Other cartridges: Dust				
P-100 (HEPA) filters				
Face shield				
Personal Flotation Device (PFD)				
High-Visibility Safety Vest	√	√		
Other:				
Level of protection required [C or D]:	**D mod**	**D mod**		

* In the event of respirator use, H&A staff must be medically qualified, fit tested and clean shaven with no facial hair that will interfere with the seal.

The required PPE checked in any box above must be on site during the task being performed. Work shall not commence unless the required PPE is present.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

Site Safety Equipment Requirements:

Check all items that are required to be on site.

Site Safety Equipment

☐ Fire Extinguisher	☑ First Aid Kit	☐ Flashlight
☐ Air horn/signaling device	☑ Cellular Phone	☐ Duct tape
☐ Ladder	☐ Barricade tape	☐ Drum dolly
☐ Two-way radio	☐ Safety cones	☐ Harness/Lanyard
☐ Other Specify		

The required equipment checked in any box above must be on site during the task being performed. Work shall not commence unless the equipment is present.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

6. MONITORING PLAN AND EQUIPMENT

Is air/exposure monitoring required at this work site for personal protection? ☑ Y ☐ N

Is perimeter monitoring required for community protection? ☑ Y ☐ N

Monitoring/Screening Equipment **Requirements:**

Check all items that are required to be on site.

Required Monitoring/Screening Equipment

☐ Photo-Ionization Detector (PID)	☐ Combustible Gas Indicator (CGI) (LEL)
☐ Photo-Ionization Detector (PID)	☐ Multiple Gas Detector LEL/O2/H2S/CO
☐ Photovac Micro Tip (PID)	☑ Dust Monitors (RAMs)
☐ Organic Vapor Monitor	☐ Colorimetric tubes
☐ Photovac Gas Chromatagraph (GC)	☑ Other Perimeter continuous dust monitoring

The required equipment checked in any box above must be on site. CO meter required for interior work only. Work shall not commence unless the equipment is present.

Standard Action Levels and Required Responses:

Exposure Guidelines for common contaminants are listed in Table 1 - Occupational Exposure Limits in the Chemical Hazards section above.

Action levels for readings obtained with a multiple gas detector are listed below.

Instrument	Normal	Operating levels	Action levels – required responses
Oxygen Meter	20.9%	Between 19.5-23.5%	Below 19.5 %: leave area, requires supplied air Above 23.5%: leave area, fire hazard
CGI	0%	Less than 10%	Greater than 10%: fire/explosion hazard; cease work
Hydrogen Sulfide	0%	Less than 10 ppm.	Greater than 15 ppm (or 10 ppm for 8 hrs) requires supplied air respirator
Carbon Monoxide	0%	Less than 25 ppm	Greater than 200 ppm for 1 hour (or 25 ppm for 8 hrs) requires supplied air respirator

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

Standard Dust Control Measures and Monitoring Plan:

Dust Control Measures:

It is anticipated that exposure to airborne dust can be mitigated during work operations as necessary to control dust emissions by means of limiting the area of exposed soils and through the use of water sprays. If dust emissions cannot be controlled by these standard measures, additional measures may be employed such as the use of a tackifier (if approved) to stabilize soil exposures or by covering exposed soil, stockpiles and roll off containers with tarpaulins, plastic sheeting or geotextile fabric. During inside work (Task 3) dust should be monitored and respiratory protection will be used is the dust level is sustained at >5 mg/m3. It is not permissible for dust emissions to escape from the site at any time and perimeter dust monitoring may be required to insure public safety. The OSHA Standard for Particulates, Not Otherwise Regulated (total dust) have been established for inert or nuisance dust at 15 mg/m3 (8 hr TWA). For the respirable fraction (less than 10 micron particulate size) the standard is 5 mg/m3. Dust may carry some concentration of heavy metals in the particulates.

Dust Monitoring:

A Respirable Aerosol Monitor (RAM) will be used to monitor total dust levels in work zones during excavations. These instruments do not give specific readings of contaminant concentration (e.g. metals, asbestos, etc.). Depending upon the contaminants present, it may be mandatory for workers to upgrade to level C protection using an air-purifying respirator with HEPA (P-100) filters if dust levels cannot be adequately controlled during any of the on-site tasks. The H&A Site Safety Officer (SSO) will determine PPE upgrades for Haley & Aldrich employees based upon meter readings and will share the readings with other site personnel responsible for the implementation of dust control measures. The OSHA PEL/STEL for Respirable Nuisance Dust is 5 mg/m^3 (8 hour TWA). Action levels for fugitive dust at the site perimeter are based upon the daily PM_{10} dust standard of 0.15 mg/m^3 in the National Ambient Air Quality Standard for Inhalable Dust (NAAQS).

