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Addendum / Addenda

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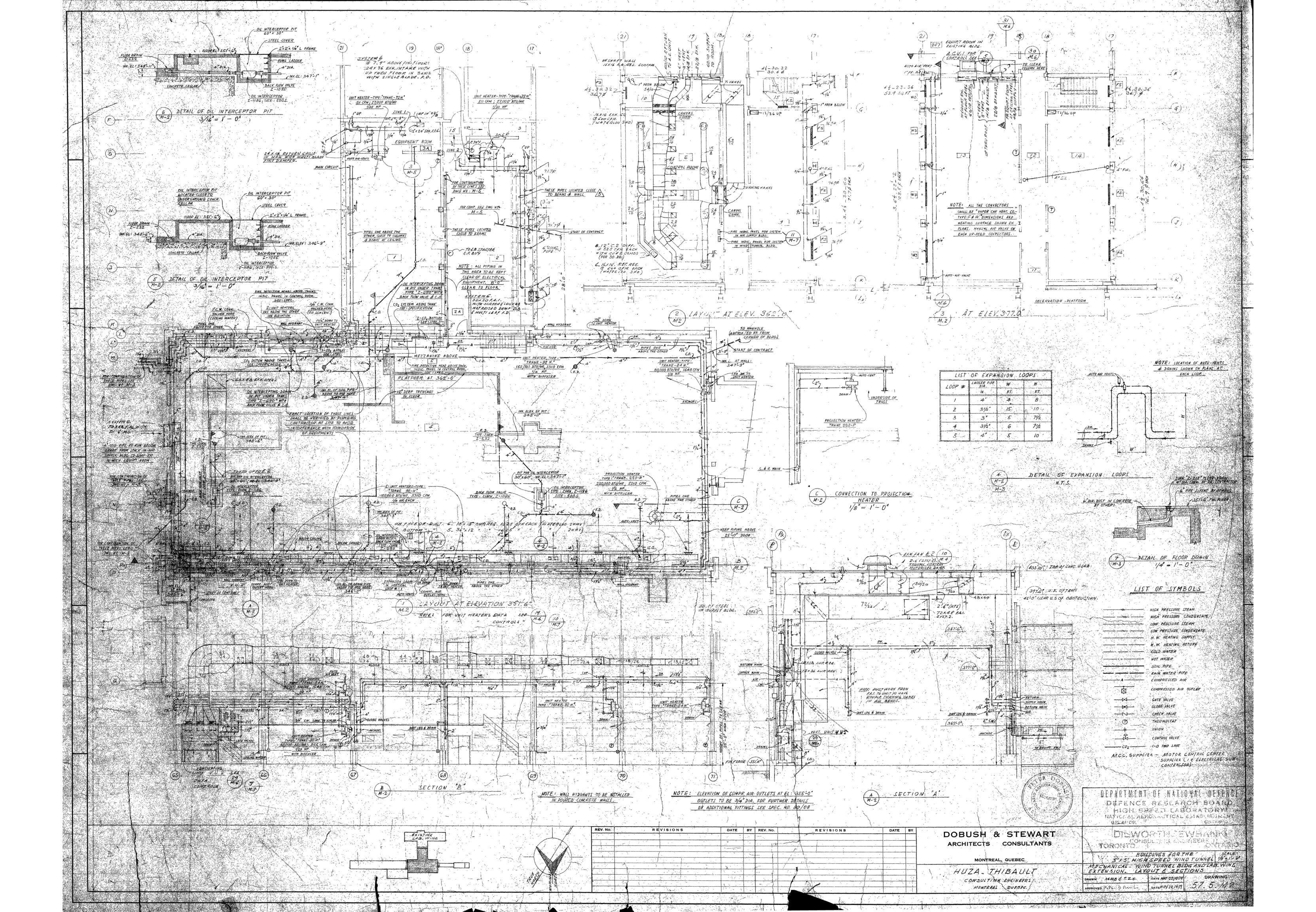
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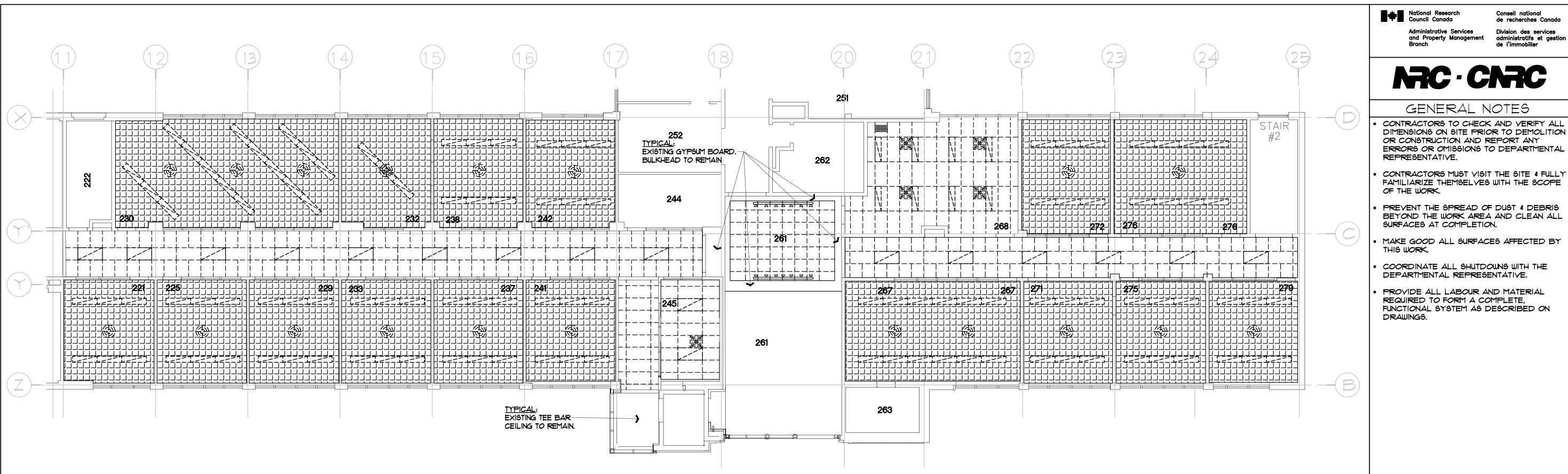
Project Description / Description de projet					
ι	J66 Chiller Replacemer	nt.			
Solicitation No./N° de solicitation	Project No./N° de projet		W.O. No./N° d'ordre de travail		
16-22146	520	01	A1-006954-06-01		
Departmental Representative / représent	ant ministériel		Date		
N	laurice Richard		February 14, 2017		
Notice:		Nota:			
shall apply and be read in conjunction with the original plans and		Cet addenda fait partie intégrale des dossiers d'appel; toutes les conditions énoncées doivent être lues et appliquées en conjonction avec les plans et les devis originaux.			

- 1 Refer to detail 2/M2 on attached original building drawing 57-5-M02 for existing duct layout within the control room, adjacent room and adjacent hallway. These ducts are from 66PAS2257. All this duct is to be removed following the abatement methods described in include abatement specifications and project specific designated substance report.
- The project specific DSR by DST Consulting Engineers includes rooms that are not part of the project area. Abatement work is not required in the following rooms noted in the project specific DSR and on the associated drawings. Drawing 1: room 2. Drawing 2: rooms 5-9, 11-19. In room 10, only abate piping directly affected by this contract. Drawing 3: rooms 24, 26, 29, 31, 32, 44, 47, 48.
- **3** See attached DSR by Oakhill Environmental Inc. for reference purposes.
- 4 Include all costs associated with expedited delivery of mechanical equipment to have air conditioning in the east and west wings of the 2nd floor fully functional by May 31, 2017. If system is not funcional by May 31 contractor will supply temporary cooling to these spaces at not cost to NRC. Temporary cooling will meet the requirements of an office environment.
- **5** Delete drawings 5201-A01, 5201-A02 & 5201-A03 and replace with the attached drawings 5201-A01-ADD#01, 5201-A02-ADD#01,5201-A03-ADD#01.
- **6** Delete specification sections: 061000 Rough Carpentry, 072000 Insulation, 075200 Modified Bituminous Membrane Roofing, 081000 Steel doors and Frames, 095100 Acoustical Ceiling Assemblies.
- **7** Add attached specification sections: 075200 Modified Bituminous Membrane Roofing –ADD#01, 095113 Acoustical Panel Ceilings-ADD#01, 095300.01 Acoustical Suspension-ADD#01.



