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V6Z 0B9  
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## SOLICITATION AMENDMENT MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

### Comments - Commentaires

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800 Burrard Street, Room 219  
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V6Z 0B9

<b>Title - Sujet</b> Turbine Installation	
<b>Solicitation No. - N° de l'invitation</b> F1700-164035/A	<b>Amendment No. - N° modif.</b> 002
<b>Client Reference No. - N° de référence du client</b> F1700-164035	<b>Date</b> 2017-01-17
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$PWY-019-7943	
<b>File No. - N° de dossier</b> PWY-6-39253 (019)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2017-01-25</b>	
<b>Time Zone</b> Fuseau horaire Pacific Standard Time PST	
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Ngan, Ken (PWY)	<b>Buyer Id - Id de l'acheteur</b> pwy019
<b>Telephone No. - N° de téléphone</b> (604) 658-2755 ( )	<b>FAX No. - N° de FAX</b> (604) 775-6633
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> DFO - Puntledge Hatchery - Courtenay, BC	

Instructions: See Herein

Instructions: Voir aux présentes

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<b>Signature</b>	<b>Date</b>

Solicitation No. - N° de l'invitation  
F1700-164035/A  
Client Ref. No. - N° de réf. du client

Amd. No. - N° de la modif.  
002  
File No. - N° du dossier  
pwy-6-39253

Buyer ID - Id de l'acheteur  
pwy019  
CCC No./N° CCC - FMS No/ N° VME

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**Les documents français seront disponibles sur demande.**

This Solicitation Amendment 002 is raised to incorporate Addendum #2 and the referenced Asbestos Survey.

All other terms and conditions remain unchanged.

## ADDENDUM #2

Date of Addendum: January 16, 2017

### NOTICE TO ALL BIDDERS AND PLANHOLDERS

The Contract Documents for the above-referenced Project are modified as set forth in this Addendum. The original Contract Documents and any previously issued addenda remain in full force and effect, except as modified by this Addendum, which is hereby made part of the Contract Documents. Bidder shall take this Addendum into consideration when preparing and submitting a bid, and shall acknowledge receipt of this Addendum in the space provided on the Bid Form.

### SPECIFICATIONS

Item	Section No.	Description of Change
1.1	01 11 00 Summary of Work	<b>Scope includes Supply of Turbine – Generator Unit.</b>  Delete Section 1.9 Pre-Purchased Equipment. All equipment is to be supplied by Contractor.
	List of Contract Documents	After Section 48 10 00, delete <b><i>“for information only”</i></b>
1.2	26 05 00 Electrical General Requirements	<b>Scope includes re-mounting new 120V light switches and outlets for control room.</b>  Add Clause 1.1.7 – Contractor to provide 4 outlets and 2 switches including teck cable or rigid conduit and cabling to be installed within the control room and/or on either side of the newly constructed control room wall. All materials to be supplied ‘new.’ Any existing electrical/wiring/outlets/switches on control room walls to be removed and disposed of by the Contractor.
1.3	01 11 00 Summary of Work	<b>Removal of Asbestos-containing Floor Tiles.</b>  Add to Clause 1.3.1 - The control room tiles are to be removed as part of this project. Approximate area tiled is 7.5 m <sup>2</sup> . Existing control room tiles have asbestos content. See attached Asbestos Report. The Work will be completed in accordance with all applicable WCB-BC (Worksafe BC) regulations relating to safe handling of asbestos.
	01 33 00 Submittal Procedures	Add Clause 1.5 Asbestos Removal Plan Submittal  1.5 Contractor to provide a plan for approval that identifies proposed method for removal of asbestos tiles, worker safety provisions, and method of disposal. The plan will demonstrate compliance with WCB regulations. No work to be completed

Puntledge River Hatchery Water Supply Energy Recovery  
ADDENDUM # 2

		prior to approval of the Asbestos Removal Plan.
1.4	09 91 23 Interior Painting	<p><b>Concrete Floor in Control Room to be Painted</b></p> <p>Add to 1.1.1</p> <ul style="list-style-type: none"> <li>- Area previously tiled (the control room floor) to be painted with floor paint.</li> </ul> <p>Add 2.6 Floor Paint: <b>Sikafloor 261 CA</b> or approved equal. Colour standard grey.</p>
1.5	40 20 00 Process Piping	<p><b>Piping Coating and Lining Alternate</b></p> <p>Add to 2.1.2 Table, Row for Coating and lining – “Shop coating and lining of pipe to AWWA C210 is an acceptable alternate to AWWA C213.”</p>
1.6	40 20 00 Process Piping	<p><b>Roll Groove joints acceptable alternate.</b></p> <p>Add to 2.1.2 Table, Row for Grooved Joints: “Roll grooves will be accepted provided that roll groove equipment used is appropriate for piping material, wall thickness and fittings as per fitting manufacturer recommendations. Provide submittal on roll groove machine(s) to be used.”</p>

## DRAWINGS

Item	Drawing No.	Description of Change
2.1	S-002	<p><b>Add Window Specification.</b></p> <p>Add to Window Schedule: Style: Fixed frame Frame: Vinyl (PVC), block frame, mitred corners Glass: Clear tempered glass to ASTM C1048, 2-pane sealed unit Standard of acceptance: Encompass by Pella Install per manufacturer’s recommendations for interior installation.</p>
2.2	M-005 Note 2.	<p><b>Add to Concrete Specification for Equipment.</b></p> <p>2. Concrete: 28 day compressive strength <math>f_c' = 35</math> MPa, Exposure Class F1 conforming to CAN/CSA A23.1. Maximum aggregate size 20 mm.</p>

Puntledge River Hatchery Water Supply Energy Recovery  
ADDENDUM # 2

<b>QUESTIONS FROM TENDERERS</b>		
Item	QUESTION	RESPONSE
3.1	Specifications for the window in the masonry block? Can we use press metal frame for the window framing?	See item 2.1 of this addendum.
	How is asbestos in the floor tile is to be handled? Are the existing floor tiles going to be removed by the owner prior to the demo?	The floor tiles are to be removed as per Item 1.3 of this addendum by the Contractor using appropriate asbestos handling and disposal methods.
	Floor covering in the new control room?	Area where tiles are removed is to be painted per Item 1.4 of this addendum.
	Ceiling finishing in the new control room?	None. Ceiling to remain as-is.
	Can stainless steel be used for the process piping?	No.
	Confirm that our tender is to include the generator? Can you please provide shop drawings for the pre purchased equipment and clarify what has been pre-purchased as per section 01 11 00 item 1.9?	Yes the Contractor is to include the generator specified. No items have been pre-purchased. See Item 1.1 of this addendum.
	Can the piping 65 mm and larger be changed from steel with AWWA C213 to steel with AWWA C210?	Yes as per Item 1.5 of this addendum.
	Section 40 20 00 item 2.1.2 refers to cut grooving the pipe. Is roll grooved also acceptable?	Yes as per Item 1.6 of this addendum.
	Is the existing masonry wall to be removed shown on drawing S-002 assumed to be hollow core?	Yes assume hollow-core.
	Are the existing electrical switches and outlets on the wall that is being demolished going to be removed by the owner prior to demo?	No. The contractor is to remove these and replace with new switches and outlets per Item 1.2 of this addendum.
	Can you please provide a concrete spec for the equipment pads?	See Item 2.2 of this addendum
	How many hours/days should the contractor allow for commissioning the owner-supplied material?	No Owner-supplied materials. Regarding the turbine generator set, please coordinate with your supplier.

Puntledge River Hatchery Water Supply Energy Recovery  
ADDENDUM # 2

	On drawing M-002 on the plan view it calls for a field groove. They don't make a field groover for 400 mm pipe. Should we weld in a grooved spool or remove the grooved coupling?	The grooved coupling is required. Welding on a grooved spool is acceptable.
	On drawing M-003 on item 17 is there a concentric reducer between the 90 and valve V8? If so what size is it?	There is not a reducer at this location. The valve is 300 mm dia. (same as pipe). The drawing shows a weld neck flange.
	Will compaction testing before paving be taken care of by the owner?	The Owner may complete testing of compaction, no initial testing is required by the Contractor. If initial tests by Owner fail re-testing will be the Contractor's responsibility.
	Can you please provide a drawing with the existing utility locations where the buried electrical conduit is to be installed?	Please see Section 31 23 33, Cl. 1.4 of the specification. The contractor is responsible for pre-location of utilities in the field prior to excavation. Note, the design drawings and reference drawings provided may be incomplete.

**Lower Puntledge Hatchery  
Asbestos Survey and Assessment  
(PK 90160)**

The attached Asbestos Survey is attached for information as part of the contract documents.