Dust monitoring will be performed at two perimeter stations and the results will be logged. Appropriate dust control measures such as covering and wetting will be applied as mitigation.

Specific Monitoring Requirements:

Monitoring requirements and frequency is indicated by task and location below:

Task Number:	1 & 2	Frequency	1	times per 30 min	event

Air monitoring of breathing zone RAM during soil excavation and fill disturbance.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

Calibration and Use of Equipment:

Calibrate all monitoring equipment in accordance with manufacturers requirements, H&A calibration (OP) standards and site specific requirements (e.g., at the beginning and end of each work day). Calibration of equipment shall be documented in the field notes or Daily Field Report (DFR). Documentation should include:

- Date/time
- Zero reading before calibration
- Concentration of calibration gas
- Reading obtained with calibration gas before adjusting span\
- Final reading obtained with calibration gas after adjusting span

Note: This HASP has been developed for Haley & Aldrich purposes only and is not for use by others.

7. DECONTAMINATION AND DISPOSAL METHODS

Personal Hygiene Safeguards:

The following minimum personal hygiene safeguards shall be adhered to:

- No smoking or tobacco products on any Hazwoper project.
- No eating or drinking in the exclusion zone.
- It is required that personnel present on site wash hands before eating, smoking, taking medication, chewing gum/tobacco, using the restroom, or applying cosmetics and before leaving the site for the day.
- It is recommended that personnel present on site shower or bathe at home at the end of each day of working on the site.

Standard Personal Decontamination Procedures:

Outer gloves and boots should be decontaminated periodically as necessary and at the end of the day. Brush off solids with a hard brush and clean with soap and water or other appropriate cleaner whenever possible. Remove inner gloves carefully by turning them inside out during removal. Wash hands and forearms frequently. It is good practice to wear work-designated clothing while on-site which can be removed as soon as possible. Non-disposable overalls and outer work clothing should be bagged onsite prior to laundering. If gross contamination is encountered on-site contact the Project Manager and LHSC to discuss proper decontamination procedures. The steps required for decontamination will depend upon the degree and type of contamination but will generally follow the sequence below.

1. Remove and wipe clean hard hat
2. Rinse boots and gloves of gross contamination
3. Scrub boots and gloves clean
4. Rinse boots and gloves
5. Remove outer boots
6. Remove outer gloves
7. Remove Tyvek coverall
8. Remove respirator, wipe clean and store
9. Remove inner gloves

Disposal of PPE:

PPE that is not grossly contaminated can be bagged and disposed in regular trash receptacles. PPE that is grossly contaminated must be bagged (sealed) and field personnel should communicate with the Project Manager to determine proper disposal.

Tools & Equipment Decontamination:

All decontamination should be conducted at the site and not at the office or lab.

Check all equipment and materials needed for decontamination of tools and other equipment.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

☐ Acetone	☐ Distilled water	☐ Poly sheeting
☑ Alconox soap	☐ Drums for water	☐ Steam cleaner
☑ Brushes	☐ Hexane	☑ Tap water
☑ Disposal bags	☐ Methanol	☑ Washtubs
☑ 5 gallon pails	☑ Other Paper towels	

Standard Equipment Decontamination Procedures:

Air monitoring instrumentation and delicate instruments that are difficult to decontaminate or sensitive to water should be protected from contamination during use through the use of plastic sheeting. To the extent possible, efforts should be taken to limit the degree of contamination to hand tools and sampling equipment during use. Proper PPE must be worn while performing decontamination, including the wearing of chemical safety goggles and gloves. Storage or transport of decontamination solvents in squirt bottles is not permitted as they may discharge their contents upon ambient temperature change or leak if overturned. Standard equipment decontamination procedures are as follows. Any additional requirements are listed under Specific Equipment Decontamination Procedures below.

Pretreatment of heavily contaminated equipment may be conducted as necessary:

1. Remove gross contamination using a brush or wiping with a paper towel
2. Soak in a solution of Alconox and water (if possible)
3. Wipe off excess contamination with a paper towel
4. Clean with hexane or acetone and allow to dry

Standard decontamination procedure:

1. Wash using a solution of Alconox and water
2. Rinse with potable water
3. Rinse with methanol
4. Rinse with distilled water

Standard Disposal Methods for Contaminated Materials:

Excess sample solids, decontamination materials, rags, brushes, poly sheeting, etc. that are determined to be free of contamination through field screening can usually be disposed into client-approved, on-site trash receptacles. Uncontaminated wash water may be discarded onto the ground surface away from surface water bodies in areas where infiltration can occur. Contaminated materials must be segregated into liquids or solids and drummed separately for offsite disposal.