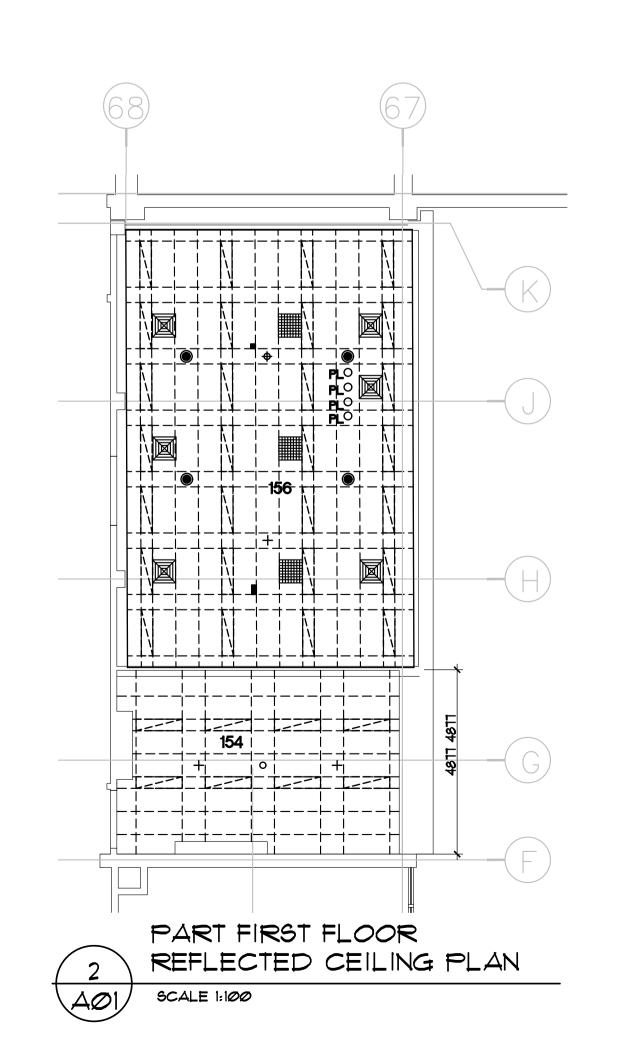






PART SECOND FLOOR REFLECTED CEILING PLAN

AOI



REFLECTED CEILING PLAN LEGEND BY ELECTRICAL, REMOVE AND REINSTALL REMOVE AND RETAIN TRACK LIGHTING, REMOVE EXISTING T-BAR CEILING SYSTEM EXISTING HEAT DETECTOR REFER TO FOR REINSTALLATION REFER TO (610x610 or 1220x610) C/W ALL TEES, ELECTRICAL FOR DESCRIPTION OF WORK. ELECTRICAL. CHANNELS, AND TRIM PIECES AND HANGERS, BY MECHANICAL EXISTING SURFACE MOUNTED BY ELECTRICAL EXISTING POT LIGHT FIXTURE SUPPLY AIR DIFFUSERS TO BE REMOVED. TO BE REMOVED. REFER TO ELECTRICAL FOR EXISTING 305×305mm CEILING TILES TO BE REFER TO MECHANICAL FOR DESCRIPTION OF DESCRIPTION OF WORK. REMOVED. NOTE: REFER TO "DST'S DSR ON ABATEMENT BY ELE3CTRICAL REMOVE AND REINSTALL OF EXISTING GLUE. BY MECHANICAL EXISTING 610 X 610 RECESSED EXISTING SPEAKER, REFER TO ELECTRICAL FOR REMOVE EXISTING PLASTER SUB-CEILING C/W SUPPLY AIR DIFFUSER TO BE REMOVED. REFER DESCRIPTION OF WORK. ALL FRAMING, TIES AND FASTENERS. TO MECHANICAL FOR DESCRIPTION OF WORK... EXISTING COMMS AND ELECTRICAL JIFFY POLE BY ELECTRICAL, EXISTING 305X1220mm SURFACE TO REMAIN, DO NOT DISTURB AND PROTECT BY MECHANICAL EXISTING RECESSED RETURN MOUNTED OR RECESSED LIGHT FIXTURE TO BE DURING DEMOLITION AND CONSTRUCTION AIR GRILLE TO BE REMOVED. REFER TO REMOVED. REFER TO ELECTRICAL FOR MECHANICAL FOR DESCRIPTION OF WORK... DESCRIPTION OF WORK BY ELECTRICAL EXISTING 610×1220mm LIGHT _____ FIXTURE TO BE REMOVED. REFER TO ELECTRICAL FOR DESCRIPTION OF WORK.

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GENERAL NOTES

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assumer la responsabilité

A Detail no.

No. du détail B Location drawing no. sur dessin no. C Drawing no.