**END OF ADDENDUM**

**PUBLIC WORKS &  
GOVERNMENT SERVICES CANADA  
ENVIRONMENTAL SERVICES**



Fisheries and Oceans Canada  
Pêches et Océans Canada

**LOWER PUNTLEDGE HATCHERY**

**ASBESTOS SURVEY AND ASSESSMENT  
(PK 90160)**



**North West  
Environmental Group Ltd.**

**March 31<sup>st</sup>, 2008**

## **Salient Information:**

### **Client:**



Environmental Services  
800 Burrard St., Room 641  
Vancouver, BC  
V6Z 2V8

### **Property:**



Fisheries and Oceans Pêches et Océans  
Canada Canada

## **Lower Puntledge Hatchery PK 90160**

### **Consultant:**



**North West  
Environmental Group Ltd.**

#3-835  
Devonshire Road  
Victoria, BC  
V9A 4T5

### **Distribution:**

- 1 Copy - Department of Fisheries and Oceans
- 1 Copy - Department of Fisheries and Oceans (Electronic)
- 1 Copy - Public Works and Government Services Canada
- 1 Copy - Public Works and Government Services Canada (Electronic)
- 2 Copies - North West Environmental Group Ltd.



## EXECUTIVE SUMMARY

North West Environmental Group Ltd. was retained by Public Works and Government Services Canada (PWGSC) on behalf of the Department of Fisheries and Oceans to perform a survey for asbestos-containing materials (ACM) at Lower Puntledge Hatchery located at Power House Road, P.O. Box 3111, Courtenay, B.C., V9N 5N3. The objective of the project was to conduct a survey and assessment of ACM and to provide recommendations to manage these materials in accordance with applicable regulations and guidelines.

The survey was conducted on January 18, 2008 by Robert Christie, Senior Occupational Hygienist with North West Environmental Group.

As per *Standing Offer E0276-050076* the consultant visited each site and conducted detailed surveys of each building for asbestos. At each site, the following was undertaken:

- A walk through of each accessible structure on the site on a room by room basis to determine the presence, location, quantity and condition of asbestos-containing materials;
- Non-intrusive sampling of building materials suspected of containing asbestos;
- Assessment of each suspect ACM based upon the Action Matrix as defined within the Minister's Directive 057 (see Appendix 4) which is included in the Department of Fisheries and Oceans Asbestos Management Plan (AMP) template;
- Analysis of suspect ACM by a laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP), as per the AMP;
- Development of a written asbestos-containing materials survey report detailing the methodologies, results, conclusions and recommendations as well as all supporting documents including a risk assessment of each ACM based upon the Action Matrix.

Based on our visual inspection and laboratory analysis, ACM were identified in quantities that will impact the operations and management of the subject facility. A summary of the ACM identified in each of the building with appropriate recommendations is provided below. The Floor Plans in **Appendix 5** illustrate sample locations and locations of identified ACM.

This report should only be interpreted by personnel trained in the provisions of the DFO *Asbestos Management Plan* and familiar with *PWGSC Departmental Directive 057*. Note that this document is not a comprehensive statement of materials that do not contain asbestos nor is it an absolute declaration of the location of all asbestos containing materials. See Section 9 for a full disclosure of the limitations of the survey and report.

Summary of ACM Survey Findings and Recommendations		
Building	Finding and Condition	Recommendations
Aeration Building	Asbestos containing vinyl floor tiles are present in the control room. Some damage has occurred and further damage is likely. This material is in FAIR condition	<p>All asbestos work must be undertaken in accordance with procedures outlined in Part 6 of the BC Occupational Health and Safety Regulation 301/2004. These procedures satisfy the federal Department of Labour and PWGSC requirements pertinent to asbestos work.</p> <p>Remove all ACM materials in FAIR condition.</p>

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**TABLE OF ACRONYMS**

<b>Acronym</b>	<b>Explanation</b>
ACGIH	American Conference of Governmental Industrial Hygienists
ACM	Asbestos Containing Materials
AMP	Asbestos Management Plan
DFO	Department of Fisheries and Oceans
EMA	Environmental Management Act
ISO/IEC	International Organization for Systematization
LQAP	Lab Quality Assurance Program of the ACGIH
NVLAP	National Voluntary Laboratory Assurance Program
PWGSC	Public Works and Government Services Canada
USEPA	US Environmental Protection Agency

## **ASBESTOS SURVEY AND ASSESSMENT**

### **Lower Puntledge Hatchery**

#### **1.0 INTRODUCTION**

North West Environmental Group Ltd. was retained by Public Works and Government Services Canada (PWGSC) on behalf of the Department of Fisheries and Oceans to perform a survey for asbestos-containing materials (ACM) at Lower Puntledge Hatchery located at Power House Road, P.O. Box 3111, Courtenay, B.C., V9N 5N3. The objective of the survey was to conduct and provide a survey and assessment of asbestos containing materials and provide recommendations to manage these materials in accordance with applicable regulations and guidelines. The Lower Puntledge Hatchery is referred to as the “subject site” throughout this document.

The survey was conducted on January 18, 2008, by Robert Christie, Senior Occupational Hygienist with North West Environmental Group.

#### **1.1 Scope of Work**

As per *Standing Offer E0276-050076* the consultant visited the subject site and conducted a detailed survey of each accessible building for asbestos. At each site, the following was undertaken:

- A walk through of each accessible structure on the site on a room by room basis to determine the presence, location, quantity and condition of asbestos-containing materials;
- Non-intrusive sampling of building materials suspected of containing asbestos;
- Assessment of each suspect ACM based upon the Action Matrix within the *PWGSC Asbestos Management Plan* template;
- Analysis of suspect ACM by a laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP), as per *PWGSC Departmental Directive 057*;
- Development of a written asbestos-containing materials survey report detailing the methodologies, results, conclusions and recommendations as well as all supporting documents including a risk assessment of each ACM based upon the Action Matrix.

## 2.0 SITE DESCRIPTION

Southwest side of the Puntledge River, west of the Courtenay city limits. The Subject Facility comprises eleven individual buildings which are part of lower and upper Puntledge.

The buildings were reportedly constructed in the 1960's. The buildings are comprised of single storey, wood framed, metal and /or concrete construction with poured concrete slab footing/foundation systems. The walls and ceilings of the buildings are made up of a combination of cinder block, drywall, plywood, metal and plaster. Building sizes varied from 10 m2 to 700 m2.

### 3.0 DEFINITIONS

Cement Asbestos Board (CAB)	Sometimes called transite, fire board, glassboard
Drywall Joint Compound	Drywall filler, drywall joint compound. Drywall is also known as gyproc, gypsum board or sheet rock.
Caulking	Term used for firestopping, window putties, ductwork caulk, etc.
Ceiling Texture	Spray applied ceiling finish, sometimes used as a wall finish.
Skim Coat	Thin cementitious, material applied to walls, ceiling, and concrete surfaces.
Non-intrusive also termed Non-destructive	A form of sampling where care is taken not to damage finished building materials and surfaces.
Debris	Crumbled materials including vermiculite that require cleaning by qualified professionals.
Bulk Sample	Small representative samples of solid materials suspected of containing asbestos which are sent for analysis.
Vermiculite	Solid granular solid insulating material made of expanded mica which often contains asbestos.

## **4.0 REGULATORY FRAMEWORK, GUIDELINES AND CODES**

### **4.1 Federal Occupational Health and Safety**

In federal jurisdictions, ACM are regulated under the *Canada Labour Code, Part II*. Specifically, *Part X, Hazardous Substances*, provides the direction for the control of exposure to potentially toxic substances in the workplace. Under this regulation, employers are required to:

- Maintain a record of all hazardous materials;
- Undertake a hazard investigation by competent person;
- Ensure materials are properly stored and handled;
- Post warning signs;
- Inform and educate employees regarding hazards; and
- Control exposure through substitution, engineering or protective equipment

Additionally, PWGSC provides guidance for the management of ACM in federal buildings managed by PWGSC under *PWGSC Departmental Directive 057*. The document specifies methods and procedures to address the following:

- Identification, assessment and inventory of ACM in buildings;
- Re-assessment of friable ACM on an annual basis;
- Maintenance of departmental information regarding ACM
- Training modules for PWGSC personnel based on the responsibilities and duties to be undertaken in relation to asbestos management; and
- Identification, classification, monitoring, inspection and control of asbestos-related work undertaken by departmental personnel or contractors.



## 4.2 Provincial Occupational Health

Workplace health and safety is regulated in British Columbia by WorkSafeBC under the *Workers' Compensation Act* (effective April 15, 1998), as amended by *Workers' Compensation (Occupational Health and Safety) Amendment Act* (effective October 1, 1999). The Act defines the general duties and obligations of the employer, employees and others at the work site.

WorkSafeBC has published Safe Handling of Asbestos, A Manual of Standard Practices. This manual outlines basic information on asbestos products, health hazard requirements for worker protection, safe work procedures and principles that should be followed in selecting the most suitable technique for the safe abatement of ACM. This document, which provides a guide to current accepted practices for asbestos work, is to be followed in the Province of British Columbia.