Specific Disposal Methods for Contaminated Materials:

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

Place in client-approved on-site receptacle.

Disposal Methods for Contaminated Soils:

Contaminated soil cuttings and spoils must be containerized for disposal off-site unless otherwise specifically directed. Any additional requirements are listed under Specific Disposal Methods for Contaminated Soils below.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

8. CONTINGENCY PLANNING

How H&A responds to an emergency depends on whether we are at an active facility or another other location. Many active facilities have very stringent requirements for the mitigation of emergencies. Therefore, the PM is responsible for identifying any specific requirements from the client contact.

As a rule of thumb, the following are H&A's basic responses to handling Emergencies. Typically, H&A does not mitigate emergencies. When Clients request or require specific functions such as First Aid/CPR trained personnel on site, we typically conform. Before any Project Manager or LHSC agrees to something more stringent, many issues should be considered such as training, safety, feasibility of an adequate response, insurance requirements, and much more.

Fire:

- Major Fires - Major fires will be mitigated by the local fire departments or by client's on-site fire/emergency response departments.
- Incipient Stage Fires -Incipient stage fires will be extinguished by on-site personnel using fire extinguishers. Only those who have received annual training may use an extinguisher.

Medical:

All H&A employee injuries and illnesses will be documented using the Supervisor's Accident / Injury / Near Miss Report (SAIR). This form is available on the Intranet.

- First Aid - First aid will be addressed using the on-site first aid kit. H&A employees are not required or expected to administer first aid/CPR to any H&A, Contractor, or Civilian personnel at any time and it is H&A's position that those who do are doing it on their behalf and not as a function of their job.
- Trauma - Based upon the nature of the injury, the injured party may be transported to the nearest hospital or emergency clinic by on-site personnel or by ambulance. First response to a trauma incident is to call 911 or facility security. H&A staff members are expected to assist in ancillary roles only such as directing ambulances to the scene. It is the discretion of the staff member on site whether an ambulance should be procured in remote locations where ambulance services will not be effective.

Hazardous Materials Spill:

- Small incidental spills (e.g. pint of motor oil) caused by H&A employees and/or by the contractor will be mitigated by the H&A staff member and/or the contractor.
- Large spills (e.g. large leak from heavy equipment fuel tank). The contractor is responsible for cleanup. In the event that it poses a serious human or environmental threat, the local Fire Department and/or client emergency response department will be contacted. Once emergency has been mitigated typically clean up will be provided by a vendor.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

Rescue:

H&A employees will not enter any confined spaces for rescue purposes.

Weather Related Emergencies:

H&A employees and their subcontractors should be aware of potential health effects and/or physical hazards of working during inclement weather. If applicable, safeguards against the effects and hazards of heat stress, cold stress, frostbite, thunderstorms, and lightning, etc., should be included with the section pertaining to physical hazards in this HASP.

Evacuation Alarms:

Evacuation alarms and/or emergency information will be communicated among personnel on site through verbal communication

Emergency Services:

Emergency services will be summoned via on-site or cellular phone

Emergency Evacuation Plan:

The site evacuation plan is as follows:

1. Establish a designated meeting area to conduct a head count in the event of an emergency evacuation.
2. If the work area is not near an emergency exit, exit via the closest route and meet at the designated meeting area.
3. Notify emergency response personnel (fire, police and ambulance) of the number of missing or unaccounted for employees and their suspected location.
4. Administer first aid will in the meeting area as necessary.

Under no circumstances should any personnel re-enter the site area without the approval of the corporate H&S manager, the H&S coordinator, and the fire department official in charge.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

9. HEALTH & SAFETY PLAN ACKNOWEDGMENT FORM

Note: Only H&A employees sign this page.

I hereby acknowledge receipt and briefing on this Health & Safety Plan prior to the start of on-site work and declare that I understand and agree to follow the provisions and procedures set forth herein while working on this site.

PRINTED NAME	SIGNATURE	DATE

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

10. PRE-JOB SAFETY CHECKLIST

The following checklist is designed to help Project Managers verify that all Health & Safety requirements are satisfied for projects involving site work and to aid in the preparation of the site-specific HASP.

Please initial and date the appropriate box once each requirement has been satisfied prior to commencement of site work.