BC

NRC U-66 CHILLER REPLACEMENT

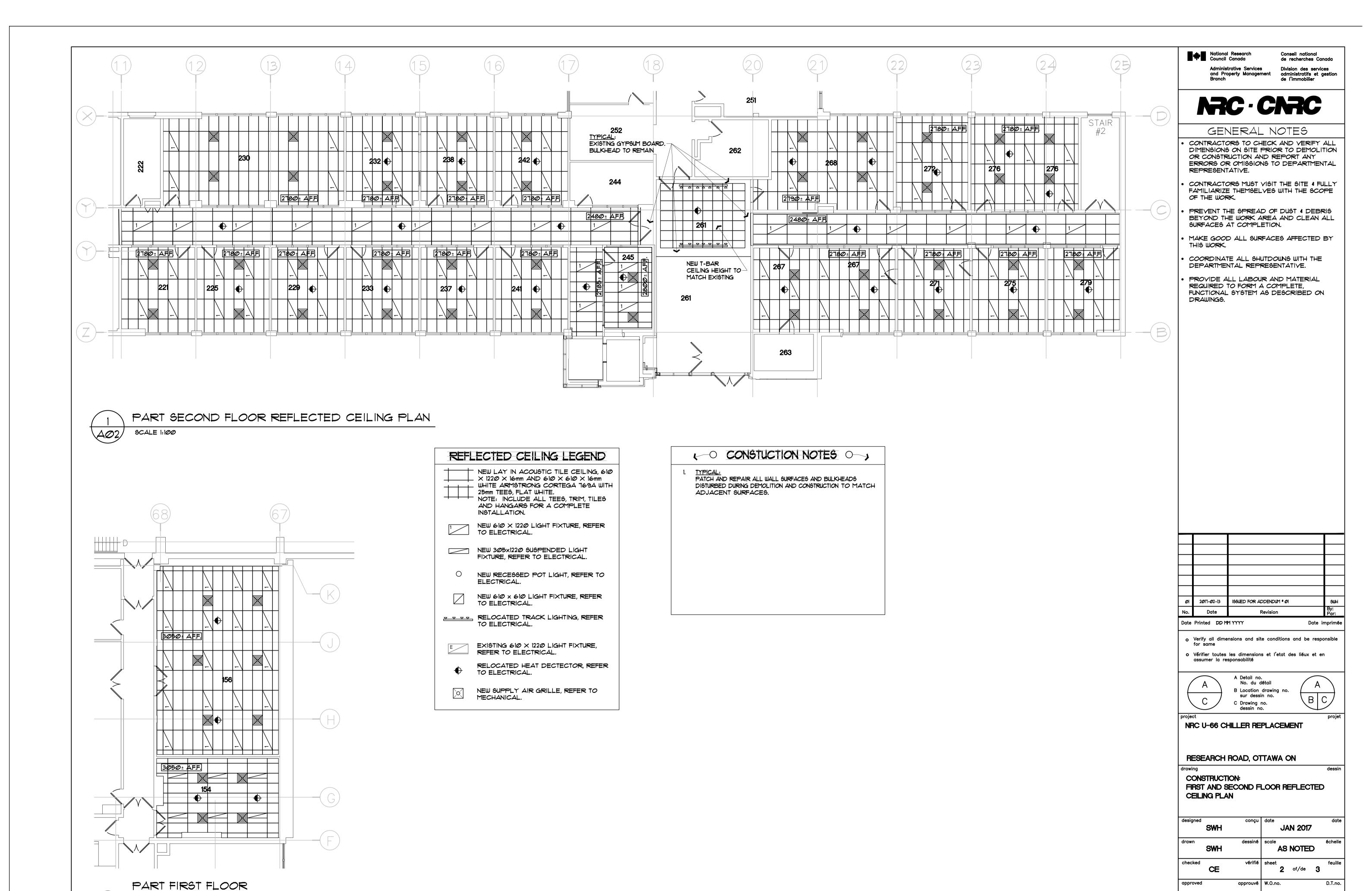
RESEARCH ROAD, OTTAWA ON

DEMOLITION: FIRST AND SECOND FLOOR REFLECTED CEILING PLAN

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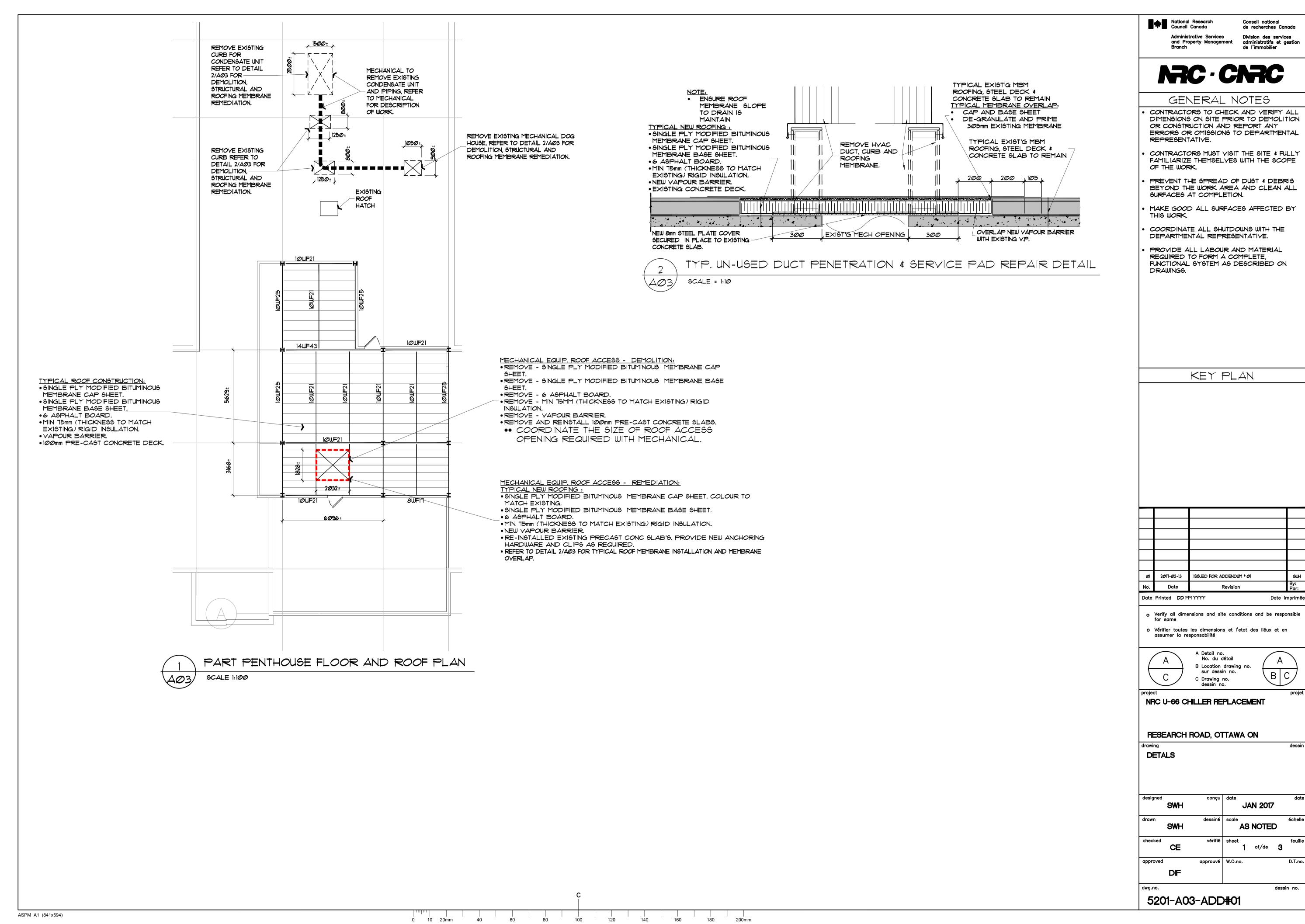
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SCALE 1:100

REFLECTED CEILING PLAN



Part 1 General

1.1 RELATED REQUIREMENTS

.1 Section 06 10 00.01 - Rough Carpentry.

1.2 GENERAL

- .1 Provide the necessary labour and materials to complete the removal of the existing roofing system, sheet metal flashings and membrane down to the existing structural deck and install new roofing system as specified herein. Do roofing work in accordance with applicable standards herein and supplemented with the Canadian Roofing Contractors Association (CRCA) roofing specifications manual.
- .2 The new system shall be as follows and as specified in the areas indicated on the drawings;

U-66 - The Typical Roof Assembly shall be:

Vapour Barrier

2 base layers 75mm Rigid Insulation min.

(Sloped Insulation if existing conditions dictate))

6mm Asphalt Core Board

2 Ply Modified Bitumen Membrane

- .3 Supply all labour and materials necessary to complete the new two ply Modified Bitumen Membrane Flashings, as specified and detailed in the areas indicated on the drawings.
- .4 Examine all surfaces to receive new roof assembly, and if corrective measures are necessary, report items to Departmental Representative in writing. Substrate shall be smooth, clean, dry and free from depressions or sharp edges. All required wood blocking and curbs shall be securely in place prior to start of roofing work. Notify the Departmental Representative in writing, prior to commencing contracted work, should corrective measures be required.
- .5 Examine drawings and existing conditions, provide for all vents, curbs, stacks roof mounted equipment curbs, and other openings through membrane roofing.

1.3 REFERENCES

.1 ASTM International Inc.

- .1 ASTM C 1177/C 1177M-08, Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
- .2 ASTM D 41/D 41M-11, Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing.
- .3 ASTM D 6162-00a(2008), Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fibre Reinforcements.
- .2 Canadian General Standards Board (CGSB)
 - .1 CGSB 37-GP-9Ma-83, Primer, Asphalt, Unfilled, for Asphalt Roofing, Dampproofing and Waterproofing.
 - .2 CGSB 37-GP-56M, Membrane, Modified, Bituminous, Prefabricated, and Reinforced for Roofing.
- .3 Canadian Roofing Contractors Association (CRCA)
 - .1 CRCA Roofing Specifications Manual-2011.
- .4 Canadian Standards Association (CSA International)
 - .1 CSA A123.21-04, Standard Test Method for the Dynamic Wind Uplift Resistance of Mechanically Attached Membrane-Roofing Systems.
- .5 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .6 Underwriters Laboratories' of Canada (ULC)
 - .1 CAN/ULC-S704-11, Standard for Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced.

1.4 ADMINISTRATIVE REQUIREMENTS

- .1 Convene pre-installation meeting one week prior to beginning waterproofing Work, with Departmental Representative to:
 - .1 Verify project requirements.
 - .2 Review installation and substrate conditions.
 - .3 Review manufacturer's installation instructions and warranty requirements.

1.5 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals if requested.
- .2 Product Data:
 - .1 Provide two copies of most recent technical roofing components data sheets describing materials' physical properties and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Provide two copies of WHMIS MSDS for all materials to be used.

1.6 INSPECTION AND TESTING

- .1 Inspection of membrane roofing and associated work, will be done by the Independent Departmental Representative appointed by the Owner. Notify the Departmental Representative at least 48 hours before commencement of any roofing work.
- .2 The Departmental Representative reserves the right to have cut tests made in the presence of the Contractor. Costs of tests and subsequent repairs shall be borne by the Contractor.
- .3 The Departmental Representative shall be notified in the event that the specifications conflict with the Manufacturer's recommendations or CRCA guidelines.
- .4 The inspection and testing service does not relieve the Contractor of his responsibility for quality control of production and for errors made by him.

1.7 QUALITY ASSURANCE

- .1 Installer qualifications: company or person specializing in application of modified bituminous roofing systems with 5 years documented experience approved by manufacturer.
- .2 Compatibility between all components of roofing system is essential.
- .3 The Contractor shall be responsible for ensuring that all items he elects to use are compatible with each other.
- .4 Study all documents which describe, or are related to any operation before commencement of that operation. Report discrepancies discovered between existing conditions and documentation. Obtain ruling on required interpretation before commencing work.
- .5 Ensure that materials, equipment, services and operatives are brought to site in sufficient quantity and in accordance with requirements of the work schedule.

1.7 FIRE PROTECTION

- .1 Fire Extinguishers:
 - .1 Maintain one cartridge operated type or stored pressure rechargeable type with hose and shut-off nozzle,
 - .2 ULC labelled for A, B and C class protection.
 - .3 Size 9 kg on roof per torch applicator, within 6 m of torch applicator.
- .2 Maintain fire watch for 2 hours after each day's roofing operations cease. Continuously use watch period to operate an infra-red thermometer over days operations to eliminate the possibility of hot spots.

1.8 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Storage and Handling Requirements:

- .1 Safety: comply with requirements of Workplace Hazardous Materials
 Information System (WHMIS) regarding use, handling, storage, and disposal of
 asphalt, sealing compounds, primers and caulking materials.
- .2 Provide and maintain dry, off-ground weatherproof storage.
- .3 Store rolls of felt and membrane in upright position. Store membrane rolls with salvage edge up.
- .4 Remove only in quantities required for same day use.
- .5 Place plywood runways over completed Work to enable movement of material and other traffic
- .6 Store sealants at +5 degrees C minimum.
- .7 Store insulation protected from daylightand weather and deleterious materials.
- .8 Any materials damaged and/or exposed to the elements and/or moisture, shall be removed from the work site at the discretion of the Departmental Representative.
- .9 Stockpiling of materials on the roof will not be allowed. Distribute material as directed by the Departmental Representative.
- .3 Packaging Waste Management: remove for reuse and return by manufacturer of pallets crates padding and packaging materials.
 - .1 Collect and separate plastic, paper packaging and corrugated cardboard in accordance with Waste Management Plan.
 - .2 Fold up metal banding, flatten and place in designated area for recycling.
- .4 Clean up as work progresses. Upon completion, remove scaffolding, temporary protections and surplus materials. Make good any defects noted at this stage. Clean areas affected under contract, to a condition at least equal to that previously existing and to satisfaction of the Departmental Representative.

1.9 PREPARATION

- .1 All materials that may be reused on the new roof system, salvage and store for inspection by the Departmental Representative. Credits for such materials may be requested.
- .2 The Contractor is solely responsible for the disconnection, relocation and re-installation of all existing mechanical and electrical services as required.
- .3 Ensure that the Owner is aware of any such work that may effect the interior environment of the building, prior to disconnection or shut down.
- .4 Disconnection and reconnection of all electrical services to meet latest regulations of Canadian Electrical Code and applicable Municipal and Provincial Codes and Regulations. In each and every instance of application, Code, Regulation, Statute, By-Law or Specification, the most stringent requirements shall apply.
- .5 Provide the Owner with a schedule indicating time and dates, for any work creating a disruption to the interior environment and obtain the Owner's written approval.