## 4.3 Environmental

The Environmental Management Act (EMA), brought into force in July 2004, is the principle environmental statute in British Columbia. The EMA prohibits the introduction of waste into the environment in such a manner or quantity as to cause pollution, except in accordance with a regulation, permit, approval or code of practice issued under the Act. The Hazardous Waste Regulation (HWR) addresses the proper handling and disposal of hazardous wastes, under provisions of the EMA.

## 4.4 Transportation of Asbestos Containing Material Waste

The transportation of asbestos-containing wastes is governed under the Canadian Transportation of Dangerous Goods Act and Regulations which outline the requirements for storage, handling and transportation of such waste. In addition, transporters require licensing by the Province which also tracks the generation, transport and disposal of ACM wastes through a system of waste manifests.

## 5.0 METHODOLOGY

### 5.1 Asbestos Survey

The results of the survey determined the type and extent of ACM in Lower Puntledge Hatchery. The survey was non-destructive and therefore did not include areas that were inaccessible at the time of the survey. The systems that were reviewed as part of the survey are as follows:

- structural – all visible structural components including walls, roofs and supporting members
- mechanical – systems including: insulation, hot water and steam systems, condensate systems, chilled water systems, glycol systems, domestic hot and cold water, emergency generator exhaust, boiler units, heat exchangers, reboiler units, asbestos cement piping, asbestos sheet products, caulking, and fire stop plasters and caulking.
- architectural – systems including: texture coats, sheet flooring, vinyl floor tile, acoustical sprayed-applied materials, thermal insulation, condensation control applications, ceiling tile, wall board, drywall joint compound, asbestos sheet products.

Identified suspect ACM were systematically sampled and recorded. Samples of suspect ACM samples were analyzed for asbestos type and percentage content using Polarized Light Microscopy (PLM) in accordance with U.S. Environmental Protection Agency (USEPA) methodologies and dispersion staining techniques (40 CFR Part 763, Vol. 52, No. 210).

Suspect ACM were identified, sampled and were submitted to EMSL Westmount, New Jersey for asbestos content analysis. EMSL is a certified under the American Industrial Hygiene Association Lab Quality Assurance Program (LQAP, thereby conforming to the ISO/IEC 17025:2005 International Standard, “General Requirements for the Competence of Testing and Calibration Laboratories” number 100194. EMSL has been approved by PWGSC. Drawings show approximate sample locations for suspect ACM are presented in **Appendix 5** and **Appendix 3** contains the analytical laboratory results. **Appendix 2** provides a complete listing of all materials sampled.

The report provides a statement of the asbestos content of materials the surveyor was able to sample on the date of the survey. A variety of materials that were not accessible were not sampled. Materials that were not sampled must be reviewed for asbestos content prior to being disturbed.

### 5.2 Risk Assessment Methodology

As part of the survey of ACM, a risk assessment was completed following the Action Matrix provided in *PWGSC Departmental Directive 057*. The results of this risk assessment for the confirmed ACM are presented in table format in Section 6. An excerpt of the Action Matrix is

included in **Appendix 5**.

### **5.3 Limitations of Survey**

This document details the methodology, findings and conclusions of the asbestos survey and assessment conducted on the subject site on January 18, 2008.

Analytical results included in the report reflect the sampled materials at the specific sample locations. Visually similar materials were referenced to specific analyzed samples.

The survey of the building did not include destructive sampling which would permit an intrusive investigation of inaccessible wall and ceiling cavities. Limited access into interior and perimeter walls, voids crawlspaces, and mechanical shafts was obtained for the investigation of insulation materials. It is possible that ACM are present in these areas but was not identified. If materials suspected of containing asbestos are encountered during future renovations or demolition, they should be treated as asbestos-containing until proven otherwise. Locations and building materials that have not been surveyed should be considered potentially asbestos containing until such time as they can be evaluated by a qualified person.

Vinyl tile or sheet flooring or other materials may be present under carpets, cabinets, frame walls and subfloors in various offices and corridors throughout the buildings. This could not be confirmed without causing damage to the carpets, these materials were not sampled. If encountered during future renovations, sampling and analysis for asbestos content would be required prior to disturbance of the concealed flooring materials.

Roofing materials may contain asbestos, however, due to the potential for damage to the building and its contents, full depth roofing core samples were not obtained from the roofing systems. Roofing materials should be sampled and analyzed for asbestos prior to disturbance in the event that roof repairs or replacement is required.

All vermiculite insulation should be considered as asbestos containing until such time as a comprehensive destructive testing sampling program is carried out within the building or structure. Asbestos containing vermiculite should be considered present within all concrete block walls, voids, and spaces including attics, walls, ceiling and floor voids.

Some materials cannot be reasonably surveyed. A variety materials should be reviewed in aside from the asbestos survey prior to renovations or demolition activities. These materials include but are not limited to :

- Internal contents of Fire Doors
- Fire Hoses
- Materials inside double wall metal chimney sections
- Concealed roofing, caulk and felts,
- Internal parts of appliances and white goods
- Internal contents of oil stoves, furnaces, hot water heaters, (see white goods), boilers, and generators
- Vermiculite in walls that do not have existing penetrations

- Buried cement pipes
- Insulation within built-in coolers or air conditioners
- Gaskets in pipe flanges and valves
- Caulk, putty, filler, cord, tiles, gland packing, etc. in shop use in inventory
- Resin composite furniture (often student-style chairs and desks).

An asbestos risk assessment must be completed prior to any removal and/or alteration work in or on a building. Removal and/or alteration work requires control measures to be implemented in accordance with Work Safe B.C. Regulations and DFO specific requirements. Protective personal equipment is required during any work or major alteration that may disturb synthetic or asbestos insulation and/or dust that may be present.

## **6.0 RESULTS AND DISCUSSION**

Detailed below are descriptions of the materials that were found to contain asbestos. Photographs showing the sample locations of materials confirmed to contain asbestos are found in Appendix 1.

Twelve samples of materials suspected of containing asbestos were collected and submitted to EMSL Analytical, Inc. with a chain of custody for asbestos content analysis. Areas and buildings found to contain ACM are summarized in conclusions.

### **6.1 Acoustic Ceiling Tiles**

One (1) sample of suspect asbestos-containing acoustic ceiling tiles was collected. None of the samples of the ceiling tiles were found to contain asbestos.

No other suspect asbestos-containing acoustic ceiling tiles were observed at the time of the survey.

### **6.2 Caulking**

No suspect asbestos-containing caulking was observed at the time of the survey.

### **6.3 Drywall Joint Compound**

Four samples of drywall joint compound were collected. None of the samples were found to contain asbestos.

No other suspected asbestos containing floor tiles were observed at the time of the survey.

### **6.4 Floor Tiles**

Four (4) samples of suspect asbestos-containing floor tiles were collected. Where possible a portion of the underlying mastic was collected and submitted with the floor tile sample. One (1) sample was found to contain asbestos (Aeration Tower). This sample was found to be in FAIR

condition at the time of the survey.

No other suspect asbestos-containing vinyl floor tiles were observed at the time of the survey.

#### **6.5 Thermal Mechanical Insulation**

Two (2) samples of thermal mechanical insulation on pipe fittings were collected. None of the samples were found to contain asbestos.

No other suspect asbestos-containing thermal mechanical insulation was observed at the time of the survey.

#### **6.6 Skim Coat**

No suspected asbestos-containing skim coat was observed at the time of the survey.

#### **6.7 Fire Stop Caulking**

No suspect asbestos-containing fire stop caulking was observed at the time of the survey.

#### **6.8 Sheet Flooring**

No suspected asbestos-containing vinyl sheet flooring was observed at the time of the survey.

#### **6.9 Other Materials**

One (1) sample of textured ceiling finish suspected of containing asbestos was collected and analyzed for asbestos content. This sample was found not to contain asbestos.

No other suspect ACM were observed at the time of the survey.

## 7.0 CONCLUSIONS

Based on findings of the visual assessment and analytical results, Northwest Environmental Group provides the following summary of conclusions regarding identified ACM in the subject site. Tables include the priority action levels as per PWGSC, *Deputy Minister Directive 057*. Tables include costs for removal of materials, although it factors in a fifty percent added cost for working in remote locations, costs for travel time and expenses have not been included. Costs for vermiculite contamination only include clean up of spilled vermiculite DEBRIS. Prices shown do not reflect the costs of demolition of vermiculite cinder blocks.

Figure 1: Identified ACM by Building

DFO Sample ID	Building	Type of Material Sampled	Location of Sample	Asbestos (% & type)	Condi- tion	Access- ibility	Friability	Recom- mended Action	Quantity	Cost
PK90160-0801- BM008	Aeration Tower	Floor Tile	Aeration Tower	5Chrysotile	FAIR	A	Non-friable	3	200sf	\$1,000.00



## 8.0 RECOMMENDATIONS

Based on the above stated conclusions, the following recommendations are provided.