#	Project H&S Requirements	Approval by PM or LHSC (initial each box or place NA)	Date Approved
1	Project site history has been researched and summarized, current site conditions have been determined and documentation of previous investigations, risk analyses and chemical data has been assembled and summarized.		
2	Project work scope has been outlined and potential chemical and physical hazards associated with work tasks have been identified.		
3	Task Safety Analysis has been performed and attached to the HASP.		
4	H&A personnel to be involved with the project have been identified and are current with medical surveillance, OSHA 40 hour and 8 hour refresher training. Hazwoper site supervisor requirements are satisfied.		
5	Additional training requirements have been met: e.g. nuclear density gauge, DOT, Confined Space Entry, Competent Person Training for Excavation, OSHA 10 hour certification, Railway Safety Training, etc.		
6	H&A personnel that may be required to wear a respirator are medically qualified and have current certification of fit testing.		
7	Client's additional H&S requirements have been met: e.g. facility safety orientations, safety documentation, meetings, special PPE requirements		
8	H&A subcontractors have met H&A's minimum requirements including: current OSHA 40 hour training, medical surveillance, written HASP, insurance, MSDSs.		
9	MSDSs are on site and available for chemicals on site.		
10	Safety equipment is available: e.g. flashlight, telephone, ladders, traffic cones, barricade tape, fire extinguisher, first aid kit, PPE, respiratory protection, air and dust monitoring instrumentation (calibrated), personal flotation device (PFD), 90' life line with ring, decontamination equipment, etc.		
11	HASP and supporting documentation is complete and signed by all members.		

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

APPENDIX A
HASP Amendment Form

This Appendix is to be used whenever there is an immediate change in the project scope that would require an amendment to the HASP. For project scope changes associated with "add-on" tasks, the changes must be made in the body of the HASP. Before changes can be made, a review of the potential hazards must be initiated by the H&A Project Manager.

Amendment No.	2, June 2016
Site Name:	Corning East High School and Memorial Stadium
Work Assignment No.:	
Date:	On going Facility enhancements that may disturb historic fill
Type of Amendment:	Additional tasks, revised contaminant list
Reason for Amendment:	Additional tasks, project updates
Alternate Safeguard Procedures:	Hospital location in corning NY has changed since project began
Required Changes in PPE:	None

Project Manager Signature: _____ Date: _6/16/16___

Local Health and Safety Coordinator: _____ Date: __6/15/16_____

This original form must remain on site with the original HASP. If additional HASPs are in the field, it is the Project Manager's responsibility to forward a signed copy of this amendment to those who have copies.

Note: This HASP has been developed for Haley & Aldrich purposes only and is not for use by others.

APPENDIX B
Issuance and Compliance
Site Safety Officer Role and Responsibilities
Training Requirements

This Health & Safety Plan (HASP) has been prepared in accordance with the requirements of Title 29 the Code of Federal Regulations (CFR) Section 1910.120/1926.65 to provide guidance for the protection of onsite personnel from physical harm and chemical exposure while working at the subject site.

The specific requirements of this HASP include precautions for hazards that exist during this project and may be revised as new information is received or as site conditions change.

- This HASP must be signed by all Haley & Aldrich (H&A) staff members who will work on the project, including H&A visitors. By signing the Health and Safety Plan Acknowledgement Form personnel are acknowledging that they are aware of the specific hazards of the site and agree to follow the provisions and procedures required to safeguard themselves and others from those hazards.
- This HASP or a current signed copy must be retained at the site at all times when H&A staff members are present.
- Deviations from this HASP are not permitted without prior approval from the above signed. Unauthorized deviations may constitute a violation of H&A company procedures/policies and may result in disciplinary action.
- Revisions to this HASP must be outlined within the contents of the HASP. If immediate or minor changes are necessary, the LHSC and H&A Project Manager may use Appendix A (HASP Amendment Form), located in the back of this HASP. Any revision to the HASP requires personnel to be informed of the changes and that they understand the requirements of the change.
- This HASP is not for H&A Subcontractor use. Each subcontractor engaged is responsible for all matters relating to the health and safety of their personnel and the safe operation of their equipment. This HASP will be made available as a reference so that subcontractors are informed of the potential hazards associated with the site to the extent we are aware. Subcontractors must develop their own HASP which must be, at a minimum, at least as protective as this HASP.
- This Site Specific HASP provides only site-specific descriptions and work procedures. General safety and health compliance programs in support of this HASP (e.g., injury reporting, medical surveillance, personal protective equipment (PPE) selection, etc. are described in detail in the H&A Corporate Health and Safety Program Manual and within Standard Operating Procedures (OPs). Both the manual and OPs can be located on the Company Intranet. When appropriate, users of this HASP should always refer to these resources and incorporate to the extent possible. The manual and OPs are available to clients and regulators per request.