1.10 SITE CONDITIONS

- .1 Ambient Conditions
 - .1 Do not install roofing when temperature remains below -15°C for torch application.
 - .2 Minimum temperature for solvent-based adhesive is -5°C.
- .2 Install roofing on dry deck, free of snow and ice, use only dry materials and apply only during weather that will not introduce moisture into roofing system.
- .3 All adjacent parts of the building shall be protected from damage caused by roofing operations. Cover walls and other surfaces in the vicinity of hoisting apparatus with heavy canvas or other suitable protective material. Any damage caused by this contract shall be repaired to match the original materials and appearance.
- .4 Locate equipment and materials in areas designated by the Departmental Representative and/or Owner.
- .5 Conduct operations so as to leave deck exposed for minimum period of time. Protect, as required, to prevent water infiltration or environmental damage to building interior.
- .6 Provide temporary membrane to render deck watertight, if for some unforseen reason work cannot be completed as specified. All temporary membranes shall be removed completely prior to any further roofing work.
- .7 Where work must continue over finished roofing membrane, protect surface with minimum 12.5mm thick plywood sheets.
- Any sharp projections, that in the opinion of the Departmental Representative may penetrate the membrane, shall be ground smooth and flush.
- .9 All aspects of the re-roofing operation shall follow in close sequence. No part of the operation shall be so far ahead of the succeeding part that the latter cannot be finished that working day.

1.11 ADDITIONAL CONSTRUCTION FACILITIES

1. Overhead Scaffold Protection:

Scaffolding: scaffold shall provide sufficient clearance to match existing door opening height and extend 2.4m from the building unless indicated greater on drawings. Scaffold shall be temporarily anchored to wall or ballasted to prevent movement from wind action. Top surface protection shall be with pre-engineered scaffold platforms complete with claw attachment and anchorage.

1.12 WARRANTY

.1 The warranty shall be extended to a period of two (2) years from the date of final completion. Repair of any actual leaks shall also include the removal and replacement of all related moisture damage materials.

- .2 Make all necessary repairs and replacements within 48 hours of receipt of written notification.
- .3 Nothing contained in this Article shall be construed as in any way restricting or limiting the liability in common law and statutory liability of the Contractor.
- .4 Provide a manufacturer's warranty, which shall guarantee the membranes and membrane flashing performance, for a period of ten years against manufacturing defects and premature deterioration.
- .5 Provide these written warranties, confirming above, issued on the corporate letterhead, signed and sealed by an authorized signing officer. The warranties will specifically reference the name of the Building, location and Owner.

Part 2 Products

2.1 PERFORMANCE CRITERIA

.1 Compatibility between components of roofing system is essential. Provide written declaration to Departmental Representative stating that materials and components, as assembled in system, meet this requirement.

2.3 PRIMER

.1 Asphalt primer: to CGSB 37-GP-9Ma ASTM D 41.

2.5 VAPOUR RETARDER

- .1 Base sheet: to CGSB 37-GP-56M polyester fibres to ASTM D 6164 glass fibres to ASTM D 6163 combination of polyester and glass fibres to ASTM D 6162.
 - .1 Styrene-Butadiene-Styrene (SBS) elastomeric polymer prefabricated sheet, glass or polyester reinforcement, having nominal weight of 180 g/m².
 - .2 Type 1, fully adhered.
 - .3 Class C plain surfaced.
 - .4 Grade 1 standard service.
 - .5 Bottom surface:
 - .1 Polyethylene.
 - .6 Top surface:
 - .1 Sanded
 - .7 Base sheet membrane properties: to CGSB 37-GP-56M.

2.6 INSULATION

.1 Rigid closed cell polyisocyanurate insulation bonded on upper and lower surfaces to an inorganic glass fibre facer. Material shall meet CAN/CGSB-51.26-M86 and CAN/ULC-S704, The boards shall be distributed in 1200mm x 1200mm panels, pre-wrapped to prevent moisture ingression. Standard of acceptance shall be Johns Manville Enrgy 3, IKOTherm III polyisocyanurate insulation or Atlas Roofing Corp AC FOAM III.

2.7 SLOPED INSULATION

- .1 In drain sumps and at perimeter, rigid closed cell polyisocyanurate insulation bonded on upper and lower surfaces to an inorganic glass fibre facer. Material shall meet CAN/CGSB-51.26-M86 and CAN\UL-S126-M. The boards shall be distributed in 1200mm x 1200mm panels, pre-wrapped to prevent moisture ingression. Standard of Acceptance shall be Johns Manville Enrgy 3, IKOTherm III polyisocyanurate insulation or Atlas Roofing Corp AC FOAM III. or approved equal.
- .2 Insulation slopes shall be as indicated on the detailed drawings and roof plans. The degree of slope shall be 1:100 or as noted on drawing.
- .3 Modules shall be factory cut to correct slopes.

2.8 MEMBRANE

- .1 Base sheet: to CGSB 37-GP-56M polyester fibres to ASTM D 6164 glass fibres to ASTM D 6163 combination of polyester and glass fibres to ASTM D 6162.
 - .1 Styrene-Butadiene-Styrene (SBS) elastomeric polymer prefabricated sheet, glass or polyester reinforcement, having nominal weight of 180 g/m².
 - .2 Type 1, fully adhered.
 - .3 Class C plain surfaced.
 - .4 Grade 1 standard service.
 - .5 Top and bottom surfaces:
 - .1 Polyethylene.
 - .6 Base sheet membrane properties: to CGSB 37-GP-56M.
- .2 Cap sheet membrane and Walkways: to CGSB 37-GP-56M combination of polyester and glass fibres to ASTM 6162.
 - .1 Styrene-Butadiene-Styrene(SBS) elastomeric polymer, prefabricated sheet, glass or polyester reinforcement, having nominal weight of 250 g/m².
 - .2 Type 1, fully adhered.
 - .3 Class A-granule surfaced.
 - .1 Colour for granular surface
 - .4 Grade 1-standard service.
 - .5 Bottom surface polyethylene.
 - .6 Cap sheet membrane properties: to CGSB 37-GP-56M.

2.9 ADHESIVE

- .1 Adhesive for securing insulation, tapered insulation and overlay board shall be;
 - a) an asphalt extended vulcanized adhesive.
 - b) a single component urethane adhesive, dispensed from a portable prepressurized container requiring no external power source.
 - c) a single component solvent free moisture curing adhesive.
 - d) a two component, elastomeric, moisture cured; low rise urethane foam adhesive that contains no solvents.
- .2 Adhesive for securing overlay board and insulation or a solvent-free moisture curing adhesive. Standard of acceptance shall be Duotack by Soprema, Elite by Tremco or Millennium Adhesive by IKO.

2.10 OVERLAY BOARD

- .1 Overlay Board: 6 mm thick asphalt based recovery board with non-woven glass facers, as recommended by the membrane manufacturer.
 - .1 Install over insulation to provide torch safe surface and cover joints with self adhesive fire resistant tape as specified in 2.2.2.

2.11 ACCESSORIES

- .1 Roofing Nails: to CSA B111-1974, Table 12, of galvanized steel or aluminum, sufficient length to penetrate wood substrate at least 25mm. Nails to have a minimum head diameter of 25mm.
- .2 Metal Securing Strips: 25mm wide, .67mm galvanized steel double hemmed.
- .3 Miscellaneous penetrations shall include a cement curb and rubberized filler. Pourable rubberized sealant shall be a two component urethane pourable and self levelling sealant. Curb shall be an inorganic composite material to withhold the sealer and prevent leakage of sealer. Standard of acceptance shall be by Chem-Link and Chem-curb, or Roofpart Elastomeric Silicone Sealant by Lexcor or an approved equal.
- .4 Vent Stack Flashings and guy line flashing: to be spun aluminum sleeve to fit over the vent stack with sufficient space to insulate. A spun aluminum cap to fit outside the sleeve and inside the vent stack inside diameter.

Execution

3.1 QUALITY OF WORK

- .1 Do examination, preparation and roofing Work in accordance with Roofing Manufacturer's Specification Manual and CRCA Roofing Specification Manual Provincial Roofing Association Manual, particularly for fire safety precautions.
- .2 Do priming in accordance with manufacturers written recommendations.
- .3 The interface of the walls and roof assemblies will be fitted with durable rigid material

sheet metal or plywood providing connection point for continuity of air barrier.

.4 Assembly, component and material connections will be made in consideration of appropriate design loads, with reversible mechanical attachments.

3.2 EXAMINATION OF ROOF DECKS

- .1 Verification of Conditions:
 - .1 Inspect with Departmental Representative deck conditions.
- .2 Evaluation and Assessment:
 - .1 Prior to beginning of work ensure:
 - .1 Decks are firm, straight, smooth, dry, free of snow, ice or frost, and swept clean of dust and debris. Do not use calcium or salt for ice or snow removal.
 - .2 Curbs have been built.
 - .3 Plywood and lumber nailer plates have been installed to deck, walls and parapets as indicated.
 - .4 Openings are cut and spray foam applied to complete air and vapour barriers.
- .3 Do not install roofing materials during rain or snowfall.

3.3 PROTECTION OF IN-PLACE CONDITIONS

- .1 Cover walls, walks and adjacent work where materials hoisted or used.
- .2 Use warning signs and barriers. Maintain in good order until completion of Work.
- .3 Clean off drips and smears of bituminous material immediately.
- .4 Protect roof from traffic and damage. Comply with precautions deemed necessary by Departmental Representative.
- .5 At end of each day's work or when stoppage occurs due to inclement weather, provide protection for completed Work and materials out of storage.

3.4 PRIMING

.1 Apply primer to roofing substrate at the rate recommended by manufacturer 2.5 L per 10 m² in areas not covered with protection board.