- 1) Provide copies of this report, or a summary thereof, to site personnel as per the asbestos management plan.
- 2) Label all identified ACM.
- 3) ACM in good condition should be controlled through the implementation of the DFO Asbestos Management Plan designed to meet the requirements of the Canada Labour Code, PWGSC Deputy Minister Directive 057, and WorkSafe BC.
- 4) Inspect all identified asbestos containing materials annually to identify any damage and ensure proper labeling is present.

Managing ACM:

- a. Any damaged ACM found during future inspections, as well as ACM that could be impacted by any demolition or renovation activity, should be removed following procedures outlined in Part 6 of the BC Reg. 296/97 as amended by BC Reg 301/2004. The work must be completed following procedures outlined in Part 6 of the BC Reg. 296/97 as amended by BC Reg 301/2004. As of the date of this report, these procedures meet the requirements of the federal Department of Labour and as well as the requirements of PWGSC as they pertain to asbestos work.
- b. Throughout the abatement activities, appropriate air monitoring and inspection should be conducted by qualified personnel to ensure all contamination is contained and ACM are disposed of appropriately. It is recommended that a proper scope of work and asbestos removal specifications be written to ensure the complete and proper removal of all ACM.

## 9.0 CLOSURE

This asbestos survey and assessment report has been prepared exclusively for Public Works and Government Services Canada and the Department of Fisheries and Oceans and is intended to provide a delineation of the presence and condition of asbestos-containing materials as observed on the date this survey was conducted. The conclusions and recommendations contained in this assessment report are based upon professional opinions with regard to the subject matter. These opinions are in accordance with accepted hygiene assessment standards and practices applicable to these locations and are subject to the following inherent limitations:

- 1) The data and findings presented in this report are valid as of the date of the investigation. The passage of time, manifestation of latent conditions or occurrence of future events may warrant further exploration at the properties, analysis of the data, and re-evaluation of the findings, observations, and conclusions expressed in this report.
- 2) The data reported and the findings, observations and conclusions expressed in this report are limited by the Scope of Work. The Scope of Work was defined by the request of the

client, the time and budgetary constraints imposed by the client, and availability of access to the properties.

- 3) Because of the limitations stated above, the findings, observations and conclusions expressed by North West in this report are not, and should not be, considered an opinion concerning compliance of any past or present owner or operator of the site with any federal, provincial or local laws or regulations.
- 4) No warranty or guarantee, whether expressed or implied, is made with respect to the data or the reported findings, observations, and conclusions, which are based solely upon site conditions in existence at the time of investigation.
- 5) This report may not be used, relied upon, copied, published, or quoted by any party other than the Public Works and Government Services Canada or the Department of Fisheries and Oceans without the written consent of North West Environmental Group, Ltd. Other parties reading this report must independently verify the completeness and accuracy of this report and its contents.
- 6) This report and the surveys focused on the presence of building materials and systems that may contain asbestos, lack of commentary or other types of potential hazardous conditions in no way represents a tacit endorsement of such conditions.

North West Environmental Group Ltd.



Robert Christie, B.Sc., CIH, MBA  
Consultant



Julie Scott-Moncrieff, B.Sc  
Project Coordinator



Bill Sullivan  
President



Reviewed by:  
Grant Rogers, B.Sc,

**APPENDIX 1: PHOTOGRAPHS ILLUSTRATING LOCATIONS OF POSITIVE  
ACM SAMPLES**



**Photo 1 – BM008 - Aeration Tower – Floor Tile**

## **APPENDIX 2: SUMMARY OF SAMPLE RESULTS**

**Figure 2: Results of Asbestos Analysis**

<b>DFO Sample ID</b>	<b>Building</b>	<b>Type of Material Sampled</b>	<b>Location of Sample</b>	<b>Percent Asbestos Content</b>	
PK90160-0801-BM008	Aeration Tower	Floor Tile	Aeration Tower	5	Chrysotile
PK90160-0801-BM003	Food Storage	Drywall Joint Compound	Main Office	None Detected	
PK90160-0801-BM002	Food Storage	Floor Tile	Main Office	None Detected	
PK90160-0801-BM005	Genetics #2	Acoustic Ceiling Tile	Main Office	None Detected	
PK90160-0801-BM004	Genetics #2	Drywall Joint Compound	Main Office	None Detected	
PK90160-0801-BM013	Headquarters Creek	Drywall Joint Compound	Headquarters Creek	None Detected	
PK90160-0801-BM006	Main Office	Pipe Elbow Cement	Main Office	None Detected	
PK90160-0801-BM007	Main Office	Pipe Elbow Cement	Main Office	None Detected	
PK90160-0801-BM010	Main Office	Pipe Elbow Cement PK90160-0801-BM005 DUPLICATE	Main Office	None Detected	
PK90160-0801-BM001	Office	Floor Tile	Main Office	None Detected	
PK90160-0801-BM012	Upper Site	Ceiling Texture Coat	Upper Site Office	None Detected	
PK90160-0801-BM011	Upper Site	Floor Tile	Upper Site Office	None Detected	
PK90160-0801-BM009	Upper Site Office	Drywall Joint Compound	Upper Site Office	None Detected	

### **APPENDIX 3: ANALYTICAL LABORATORY REPORT**

[illegible]



**EMSL Analytical, Inc.**

107 Haddon Ave., Westmont, NJ 08108

Phone: (856) 858-4900 Fax: (856) 858-4960 Email: [westmontlab@EMSL.com](mailto:westmontlab@EMSL.com)

Attn: **Robert Christie**  
**North West Environmental**  
**# 3-835 Devonshire Road**  
**Victoria, BC V9A4T4**

Fax: (250) 384-9865 Phone:  
 Project:

Customer ID: PAEC50  
 Customer PO: 07106-500-010  
 Received: 01/29/08 9:30 AM  
 EMSL Order: 040802047

EMSL Proj:  
 Analysis Date: 2/28/2008  
 Report Date: 3/10/2008

**Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized  
 Light Microscopy**

Sample	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
PK90160-0801-BM001 040802047-0001	MAIN OFFICE	Red Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
PK90160-0801-BM002 040802047-0001A	MAIN OFFICE	Black Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
PK90160-0801-BM003 040802047-0002	MAIN OFFICE	White Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
PK90160-0801-BM004 040802047-0003	MAIN OFFICE	White Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (other)	None Detected
PK90160-0801-BM005 040802047-0004	MAIN OFFICE	Gray Fibrous Homogeneous	50% Cellulose 50% Min. Wool		None Detected
PK90160-0801-BM006 040802047-0006	MAIN OFFICE	Gray Fibrous Heterogeneous	25% Cellulose	75% Non-fibrous (other)	None Detected

Analyst(s)

Delores Beard (1)  
 Kevin Ream (12)

Stephen Siegel, CIH, Laboratory Manager  
 or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection, as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

Analysis performed by EMSL Westmont (NVLAP #101048-0), NY ELAP 19872

PLM-1

1



**North West**  
**Environmental Group Ltd.**

**EMSL Analytical, Inc.**

107 Haddon Ave., Westmont, NJ 08108

Phone: (856) 858-4900 Fax: (856) 858-4960 Email: westmontlab@EMSL.com

Attn: **Robert Christie**  
**North West Environmental**  
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**Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized  
 Light Microscopy**

Sample	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
PK90160-0801-BM007 040802047-0006	MAIN OFFICE	Gray Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
PK90160-0801-BM008 040802047-0007	AERATION TOWER	Gray Non-Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile
PK90160-0801-BM009 040802047-0008	UPPER SITE OFFICE	White Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
PK90160-0801-BM010 040802047-0012	MAIN OFFICE	Gray Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (other)	None Detected
PK90160-0801-BM011 040802047-0009	UPPER SITE OFFICE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
PK90160-0801-BM012 040802047-0010	UPPER SITE OFFICE	White Non-Fibrous Homogeneous	SUGGEST TEM	100% Non-fibrous (other)	None Detected

Analyst(s)

Delores Beard (1)  
 Kevin Ream (12)

Stephen Siegel, CIH, Laboratory Manager  
 or other approved signatory

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Analysis performed by EMSL Westmont (NVLAP #101048-0), NY ELAP 19872

PLM-1

2



**North West**  
**Environmental Group Ltd.**

**EMSL Analytical, Inc.**

107 Haddon Ave., Westmont, NJ 08108

Phone: (856) 858-4900 Fax: (856) 858-4960 Email: [westmontlab@EMSL.com](mailto:westmontlab@EMSL.com)

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 Analysis Date: 2/28/2008  
 Report Date: 3/10/2008

**Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized  
 Light Microscopy**

Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
PK90160-0801- BM013	HEADQUARTERS CREEK	White		100% Non-fibrous (other)	None Detected
040802047-0011		Non-Fibrous			
		Homogeneous			

revised report- sample locations corrected

Analyst(s)

Delores Beard (1)  
 Kevin Ream (12)

Stephen Siegel, CIH, Laboratory Manager  
 or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection, as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

Analysis performed by EMSL Westmont (NVLAP #101048-0), NY ELAP 10872

PLM-1

**THIS IS THE LAST PAGE OF THE REPORT.**

3



**North West**  
**Environmental Group Ltd.**

**APPENDIX 4: COPY OF EXCERPT FROM PWGSC DEPUTY MINISTER  
DIRECTIVE 057 “EVALUATION AND RECOMMENDATION CRITERIA FOR  
CONTROL OF ASBESTOS CONTAINING MATERIAL”**

## ASSESSMENT OF CONDITION

### Spray Applied Fireproofing Insulation And Texture Finishes

To evaluate the condition of ACM spray applied as fireproofing, thermal insulation, or texture, decorative or acoustic finishes, the following criteria are applied: .