Note: This HASP has been developed for Haley & Aldrich purposes only and is not for use by others.

Site Safety Officer:

The site safety officer (SSO) is defined as the individual responsible to the employer with the authority and knowledge necessary to implement the HASP and verify compliance with applicable health and safety requirements.

The H&A Project Manager may designate any person as the site safety officer (SSO) and determines the order of authority on site. Usually the highest ranking person on site is the SSO. A site safety officer must be on site at all times. When none of the designated SSOs are present on site, the senior person for H&A on site will default to the SSO. This project has identified the following hierarchy for SSO.

1. TBD based on ongoing project needs

Site Safety Officer Roles and Responsibilities:

The SSO is responsible for field implementation of this HASP and enforcement of safety rules and regulations. SSO functions include:

- Act as H&A's liaison for health and safety issues with client, staff, subcontractors, and agencies.
- Verify that utility clearance has been performed by H&A subcontractors.
- Oversee day-to-day implementation of the HASP by H&A employees on site.
- Interact with subcontractor project personnel on health and safety matters.
- Verify use of required PPE as outlined in the HASP.
- Inspect and maintain H&A safety equipment, including calibration of air monitoring instrumentation used by H&A.
- Perform changes to HASP and document in Appendix A of the HASP as needed and notify appropriate persons of changes.
- Investigate and report on-site accidents and incidents involving H&A and its subcontractors.
- Verify that site personnel are familiar with site safety requirements (e.g., the hospital route and emergency contact numbers).
- Report accidents, injuries, and near misses to the H&A PM and Local Health and Safety Coordinator (LHSC) as needed.

The SSO will conduct initial site safety orientations with site personnel (including subcontractors) and conduct toolbox and safety meetings thereafter with H&A employees and H&A subcontractors at regular intervals and in accordance with H&A policy and contractual obligations. The SSO will track the attendance of site personnel at H&A orientations, toolbox talks, and safety meetings. Subcontractors will document training and provide training rosters to the H&A SSO.

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

The SSO will report accidents such as injury, overexposure, or property damage to the Local Health and Safety Coordinator, to the Project Manager, and to the safety managers of other on-site consultants and contractors. The SSO will consult with the safety managers of other on-site consultants and subcontractors on specific health and safety issues arising over the course of the project, as needed.

Health and Safety Training Requirements:

Personnel will not be permitted to supervise or participate in field activities until they have been trained to a level required by their job function and responsibility. H&A staff members, contractors, subcontractors, and consultants who have the potential to be exposed to contaminated materials or physical hazards must complete the training described in the following sections.

The H&A Project Manager/LHSC will be responsible for maintaining and providing to the client/site manager documentation of H&A staff members' compliance with required training as requested. Records shall be maintained per OSHA requirements.

40-Hour Health and Safety Training

The 40-Hour Health and Safety Training course provides instruction on the nature of hazardous waste work, protective measures, proper use of personal protective equipment, recognition of signs and symptoms which might indicate exposure to hazardous substances, and decontamination procedures. It is required for all personnel working on-site, such as equipment operators, general laborers, and supervisors, who may be potentially exposed to hazardous substances, health hazards, or safety hazards consistent with 29 CFR 1910.120.

8-hour Annual Refresher Training

Personnel who complete the 40-hour health and safety training are subsequently required to attend an annual 8-hour refresher course to remain current in their training. When required, site personnel must be able to show proof of completion (i.e., certification) at an 8-hr refresher training course within the past 12 months.

8-Hour Supervisor Training

On-site managers and supervisors directly responsible for, or who supervise staff members engaged in hazardous waste operations, should have eight additional hours of Supervisor training in accordance with 29 CFR 1910.120. Supervisor Training includes, but is not limited to, accident reporting/investigation, regulatory compliance, work practice observations, auditing, and emergency response procedures.

Additional Training for Specific Projects

H&A personnel will ensure their personnel have received additional training on specific instrumentation, equipment, confined space entry, construction hazards, etc., as

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.

necessary to perform their duties. This specialized training will be provided to personnel before engaging in the specific work activities including:

- Client specific training or orientation
- Competent person excavations
- Confined space entry (entrant, supervisor, and attendant)
- Heavy equipment including aerial lifts and forklifts
- First aid/ CPR
- Diving certification
- Use of fall protection
- Commercial drivers license
- Use of nuclear density gauges
- Asbestos awareness

Note: This HASP is developed for Haley & Aldrich purposes only and not for use by others.