3.5 VAPOUR RETARDER

- .1 Install as detailed on the drawings and lap over parapets.
- .2 Commencing at the lowest point of the roof, apply vapour barrier by torching application.

Apply membrane with 75mm side laps and 150mm end laps. Supplement adhesion where necessary with additional membrane strips to ensure waterproof protection until application of roof assembly.

- .3 Ensure membrane is unrolled to enable membrane to relax prior to installation. Time required for relaxation will vary with weather conditions.
- .4 Torch weld all lap joints by heat softening the membrane and pressing the edge of the membrane firmly with a roofing trowel. Ensure consistent adhesion has been achieved between the substrate and base sheet membrane.

3.6 (EXPOSED) CONVENTIONAL MEMBRANE ROOFING (CMR) APPLICATION

- .1 Install insulation to meet thickness as required in scope of work and indicated on the drawings. Ensure polyethylene film on base sheet vapour barrier is completely removed prior to applying adhesives.
- .2 Stagger all joints in the boards, for all layers.
 - .1 Adhere insulation to vapour barrier using adhesive.
 - .2 Cut end pieces to suit.
 - .3 Apply adhesive in continuous 13mm ribbons at 200 mm on centre.
- .3 In the sump area around the drain, reduce base insulation by 25mm and install sloped insulation as detailed.
- .4 Cap all insulation, as detailed, with the overlay board, secured with the specified adhesives.
- .5 Unless specifically stated otherwise, strictly follow the adhesives Manufacturers printed instructions for the application of the adhesives, including spread patterns and requirements for walking over the boards.
- .6 Overlay Board: adhesive application:
 - .1 Adhere overlay board to insulation with adhesive at the rate of one 13 mm ribbon at 200 mm O.C.
 - .2 Place boards in parallel rows with end joints staggered.
 - .3 Cut ends to suit and apply adhesive in continuous ribbons at 200 mm on centre.
 - .4 Install fire tape over all joints as distributed by membrane manufacturer.
- .7 Base sheet application:
 - .1 Starting at low point of roof, perpendicular to slope, unroll base sheet, align and reroll from both ends.
 - .2 Unroll and torch base sheet onto substrate taking care not to burn membrane or its reinforcement or substrate.
 - .3 Lap sheets 75 mm minimum for side and 150 mm minimum for end laps.
 - .4 Application to be free of blisters, wrinkles and fishmouths.
- .8 Cap sheet application:
 - .1 Starting at low point on roof, perpendicular to slope, unroll cap sheet, align and

- reroll from both ends.
- .2 Unroll and torch cap sheet onto base sheet taking care not to burn membrane or its reinforcement.
- .3 Lap sheets 75 mm minimum for side laps and 150 mm minimum for end laps. Offset joints in cap sheet 300 mm minimum from those in base sheet.
- .4 Application to be free of blisters, fishmouths and wrinkles.
- .5 Do membrane application in accordance with manufacturer's recommendations.

.9 Flashings:

- .1 Complete installation of flashing base sheet stripping prior to installing membrane cap sheet.
- .2 Torch base and cap sheet onto substrate in 1 metre wide strips.
- .3 Lap flashing base sheet to membrane base sheet minimum 150 mm and seal by mopping or torch welding.
- .4 Lap flashing cap sheet to membrane cap sheet 250 mm minimum and torch weld.
- .5 Provide 75 mm minimum side lap and seal.
- .6 Properly secure flashings to their support, without sags, blisters, fishmouths or wrinkles.
- .7 Do work in accordance with manufacturer's recommendations Section 07 62 00 Sheet Metal Flashing and Trim.
- .8 Install reinforcing gussets at all inside and outside corners as per manufacturer's recommendations.
- .9 Granules shall be embedded for the preparation of the selvage where the membrane will overlap on the mineral surface.
- .10 Using the propane torch, heat the back of the flashing strip until the coating flows and bonds to the roof and up to the vertical. Press in firmly for proper adhesion. Continue by bonding the upper portion to the wall, taking precautions not to stretch the membrane. Secure all membrane flashings to verticals with continuous securement strips installed along the top edge of membrane flashings and fastened at 300mm O.C. or as detailed. Lap all flashing strips to the selvage or a minimum of 75mm and seal the laps securely.
- .11 Use a wet sponge to tamp the membranes in place at the junction of the horizontal and vertical surfaces.
- .12 Torch application of membrane flashings shall be performed by skilled tradesmen in accordance with the manufacturer's recommendations.

.10 Roof penetrations:

.1 Install vent stack covers and other roof penetration flashings and seal to membrane in accordance with manufacturer's recommendations and details.

3.8 MISCELLANEOUS PENETRATIONS

- .1 Construct new composite curbs around base of posts and service lines after installation of Cap sheet membrane. Curb alignment shall be performed to ensure curbs are of consistent size and centered on the post or service line.
- .2 Adhere curb to membrane and seal all joints, prior to installing rubberized filler. Mix rubberised filler immediately before filling and cove to exterior for drainage.

3.9 SOIL VENT FLASHING

- .1 Prime aluminum flange and set into a coat of compatible mastic. Flash with one (1) ply of base sheet membrane for reinforcement, to extend a minimum of 200mm beyond flange. Complete installation with the application of the cap sheet membrane.
- .2 Install batt insulation between vent and aluminum flashing.
- .3 Caulk as detailed.

3.10 BATT INSULATION

.1 Install mineral fibre batt insulation to fully fill stud/vent flashing cavities as required within the specification and shown on the drawings.

3.11 METAL FLASHING

.1 Metal flashings are specified in Section 07 62 00. Co-ordinate this work with that section.

3.12 GENERAL

- .1 Remove bituminous markings from finished surfaces.
- .2 In areas where finished surfaces are soiled caused by work of this section, consult manufacturer of surfaces for cleaning advice and complying with their documented instructions.
- .3 Repair or replace defaced or disfigured finishes caused by work of this section. Patching of the cap sheet membrane shall be carried out utilizing patches with a minimum size of 450mm by 1000mm. Minimum length of cap sheet on flat run of roof shall not be less than 1000mm. Wrinkled or deformed ends of cap sheet rolls will not be tolerated and therefore must be discarded prior to application.
- .4 Following completion of new roofing, torch soften and apply a liberal application of approved bulk type mineral granules to cap sheet membrane edges where asphalt has extruded or flowed beyond clean lines and to all surface damage.
- .4 Splices in delivered rolls of membrane are to be removed. Cut back the roll 450mm on both sides of the splices and remove prior to installation.
- .5 At end of each day: Install water cut-offs and remove completely prior to continuing further roofing applications. Inspect all laps of the membrane application to ensure they are properly bonded. Repair any deficiencies prior to leaving the site for the day. Base sheet applications should not be left exposed overnight unless all seams are torch welded prior to leaving the work site.

END OF SECTION

PART 1 - GENERAL

1.1 Related Requirements

.1 Section 09 53 00.01 – Acoustical Suspension.

1.2 REFERENCES

- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM C 423-09a, Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
 - .2 ASTM E 1264-14, Standard Classification for Acoustical Ceiling Products.
 - ASTM E 1477-98a(2013), Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-92.1-M89, Sound Absorptive Prefabricated Acoustical Units.
- .3 Canadian Standards Association (CSA International)
 - .1 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.
- .4 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .5 Underwriter's Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102-2003, Surface Burning Characteristics of Building Materials and Assemblies.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit samples in accordance with Section 00 10 00 General Instructions.
- .2 Product Data: submit WHMIS MSDS in accordance with Section 00 10 00 General Instructions.
- .3 Submit duplicate full size samples of acoustical units.

1.4 QUALITY ASSURANCE

- .1 Regulatory Requirements:
 - .1 Fire-resistance rated floor/ceiling and roof/ceiling assembly: certified by Canadian Certification Organization accredited by Standards Council of Canada.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Protect on site stored or installed absorptive material from moisture damage.
- .2 Store extra materials required for maintenance, where directed by NRC Departmental Representative.
- .3 Waste Management and Disposal:
 - .1 Separate waste materials for reuse and recycling.
 - .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .4 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard packaging material in appropriate on-site bins for recycling.

1.6 ENVIRONMENTAL REQUIREMENTS

- .1 Permit wet work to dry before beginning to install.
- .2 Maintain uniform minimum temperature of 15degrees C and humidity of 20-40% before and during installation.
- .3 Store materials in work area 48 hours prior to installation.

1.7 EXTRA MATERIALS

- .1 Provide extra materials of acoustic units in accordance with Section 00 10 00 General Instructions.
- .2 Ensure extra materials are from same production run as installed materials.
- .3 Clearly identify each type of acoustic unit, including colour and texture.
- .4 Deliver to NRC Departmental Representative, upon completion of the work of this section.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Acoustic units for suspended ceiling system: to CAN/CGSB-92.1, ASTM E 1264:
 - .1 ACT1:
 - .1 Type 1.
 - .2 Class A.
 - .3 Pattern: Fissured
 - .4 Textures: smooth
 - .5 Flame spread rating of 25 or less in accordance with CAN/ULC-S102.
 - .6 Smoke developed 50 or less in accordance with CAN/ULC-S102.