#### **GOOD**

Surface of material shows no significant signs of damage, deterioration or delamination. Up to 1 percent visible damage to surface is allowed in range of GOOD. Evaluation of sprayed fireproofing requires the surveyor to be familiar with the irregular surface texture typical of sprayed asbestos products. GOOD condition includes unencapsulated or unpainted fireproofing or texture finishes, where no delamination or damage is observed, and encapsulated fireproofing or texture finishes where the encapsulation has been applied after the damage or fallout occurred.

#### **POOR**

Sprayed materials show signs of damage, delamination or deterioration. More than 1 percent damage to surface of ACM spray. In observation areas where damage exists in isolated locations, both GOOD and POOR condition may be reported. The extent or percentage of each condition will be recorded on the survey or re-assessment form. FAIR condition is not utilized in the evaluation of the sprayed fireproofing, sprayed insulation, or texture coat finishes. The evaluation of ACM spray applied as fireproofing, non-mechanical thermal insulation, or texture, decorative or acoustic finishes which are present above ceilings, may be limited by the number of observations made, and by building components such as ducts or full height walls that obstruct the above ceiling observations. Persons entering the ceiling are advised to be watchful for ACM DEBRIS prior to accessing or working above ceilings in areas of buildings with ACM regardless of the reported condition.

### Mechanical Insulation

The evaluation of the condition of mechanical insulation (on boilers, breaching, ductwork, piping, tanks, equipment etc.) utilizes the following criteria:

#### **GOOD**

Insulation is completely covered in jacketing and exhibits no evidence of damage or deterioration. No insulation is exposed. Includes conditions where the jacketing has minor surface damage (i.e., scuffs or stains), but the jacketing is not penetrated.

#### **FAIR**

Minor penetrating damage to jacketed insulation (cuts, tears, nicks, deterioration or delamination) or undamaged insulation that has never been jacketed. Insulation is exposed but not showing surface disintegration. The extent of missing insulation ranges should be minor to none.

#### **POOR**

Original insulation jacket is missing, damaged, deteriorated or delaminated. Insulation is exposed and significant areas have been dislodged. Damage cannot be readily repaired.

The evaluation of mechanical insulation may be limited by the number of observations made and building components such as ducts or full height walls that obstruct observations. It is not possible to observe each foot of mechanical insulation from all angles.

**Non-Friable And Potentially Friable Materials**

Non-friable materials generally have little potential to release airborne fibres, even when damaged by mechanical breakage. However, some non-friable materials, i.e., exterior asbestos cement products, may have deteriorated so that the binder no longer effectively contains the asbestos fibres. In such cases of significantly deteriorated non-friable material, the material should be treated as a friable product.

**EVALUATION OF ACCESSIBILITY**

The accessibility of building materials known or suspected of being ACM is rated according to the following criteria:

**ACCESS (A)**

Areas of the building in reach (from floor level) of all building users. Includes areas such as gymnasiums, workshops, and storage areas where activities of the building users may result in disturbance of ACM not normally in reach from floor level.

**ACCESS (B)**

Frequently entered maintenance areas in reach of maintenance staff, without the need for a ladder. Includes:

areas in reach from a fixed ladder or catwalk, i.e., tops of equipment, mezzanines.

frequently entered pipe chases, tunnels and service areas.

**ACCESS (C) EXPOSED**

Areas of the building above 8'-0" where use of a ladder is required to reach the ACM.

Only refers to ACM that is exposed to view, from the floor or ladder, without the removal or opening of other building components such as ceiling tiles, or service access door or hatch. Does not include infrequently accessed service areas of the building.

**ACCESS (C) CONCEALED**

Areas of the building which require the removal of a building component, including lay-in ceilings and access panels into solid ceiling systems. Includes rarely entered crawl spaces, attic spaces, etc. Observations will be limited to the extent visible from the access points.

**ACCESS (D)**

Areas of the building behind inaccessible solid ceiling systems, walls or mechanical equipment, etc. where demolition of the ceiling, wall or equipment, etc. is required to reach the ACM. Evaluation of condition and extent of ACM is limited or impossible, depending on the surveyor's ability to visually examine materials in ACCESS D.

**ACM DEBRIS****DEBRIS FROM FRIABLE ACM**

The presence of fallen ACM is noted separately from the presumed friable ACM source (sprayed fireproofing, thermal insulation, texture, decorative or acoustic finishes or mechanical insulation) and is referred to as DEBRIS.

**DEBRIS FROM DAMAGED NON-FRIABLE ACM**

The presence of fallen ACM from damaged non-friable ACM is also reported separately from the non-friable ACM source. Only fallen non-friable ACM that has become friable is reported as DEBRIS.

The identification of the exact location or presence of DEBRIS on the top of ceiling tiles is limited by the number of observations made and the presence of building components such as

ducts or full height walls that obstruct observations. Workers are advised to be watchful for the presence of DEBRIS prior to accessing or working in proximity to mechanical insulation or above ceilings in areas of buildings with ACM regardless of the reported presence or absence of DEBRIS.

## **ACTION MATRIX AND DEFINITIONS**

The Asbestos Management Plan requires the following responses:

Immediately clean-up DEBRIS that is likely to be disturbed.

Remove, repair or enclose friable ACM in POOR or FAIR condition whose continued deterioration will result in DEBRIS that is likely to be disturbed.

The following factors are also considered in making site-specific recommendations for compliance with the regulation and the practical implementation of the Asbestos Management Plan:

i) ACM in POOR condition is not routinely repairable.

If an abatement action is necessary, removal is the recommended action (enclosure is a viable option in unusual circumstances).

ii) Mechanical insulation in FAIR condition can be repaired or removed based on the following general recommendations applied on a case by case basis (Note: Either repair or removal are legally acceptable options for the treatment of ACM found in FAIR condition); Repair ACM mechanical insulation found in FAIR condition in ACCESS (B) or ACCESS (C EXPOSED) areas.

Remove ACM mechanical insulation found in FAIR condition in ACCESS (B) and ACCESS (C EXPOSED) areas, where future damage to the ACM is likely to occur.

- Remove ACM mechanical insulation found in FAIR condition with ACCESS (A) to eliminate the potential for re-damaging ACM by all building users.

iii) ACM in GOOD condition present in ACCESS (A) can be managed by surveillance, as long as it is not disturbed by future renovation, maintenance or demolition. However, proactive removal of the ACM in ACCESS (A) should be considered where damage is possible by ongoing occupant activity (accidental or intentional).

iv) Non-friable or manufactured products are considered in the action matrix as follows:

- Non-friable or manufactured products reported in POOR condition or friable DEBRIS resulting from the deterioration of non-friable ACM are treated as friable materials and the appropriate Action, depending on accessibility, is determined from the Action Matrix for friable ACM.
- For non-friable or manufactured products reported in GOOD condition, Action 7 (surveillance) is recommended regardless of Accessibility.

v) Remove all ACM from a particular area where small quantities of asbestos are present and removal will negate the need for the use of the Asbestos Management Plan in that area.

With these principles in mind the following Action Matrix Tables establish the recommended asbestos control action. Note that factors not included in the above discussion, such as an owner's policy decision to remove material, knowledge of upcoming maintenance, etc., may result in a recommendation that differs from this table.

The ACTIONS are described in full following the tables.

## **ACTION MATRIX TABLES**



## FRIABLE ACM

ACCESS	CONDITION			
	GOOD	FAIR	POOR	DEBRIS
(A)	ACTION 5/7 <sup>1</sup>	ACTION 5/6 <sup>2</sup>	ACTION 3	ACTION 1
(B)	ACTION 7	ACTION 6/5 <sup>3</sup>	ACTION 3	ACTION 1
(C) EXPOSED	ACTION 7	ACTION 6	ACTION 4	ACTION 2
(C) CONCEALED	ACTION 7	ACTION 7	ACTION 4	ACTION 2
(D)	ACTION 7	ACTION 7	ACTION 7	ACTION 7

1. If material in **ACCESS (A)/GOOD** condition is not removed **ACTION 7** is required
2. If material in **ACCESS (A)/FAIR** condition is not removed **ACTION 6** is required
3. Remove ACM in **ACCESS (B) /FAIR** condition if ACM is likely to be disturbed



**ACTION DEFINITIONS****ACTION 1 - Immediate Clean-Up of DEBRIS that is Likely to Be Disturbed**

Restrict access that is likely to cause a disturbance of the ACM **DEBRIS** and clean up ACM **DEBRIS** immediately. Utilize correct asbestos procedures. This action is required for compliance with regulatory requirements. The surveyor should immediately notify the Asbestos Coordinator of this condition.

**ACTION 2 – Type 2 Precautions for Entry into Areas with ACM DEBRIS**

At locations where ACM DEBRIS can be isolated in lieu of removal or cleaned up, use appropriate means to limit entry to the area. Restrict access to the area to persons utilizing Type 2 asbestos precautions. The precautions will be required until the ACM DEBRIS has been cleaned up, and the source of the DEBRIS has been stabilized or removed

**ACTION 3 – ACM Removal Required for Compliance**

Remove ACM for compliance with regulatory requirements. Utilize asbestos procedures appropriate to the scope of the removal work.

**ACTION 4 – Type 2 Precautions for Access into Areas Where ACM is Present and Likely to be Disturbed by Access**

Use Type 2 asbestos precautions when entry or access into an area is likely to disturb the ACM. ACTION 4 must be used until the ACM is removed (Use ACTION 1 or 2 if DEBRIS is present)

**ACTION 5 – Proactive ACM Removal**

Remove ACM in lieu of repair, or locations where the presence of asbestos in GOOD condition is not desirable.

**ACTION 6 – ACM Repair**

Repair ACM found in FAIR condition, and not likely to be damaged again or disturbed by normal use of the area or room. Upon completion of the repair work treat ACM as material in GOOD condition and implement ACTION 7. If ACM is likely to be damaged or disturbed, during normal use of the area or room, implement ACTION 5

**ACTION 7 –Routine Surveillance**

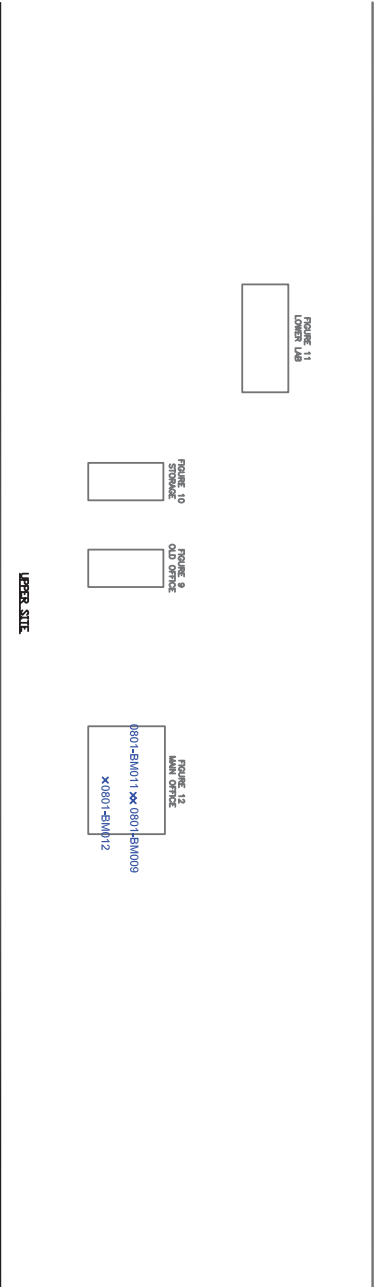
Institute routine surveillance of the ACM. Trained workers or contractors must use appropriate asbestos precautions (Type1, Type2 or Type 3) during disturbance of the remaining ACM. disturbance of the remaining ACM.

## **APPENDIX 5: FLOOR PLANS ILLUSTRATING SAMPLE LOCATIONS AND IDENTIFIED ACM**

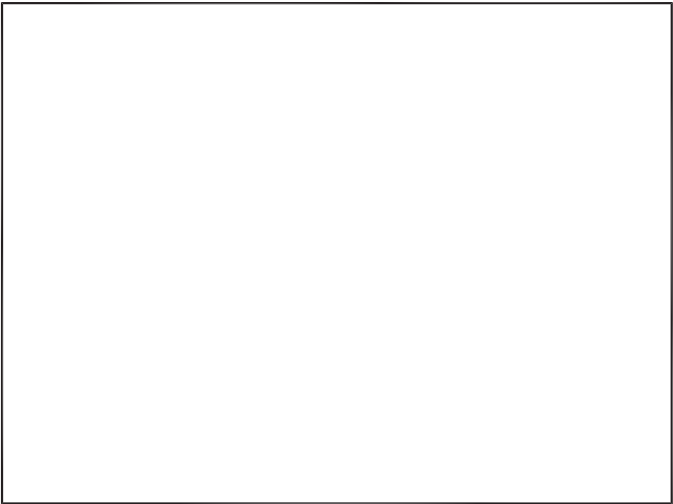
**Notice to Reader:**

1) the drawings found in this Appendix must be used in conjunction with the overall report and do not represent an absolute declaration of the asbestos content of each building and must not be used on their own.

2) the drawings show only the locations of materials that were confirmed to be positive for asbestos content. Materials of similar type or appearance that may be found in other locations must be considered to be asbestos containing, until a risk assessment is carried out by a qualified person. A risk assessment by a qualified person must be carried out if the suspect material is to be worked upon or disturbed.



UPPER SITE



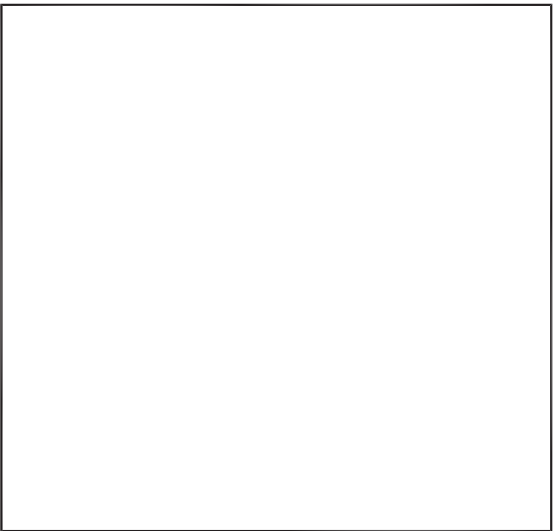
CONSULTANT

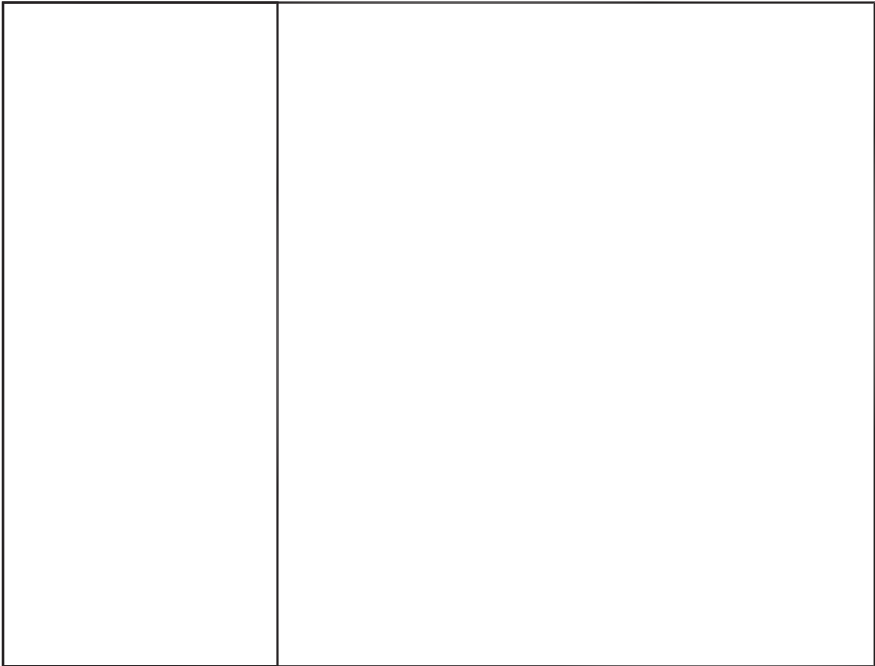


North West  
Environmental Group Ltd.