- .7 Noise Reduction Coefficient (NRC) designation of .55
- .8 Ceiling Attenuation Class (CAC) rating 30, in accordance with ASTM E 1264
- .9 Light Reflectance (LR) range of .81 to ASTM E 1477.
- .10 Edge type square.
- .11 Colour white.
- .12 Size:
 - .1 610 x 1219 x 16mm thick.
 - .2 610 x 610 x 16mm thick.
- .13 Shape flat.
- .14 Acceptable material: Armstrong Cortega 769A.
- .2 Staples, nails and screws: to CSA B111 non-corrosive finish as recommended by acoustic unit manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

.1 Do not install acoustical panels and tiles until work above ceiling has been inspected by NRC Departmental Representative.

3.2 INSTALLATION

.1 Install acoustical panels and tiles in ceiling suspension system, layout as indicated on drawings.

3.3 APPLICATION

- .1 Install acoustic units to clean, dry and firm substrate.
- .2 Install acoustical units with directional pattern running in same direction. Refer to reflected ceiling plan.
- .3 Scribe acoustic units to fit adjacent work. Butt joints tight.

3.4 INTERFACE WITH OTHER WORK

- .1 Co-ordinate with Section 09 53 00.01 Acoustical Suspension.
- .2 Co-ordinate ceiling work to accommodate components of other sections, such as light fixtures, diffusers, speakers, sprinkler heads, to be built into acoustical ceiling components.

PART 1- GENERAL

1.1 RELATED REQUIREMENTS

.1 Section 09 51 13 – Acoustical Panel Ceilings.

1.2 REFERENCES

- .1 ASTM International
 - .1 ASTM C 635/C 635M-13a, Standard Specifications for the Manufacture, Performance and Testing of Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
 - .2 ASTM C 636/C 636M-13, Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 00 10 00 General Instructions.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for acoustical suspension and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Shop Drawings:
 - .1 Submit reflected ceiling plans for special grid patterns as indicated.
 - .2 Indicate lay-out, insert and hanger spacing and fastening details, splicing method for main and cross runners, location of access splines, change in level details and acoustical unit support at ceiling fixture.
- .4 Samples:
 - .1 Submit for review and acceptance of each unit.
 - .2 Submit one representative model of each type ceiling suspension system.
 - .3 Ceiling system to show basic construction and assembly, treatment at walls, recessed fixtures, splicing, interlocking, finishes, acoustical unit installation.

1.4 CLOSEOUT SUBMITTALS

- .1 Submit in accordance with Section 00 10 00 General Instructions.
- .2 Operation and Maintenance Data: submit operation and maintenance data for acoustical suspension for incorporation into manual.

1.5 QUALITY ASSURANCE

.1 Certifications: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.6 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 00 10 00 General Instructions and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials off ground, indoors, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect acoustical ceiling tiles and tracks from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.
- .4 Packaging Waste Management: remove for reuse and return pallets, crates and packaging materials.

PART 2 - PRODUCTS

2.1 DESIGN CRITERIA

.1 Design Requirements: maximum deflection: 1/360th of span to ASTM C 635/ASTM C635M deflection test.

2.2 MATERIALS

- .1 Intermediate duty system to ASTM C 635/ASTM C635M.
- .2 Basic materials for suspension system: commercial quality cold rolled steel, mill finished.
- .3 Suspension system: non fire rated, made up as follows:
 - .1 For ACT 1:
 - .1 2 directional exposed tee bar grid.
 - .2 Exposed tee bar grid components: shop painted satin sheen white.

 Components die cut. Main tee with double web, rectangular bulb and 25 mm rolled cap on exposed face. Cross tee with rectangular bulb; web extended to form positive interlock with main tee webs; lower flange extended and offset to provide flush intersection.

- .3 Perimeter trim: 19mm by height as indicated on drawings. Extruded aluminum, shop painted to match exposed tee bar grid finish, concealed spline clip with screws. Acceptable material: Axiom Classic Straight by Armstrong or approved equivalent. Perimeter trim and suspension system to be of same manufacturer.
- .4 Hanger wire: galvanized soft annealed steel wire:
 - .1 3.6mm diameter for access tile ceilings.
 - .2 To ULC design requirements for fire rated assemblies.
 - .3 3.0 mm diameter for other ceilings.
 - .4 Hanger inserts: purpose made, self-drilling type similar to Phillips "Red Head" T-32.
 - .5 Carrying channels: 38mm x 25mm channel of 1.2mm thick
- .5 Accessories: splices, clips, wire ties, retainers and wall moulding flush to complement suspension system components, as recommended by system manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for acoustical ceiling tile and track installation in accordance with manufacturer's written instructions.
- .1 Visually inspect substrate in presence of NRC Departmental Representative.
 - .1 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .2 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from NRC Departmental Representative.

3.2 INSTALLATION

- .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.
- .2 Installation: to ASTM C 636/C 636M except where specified otherwise.
- .3 Install suspension system to manufacturer's instructions and Certification Organizations tested design requirements.
- .4 Do not erect ceiling suspension system until work above ceiling has been inspected and approved by Departmental Representative.

- .5 Install hangers spaced at maximum 1200mm centres and within 150mm from ends of main tees.
- .6 Lay out system according to reflected ceiling plan.
- .7 Ensure suspension system is co-ordinated with location of related components.
- .8 Install wall moulding to provide correct ceiling height.
- .9 Completed suspension system to support super-imposed loads, such as lighting fixtures, diffusers, grilles and speakers.
- .10 Support at light fixtures and diffusers with additional ceiling suspension hangers within 150mm of each corner and at maximum 600mm around perimeter of fixture.
- .11 Interlock cross member to main runner to provide rigid assembly.
- .12 Frame at openings for light fixtures, air diffusers, speakers and at changes in ceiling heights.
- .13 Install access splines to provide 25% ceiling access.
- .14 Finished ceiling system to be square with adjoining walls and level within 1:1000.

3.3 CLEANING

- .1 Progress Cleaning:
 - .1 Leave Work area clean at end of each day.
 - .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 00 10 00 General Instructions.
- .2 Touch up scratches, abrasions, voids and other defects in painted surfaces.
- .2 Waste Management: separate waste materials for reuse and recycling.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.4 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by acoustical suspension installation.

END OF SECTION

NATIONAL RESEARCH COUNCIL CANADA 1200 MONTREAL ROAD OTTAWA, ONTARIO K1A 0R6

DESIGNATED SUBSTANCES SURVEY



BUILDING U-66 OTTAWA, ON



Distribution: 2 copies – National Research Council Canada 1 copy – Oakhill Environmental Inc.



EXECUTIVE SUMMARY

Oakhill Environmental Inc. (Oakhill) was retained by National Research Council Canada (NRC) to conduct a designated substances survey within Building U-66 in Ottawa, Ontario. All site work was completed from February 6th to February 16th, 2012.

All work carried out meets the requirements of the Ontario Occupational Health and Safety Act and WHMIS Regulation (formerly Bill 208). The purpose of the investigation was to identify any potential designated substances and mould.

Based on the visual inspection and laboratory analyses, designated substances were identified to be present in the facility. A summary of the survey recommendations is presented in Table 1.

Table 1 - Summary of Findings and Recommendations

Table 1 - Summary of Findings and Recommendations						
Comments	Recommendations					
Basement: Room(s) 20 (FS# B009)						
Five damaged mud joint compound fittings were identified on the tunnel system. (5 units)	Encapsulate the five damaged mud joint compound fittings on the tunnel system.					
One damaged mud joint compound fittings was identified on the domestic cold water system. (1 unit)	Remove the damaged mud joint compound fittings on the domestic cold water system.					
First Floor: Men	's Washroom (FS# 1009)					
One section of damaged Aircell pipe insulation was identified on the domestic cold water system. (0.5 LM)	One encapsulation is required on the damaged Aircell pipe insulation on the domestic cold water system.					
First Floor: Room(s) 155 (FS# 1010)						
One damaged mud joint compound fitting was identified on the hot water heating	Remove the damaged mud joint compound fitting on the hot water heating system.					
First Floor: Room(s) 101, 102, 103, 133, 135 (FS# 1012)						
One damaged mud joint compound fitting was identified on the hot water heating system. (1 unit)	Encapsulate the damaged mud joint compound fitting on the hot water heating system.					
First Floor: Room(s) 149 (FS# 1015)						
One section of damaged Aircell pipe insulation was identified on the chiller system. (0.5LM)	One encapsulation is required on the damaged Aircell pipe insulation on the chiller system.					
First Floor: Tunnel Room 2 (FS# 1023)						
Two damaged mud joint compound fittings were identified on the hot water heating system. (2 units)	Remove the two damaged mud joint compound fittings on the hot water heating system.					
	Basement: Ro Five damaged mud joint compound fittings were identified on the tunnel system. (5 units) One damaged mud joint compound fittings was identified on the domestic cold water system. (1 unit) First Floor: Men One section of damaged Aircell pipe insulation was identified on the domestic cold water system. (0.5 LM) First Floor: Ro One damaged mud joint compound fitting was identified on the hot water heating system. (1 unit) First Floor: Room(s) 10 One damaged mud joint compound fitting was identified on the hot water heating system. (1 unit) First Floor: Ro One section of damaged Aircell pipe insulation was identified on the chiller system. (0.5LM) First Floor: Tun Two damaged mud joint compound fittings were identified on the hot water heating					