43 - 835 Deschamps Road  
Calgary, Alberta T2C 1P9  
Tel: (403) 244-9895

DRAWING TITLE			
PUNTLIDGE CHUM HATCHERY SAMPLING LOCATIONS			
PROJECT TITLE			
ASBESTOS SURVEYS AND RISK ASSESSMENTS			
DRAWN BY	DATE	SIGNED BY	DATE
IES	28/03/08	RC	01/08
		PROJECT NO.	FIGURE
		PC0060	FIGURE 2





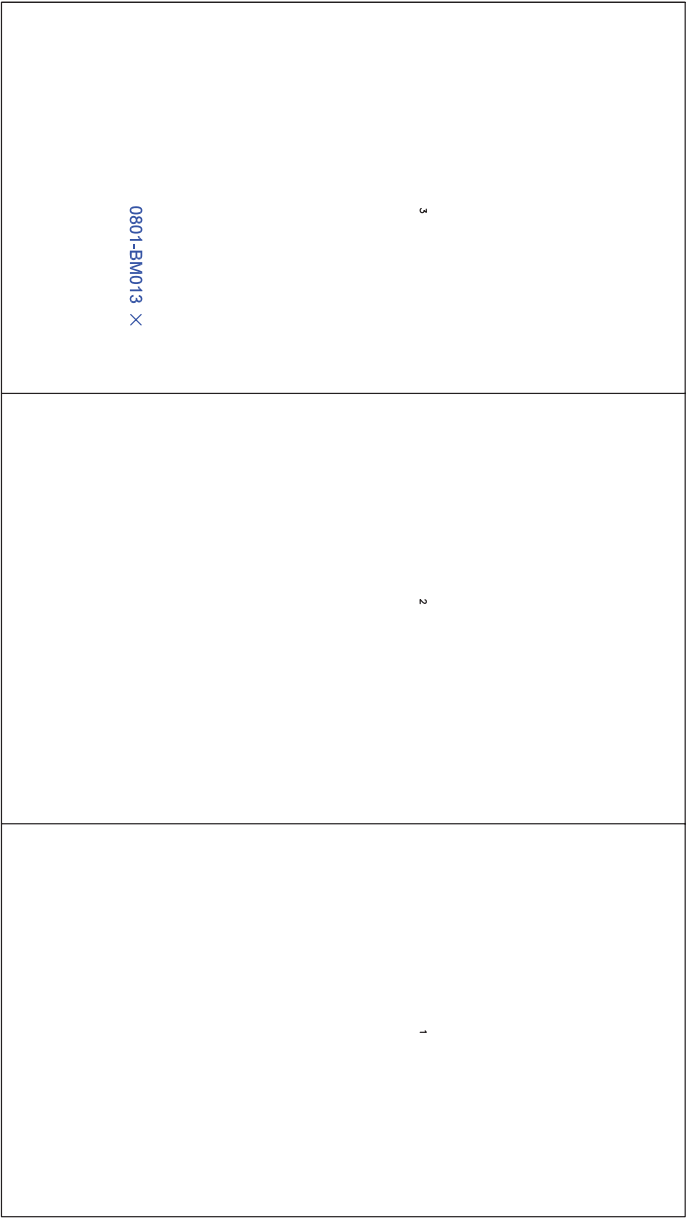
CONSULTANT



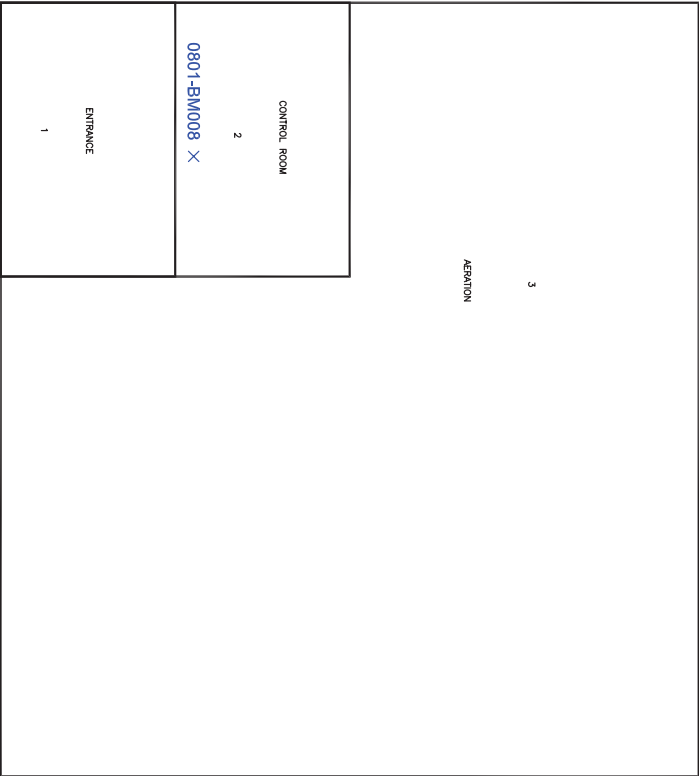
North West  
Environmental Group Ltd.

43 - 835 Deschamps Road  
Calgary, Alberta T2C 1P9  
Tel: (403) 244-9895

DRAWING TITLE					
PUNTLIDGE DRY STORAGE SAMPLING LOCATIONS					
PROJECT TITLE					
ASBESTOS SURVEYS AND RISK ASSESSMENTS					
DRAWN BY	DATE	SIGNED BY	DATE	PROJECT NO.	FIGURE
IES	28/03/08	RC	01/08	PC0060	FIGURE 4







CONSULTANT



North West  
Environmental Group Ltd.

43 - 835 Deschamps Road  
Edmonton, Alberta T6C 1K7  
Tel: (250) 384-9895

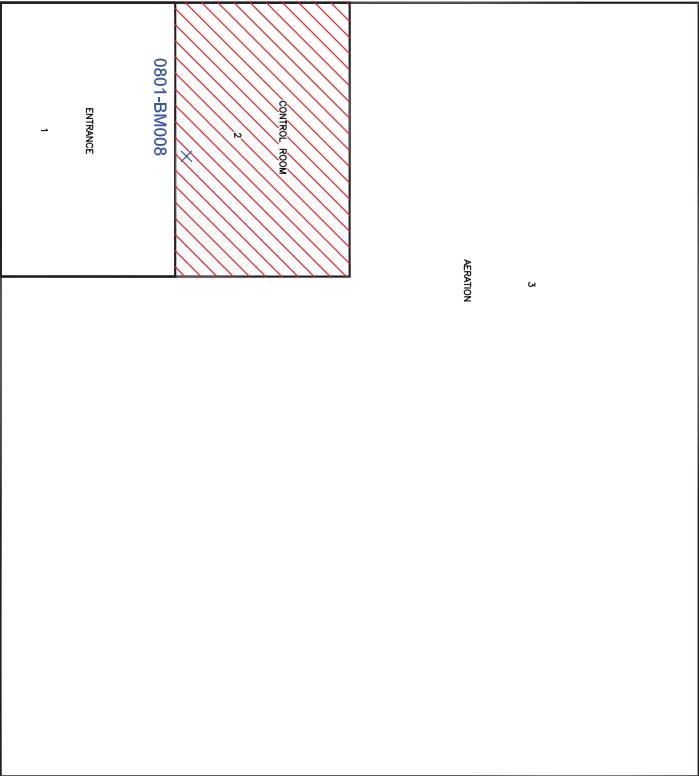
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PONTLEIDGE AERATION TOWER SAMPLING LOCATIONS					
PROJECT TITLE					
ASBESTOS SURVEYS AND RISK ASSESSMENTS					
DRAWN BY	DATE	SIGNED BY	DATE	PROJECT NO.	FIGURE
IES	28/03/08	RC	04/08	PC0060	FIGURE 6