Issue	Comments	Recommendations					
	Second Floor: J	Room(s) 257 (FS# 2011)					
	One damaged section of mud joint compound /parging duct insulation was identified on the HVAC system. (1 m2)	Encapsulate the damaged area of mud joint compound /parging duct insulation on the HVAC system.					
		puse (FS# PH01)					
	One section of damaged Sweatwrap pipe insulation was identified on the domestic cold water system. (0.5 LM)	One encapsulation is required on the damaged Sweatwrap pipe insulation on the domestic cold water system.					
Lead	One paint sample was submitted for lead analysis. The peach paint sample was found to contain significant levels of lead (i.e., equal to or greater than 5000 ppm). Lead may be present in the solder used on copper domestic water lines, as caulking in bell fittings, cast iron drainage pipes, in glazing on the ceramic tiles and in electrical equipment, wiring or fixtures.	The draft Proposed Lead Regulation on Construction Projects, May 5, 1995, (enforced by the Ministry of Labour) does not require removal of lead paint or lead-based materials, unless work on these materials is likely to produce lead fumes or dust, for example during welding, torch cutting, grinding, sanding or sandblasting. In the event that such work is conducted at this facility, ensure that lead fumes or dust do not exceed the maximum allowable Time Weighted Average Exposure Value (TWAEV) of 0.05 mg/m³ as prescribed by the OHSA.					
Mercury	Mercury vapour may be present in fluorescent light tubes and thermostats. Mercury may also be present in paints and adhesives.	Mercury, or mercury vapour within light fixtures, pose no risk to workers or occupants, provided the mercury containers remain intact and undisturbed. Where possible, fluorescent lights should be recycled at an approved recycling facility. Mercury must be handled and disposed of in accordance with O. Reg. 390/00 and O. Reg. 558/00.					
Silica	Silica may be present in concrete, cement mortar and non-fibreglass acoustic ceiling tiles.	Ensure workers performing demolition work are not exposed to airborne silica levels in excess of 0.10 mg/m³ by providing respiratory protection, and/or wetting down work area, and providing workers with a facility to properly wash prior to exiting the work area as prescribed by O.Reg.490/09.					
	Room(s	s) 135 (FS# 1012)					
Suspect Mould	Suspect mould was observed in one location on the water supply system.	Bulk fungal analysis should be performed to the species level. Once the hazard is qualified, the mould should be removed and the source of the moisture should be mitigated.					
	Suspect mould was observed in five locations on the chiller system.	Bulk fungal analysis should be performed to the species level. Once the hazard is qualified, the mould should be removed and the source of the moisture should be mitigated.					
iviouiu	Stairwell (FS# SW03)						
	Suspect mould was observed in one location on the chiller system.	Bulk fungal analysis should be performed to the species level. Once the hazard is qualified, the mould should be removed and the source of the moisture should be mitigated.					
	Penthouse (FS# PH01)						
	Suspect mould was observed in one location on the chiller system.	Bulk fungal analysis should be performed to the species level. Once the hazard is qualified, the					



Issue	Comments	Recommendations			
		mould should be removed and the source of the moisture should be mitigated.			

None of the other designated substances were observed during the course of the survey inspection.



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1.0 INTRODUCTION

Oakhill Environmental Inc. (Oakhill) was retained by the National Research Council Canada (NRC) to perform a survey for Designated Substances and mould of Building U-66 in Ottawa, Ontario. Building U-66 was surveyed from February 6th to February 16th, 2012.

The purpose of the investigation was to identify any building materials or equipment containing certain substances termed "Designated Substances" and mould.

This survey will enable NRC to:

- 1. Manage asbestos containing materials (ACM's) to ensure that these materials are in good condition and provide recommendations for ACM's that are in need of repair,
- 2. Provide this report to NRC building managers, project managers, contractors and subcontracts enabling them to comply with O. Reg. 278/05, the regulation regarding asbestos on construction projects and in buildings and repair operations, and
- 3. Provide a comprehensive survey, which will enable NRC to develop a Management Plan to deal with designated substances.

1.1 Limitations

This report details the accessible Designated Substances found within the building and the exterior walls. Representative views were made above accessible suspended ceiling systems. Throughout the process of inspection there were, on numerous occasions, areas that were inaccessible. These areas include but are not limited to: areas above solid ceilings, areas behind solid walls and internal components of machinery or equipment. These areas require intrusive investigative techniques, which may compromise the integrity of that system. An example of an intrusive issue is asphaltic roofing felts (tar paper), which may contain asbestos. However, due to the potential for damages to the building and its contents, as well as safety reasons, no samples were obtained from the roofing systems at the facility. Intrusive investigative techniques are only undertaken at the expressed request of NRC staff where forthcoming renovations projects are known.

Any area that was not inspected and considered inaccessible in this report should be dealt with cautiously in future endeavours before undertaking any form of work, as there may be ACM in this area. In such future



situations, samples should be collected and analyzed of all suspect ACM before commencing work. Any area that was not accessible at the time of inspection would be noted within the report.

The report reflects the observations of accessed areas, findings and analysis of materials sampled during the survey. Designated Substances may have been removed from or added to the project area. It is the NRC's responsibility to disclose whether any Designated Substances have been added to or removed from the project area.

The material in it reflects Oakhill's best judgement based on the information discovered at the time of preparation and within the Designated Substance Survey scope of work. There may be materials on-site, which are not represented by these investigations. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Oakhill accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.



2.0 SCOPE OF WORK

The purpose of the investigation was to identify any building materials or equipment containing certain substances termed "Designated Substances" and mould. The scope defined for this project is summarized below.

- 1. To provide assessments for the presence of Designated Substances which include:
 - Acrylonitrile
 - Arsenic
 - Asbestos
 - Benzene
 - Coke Oven Emissions
 - Ethylene Oxide
 - Isocyanates
 - Lead

- Mercury
- Silica (free crystalline silica)
- Vinyl Chloride (vinyl chloride monomer, not PVC)
- And in addition Mould
- 2. Assessment will include building materials and components incorporated in the structure and finishes (including exterior finishes). Items not included are building and service tunnels, owner or occupant articles within the building (e.g. process materials or equipment, furniture, etc.), soil contaminants, groundwater, vessels, drums or underground storage tanks.
- 3. To collect samples of suspect building materials to verify the presence of asbestos and lead.
- 4. To provide testing from a certified laboratory on samples collected of suspect asbestos and lead.
- 5. Provide two hard and electronic (PDF) copies of the final report.



3.0 REGULATORY CRITERIA, STANDARDS AND GUIDELINES

The following regulatory criteria, standards, and guidelines were applied for the interpretation and reporting of observations, laboratory data, and on-site monitoring data. The building materials and contents were visually examined to determine the presence of the following designated substances in accordance with the requirements of the Ministry of Labour's (MOL) Occupational Health and Safety Act, Section 30. The Regulations governing the Designated Substances were consolidated to fall under O. Reg. 490/09.

Acrylonitrile O. Reg. 835/90 as amended by O. Reg. 490/09
Arsenic O. Reg. 836/90 as amended by O. Reg. 490/09
Asbestos O. Reg. 278/05, O. Reg. 490/09 and O. Reg. 347/90
Benzene O. Reg. 839/90 as amended by O. Reg. 490/09
Ethylene Oxide O. Reg. 841/90 as amended by O. Reg. 490/09
Isocyanates O. Reg. 842/90 as amended by O. Reg. 490/09
Lead O. Reg. 843/90 as amended by O. Reg. 490/09

Mercury O. Reg. 844/90 as amended by O. Reg. 490/09and the MOL guideline

Silica O. Reg. 845/90 as amended by O. Reg. 490/09 Vinyl Chloride O. Reg. 846/90 as amended by O. Reg. 490/09

Asbestos-Containing Material (ACM) is defined as "Material that contains 0.5% or more asbestos by dry weight". Friable Material is defined as "material that: (a) when dry, can be crumbled, pulverized or powdered by hand pressure, or (b) is crumbled, pulverized or powdered".

For asbestos, lead and silica the above regulations define exposure guidelines for a worker's time-weighted average exposure of the material in air. Airborne levels should not exceed 0.1 fibres/cm³ of asbestos in air, 0.05 mg/m³ of lead in air, 2 ppm of acrylonitrile in air, 0.01 mg/m³ of arsenic in air, 0.5 ppm of benzene in air and 0.1 mg/m³ of silica in air. The above regulations classify disturbances (Type 1, Type 2, and Type 3), handling requirements, respiratory requirements and monitoring requirements.

The Ministry of Labour published, <u>The Safe Handling of Mercury</u>, A Guideline for the Construction Industry, Jan 1991, outlining the health effects, sources, respiratory protection during the clean up of mercury. From the U.S. Department of Housing and Urban Development, Lead- Based Paint is classified as any paint application containing at least 1.0 milligrams of lead per square centimetre of surface area (1.0 mg/cm2) or at least 0.5% lead content by weight (5,000 ppm) or 5,000 µg/g.



The Provincial Government has issued O. Reg. 558/00 controlled under R.R.O. 1990, Regulation 347 outlining generator, hauler and receiver requirements for wastes dependant on the results of leachate analyses. Provincial and Federal regulations also outline the packaging and transportation of wastes.



4.0 SURVEY METHODOLOGY

4.1 Background Information Review

Reviewing existing reports, interviewing knowledgeable NRC staff, and reviewing as-built drawings allowed Oakhill to obtain a basic understanding of potential issues regarding each building.