LEGEND

ASBESTOS CONTAINING MATERIALS



ACM

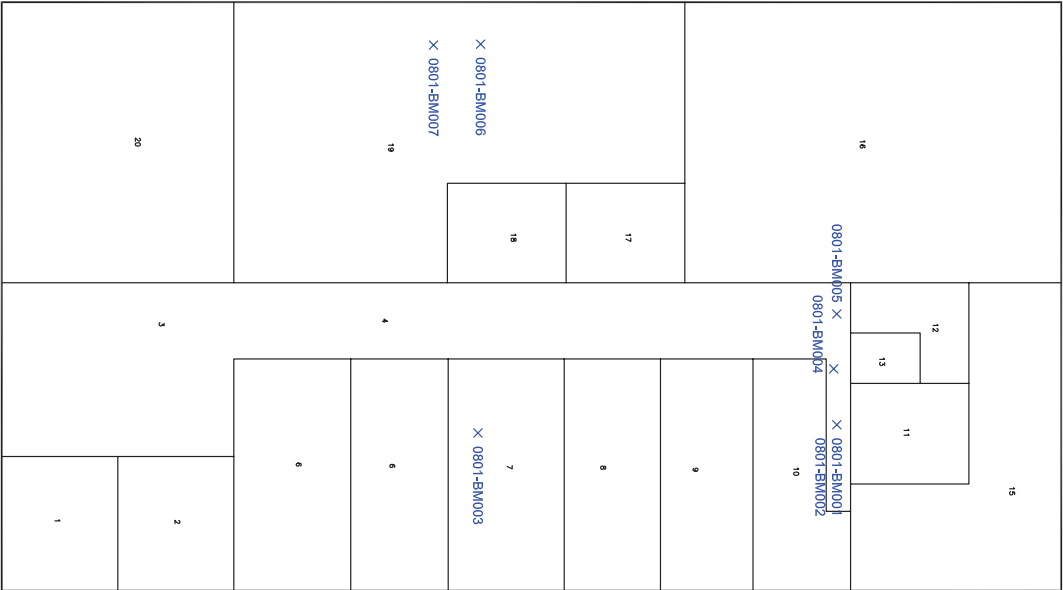


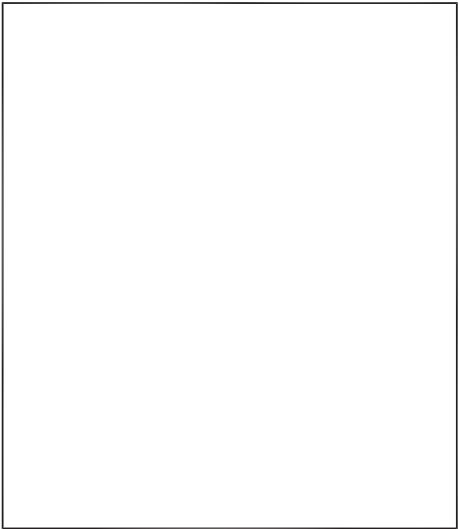


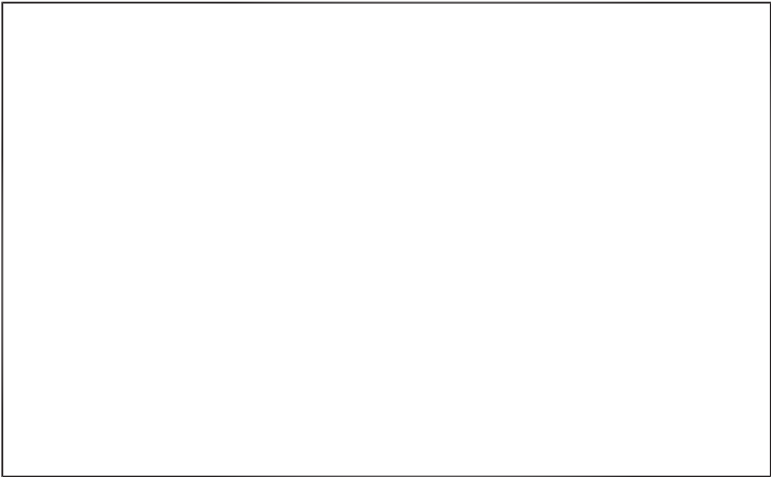
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Environmental Group Ltd.

43 - 835 Deschamps Road  
Edmonton, Alberta T6C 1K7  
Tel: (250) 384-9895


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LOCATIONS OF IDENTIFIED ACM					
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DRAWN BY	DATE	SIGNED BY	DATE	PROJECT NO.	FIGURE
IES	28/03/08	RC	04/08	PC0060	FIGURE 6A







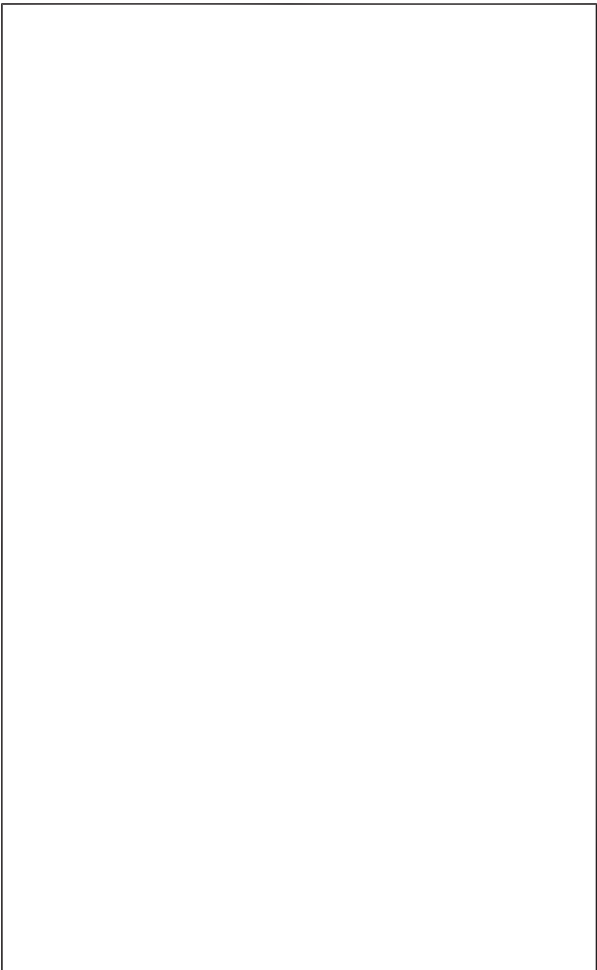
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SAMPLING LOCATIONS					
DRAWN BY	DATE	SIGNED BY	DATE	PROJECT NO.	FIGURE
IES	28/03/08	RC	04/08	PC0060	FIGURE 9



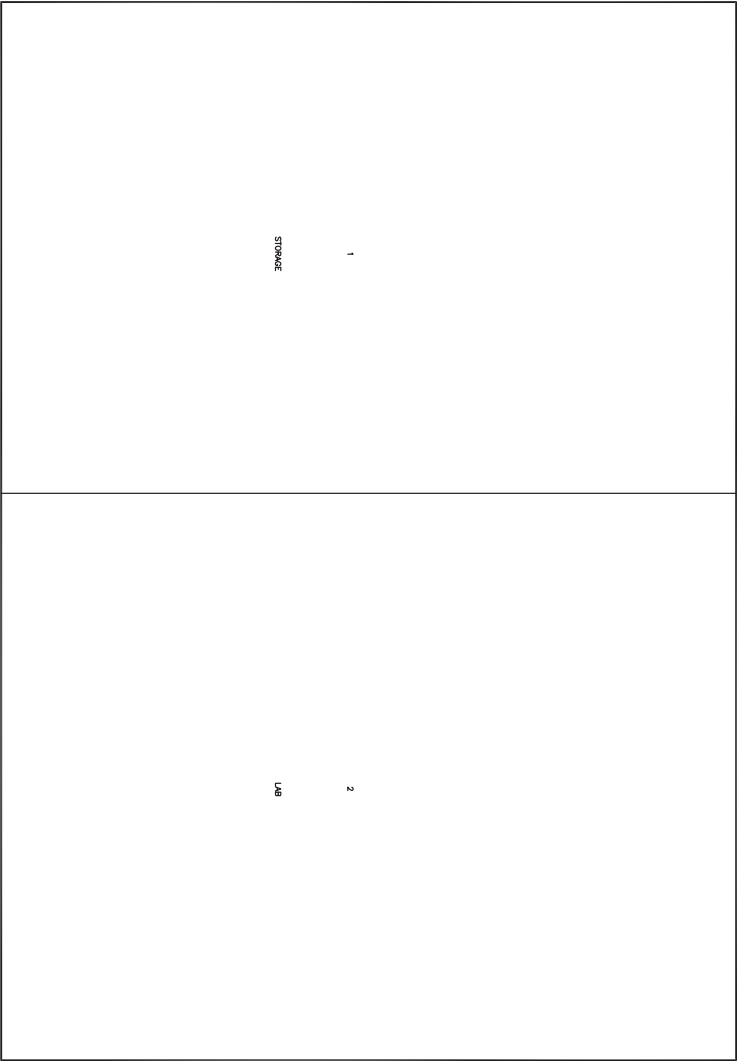
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IES	28/03/08	RC	04/08	PC0060	FIGURE 10



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Saskatoon, Saskatchewan S7N 3K7  
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PROJECT TITLE					
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DRAWN BY	DATE	SIGNED BY	DATE	PROJECT NO.	FIGURE
IES	28/03/08	RC	04/08	PC0060	FIGURE 11



**North West  
Environmental Group Ltd.**  
43 - 835 Deschamps Road  
Edmonton, Alberta T6C 1K7  
Tel: (250) 384-9895

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PROJECT TITLE					
ASBESTOS SURVEYS AND RISK ASSESSMENTS					
DRAWN BY	DATE	SIGNED BY	DATE	PROJECT NO.	FIGURE
IES	28/03/08	RC	04/08	PC0060	FIGURE 12