4.2 Field Investigation

A detailed visual survey of all accessible areas of the building on a room-by-room basis, including ceiling spaces above removable acoustical ceiling tiles; and wall spaces behind removable panels. Each area or room of the building was assigned a four-digit functional space identification number beginning with 1001. A room-by-room inspection was conducted for Designated Substances in all accessible areas. All suspect ACM and lead were sampled and were categorized with a unique homogeneous material number. Visual assessment of all known and suspect ACM included assessment as to friability, type, quantity, condition, accessibility, appropriate response, as well as comments made on the potential or likelihood of future damage or exposure to ACM by building occupants. Quantification of all ACM's were approximations only, not actual measurements. Square metres or linear metres were generally used for quantifying ACM. All ACM's are documented through functional space forms and photographs.

In the performance of this Designated Substances survey, Oakhill utilized the project team comprised of the following staff:

Mr. Fil Barillaro, M.A.Sc., P.Eng.

Mr. Bill McGovern, Industrial Hygiene Cert.

Mr. Sean Bagnulo, AutoCAD

Mr. Raivo Tähiste, BSc.

Mr. John Butera

Mr. Nick Riddick, Dip. C. Tech, CEPIT

Mr. Dave Jamieson

Ms. Petra Wittig

Project Manager

On-Site Project Manager Environmental Analyst Environmental Analyst

Environmental Analyst

Environmental Analyst

Environmental Analyst

Administration



4.2.1 Homogenous Materials

Materials were grouped to be homogenous. That is, materials that are uniform in colour and texture were assumed to be similar in content. Regarding asbestos, samples collected of suspect materials adhered to O. Reg. 278/05, Table 1 Bulk Material Samples – Section 3 (3), for minimum sample requirements for respective suspect materials and quantities. Samples were randomly collected to be representative of each suspect ACM and lead material and then assigned a homogenous material number accordingly. A homogenous materials list was generated which consists of suspect ACM sampled, with positive materials highlighted. The Homogenous Materials List is located in Table 2 of this report.

4.3 Sample Collection

Collection of bulk samples of suspect materials for submission to AGAT Laboratories Ltd., in Mississauga, Ontario for analysis for asbestos (as percentage asbestos fibre, and type of asbestos fibre) and for lead (ug/g).

4.3.1 Bulk Sample Collection

Oakhill field staff wore half-face respirators with P100 cassettes during bulk sampling events. Building materials were pre-dampened with an application of amended water from a spray bottle to suppress surface and airborne fibres prior to disturbance for sample collection.

The building material sampled was sealed with caulking after sample collection to restore the material to its original condition. Every effort to minimize intrusion of the sampled building materials was always of paramount consideration. Each sample was sealed in a new plastic bag and labeled with a unique sample number and then double bagged. Chain of custody records were completed on-site and submitted with all samples to an approved laboratory.

All bulk materials sampled were randomly collected and are representative of each area of homogenous material. The minimum number of bulk materials to be collected from an area of homogenous material was in accordance with O. Reg. 278/05, Section 3 (3) (Table 1). All analysis of suspect asbestos containing materials was conducted according to O. Reg. 278/05, Section 3 (1) which states that the following standard be used: U.S. Environmental Protection Agency. Test method EPA/600/R-93/116: Method for the



Determination of Asbestos in Bulk Building Materials. June 1993. Sample locations are depicted in Appendix E.

4.3.2 Sample Analysis

All bulk samples were submitted to AGAT Laboratories Inc. (AGAT) in Mississauga, Ontario, an independent laboratory, for analysis.

AGAT has been evaluated and has been found to comply with the criteria and standards established by the Canadian Association for Environmental Laboratories (CAEAL) for asbestos fibre analysis by phase contrast microscopy. The American Industrial Hygiene Association (AIHA) has accredited AGAT for the Industrial Hygiene Laboratory Accreditation Program for Asbestos using optical microscopy. Suspect bulk samples were analyzed using polarized light microscopy, and were based on a "test for first positive" approach. Laboratory results of the asbestos and lead sampling can be found in Appendices B and C respectively.



5.0 FINDINGS AND RECOMMENDATIONS

The results of the survey for designated substances and mould at building U-66 are discussed below.

5.1 Asbestos

All potential asbestos-containing materials sampled have been compiled into a homogenous materials list. Each homogenous material is given a homogeneous number, description, analytical result and corresponding sample numbers. The homogeneous materials list for building U-66 is shown in Table 2.

Table 2 - Homogeneous Materials List

Hom. Mat. #	Material Description	Asbestos Type & Conc.	Sample No.
1	Plaster	ND	U66-01A
2	MJC FI (HWH: Large diameter)	50%-75% Chrysotile	U66-02A-C
3	Transite Panel	Suspect	Suspect
4	Sweatwrap PI (Tunnel System)	75% Chrysotile	U66-04A-C
5	MJC FI (Tunnel System)	50%-75% Chrysotile	U66-05A-C
6	MJC FI (HWH: Small diameter)	75% Chrysotile	U66-06A-C
7	Tank Insulation (HVAC)	50%-75% Chrysotile	U66-07A-C
8	Exterior Stucco	0.5%-5% Chrysotile	U66-08A-C
9	Aircell PI	30%-50% Chrysotile	U66-09A-C
10	MJC FI (DCW & drain)	50%-75% Chrysotile	U66-10A-C
11	MJC FI (Chiller)	ND	U66-11A-C
12	MJC/Parging Duct Insulation (HVAC)	50%-75% Chrysotile	U66-12A-C
13	9"x9" Floor Tile	Suspect	NA

Hom. Mat. # - Homogeneous Material Number Conc. - Concentration NAD - No Asbestos Detected

5.1.1 Survey Findings

The eleven building materials that contain asbestos are as follows:

- 1) Sweatwrap pipe insulation;
- 2) Aircell pipe insulation;
- 3) Mud joint compound fitting insulation on the cold systems (drain, & domestic cold water);
- 4) Mud joint compound fitting insulation on the hot system (hot water heating: small diameter);
- 5) Mud joint compound fitting insulation on the hot system (hot water heating: large diameter);
- 6) Mud joint compound fitting insulation on systems located in the tunnel;
- 7) Mud joint compound/Parging duct insulation on the HVAC system;



- 8) Tank insulation on the HVAC system
- 9) Exterior stucco finish:
- 10) Transite panel; and
- 11) Floor tile (9"x9") refer to paragraph below on floor tile;

In the case of the 9" x 9" floor tiles, although PLM analytical results may indicate that this material is non-asbestos, it is the opinion of Oakhill that this material <u>does contain asbestos</u> and that PLM analysis has limitations regarding separating bound materials such as floor tile to properly identify asbestos content. TEM analysis is recommended for this material.

Table 3 provides a summary of all asbestos-containing materials by room. This table can be cross-referenced with both the functional space forms in Appendix F to find a complete description of the room and the floor plans in Appendix E depicting exactly where the ACM materials were encountered.

Table 3 – Summary of ACM by Room Listing

Functional Space	Room	Homo Mat	Material Description and Quantity	Response
Basement				
B005	Rooms	3	Transite panel on the wall $-3m^2$	O & M
B003	006 & 004	2	Mud Joint Compound Fitting Insulation on the hot water heating system. – 8 units	O & M
B006	Hallway	3	Transite panel on the wall – 30m ²	O & M
В000	Hanway	3	Transite panel on the ceiling – 8m ²	O & M
		4	Sweatwrap Pipe Insulation on the tunnel system –9LM	O & M
		5	Mud Joint Compound Fitting Insulation on the tunnel system. – 89 units	O & M
B009		5	Five damaged Mud Joint Compound Fittings on the tunnel system. – 5 units	5 encaps.
DUUY	Room 20	6	Mud Joint Compound Fitting Insulation on the hot water heating system. – 48 units	O & M
		10	One damaged Mud Joint Compound Fitting Insulation on the domestic cold water system. – 1 unit	1 removal
		10	Mud Joint Compound Fitting Insulation on the drain system. – 22 units	O & M



		9	Aircell Pipe Insulation on the hot water heating system – 3 LM	O & M
1005	Rooms 168, 176, 176A	9	Aircell Pipe Insulation on the domestic cold water system – 6 LM	O & M
	17074	10	Mud Joint Compound Fitting Insulation on the domestic cold water system. – 4 units	O & M
		9	Aircell Pipe Insulation on the hot water heating system – 10 LM	O & M
		9	Aircell Pipe Insulation on the domestic cold water system – 8 LM	O & M
1007	Room 164	9	Aircell Pipe Insulation on the domestic hot water system – 8 LM	O & M
1007	Room 104	10	Mud Joint Compound Fitting Insulation on the domestic cold water system. – 4 units	O & M
		10	Mud Joint Compound Fitting Insulation on the domestic hot water system. – 4 units	O & M
		6	Mud Joint Compound Fitting Insulation on the hot water heating system. – 7 units	O & M
1000 P	Room 162	9	Aircell Pipe Insulation on the hot water heating system – 3 LM	O & M
1008	Koom 162	6	Mud Joint Compound Fitting Insulation on the hot water heating system. – 1 unit	O & M
		9	Aircell Pipe Insulation on the hot water heating system – 4 LM	O & M
		9	Aircell Pipe Insulation on the domestic cold water system – 4 LM	O & M
		9	Aircell Pipe Insulation on the domestic hot water system – 4 LM	O & M
1009	Men's Washroom	10	Mud Joint Compound Fitting Insulation on the domestic cold water system. – 2 units	O & M
		10	Mud Joint Compound Fitting Insulation on the domestic hot water system. – 2 units	O & M
		6	Mud Joint Compound Fitting Insulation on the hot water heating system. – 2 units	O & M
		9	One section of damaged Aircell Pipe Insulation on the domestic cold water system – 0.5 LM	1 encap.
1010	Room 155	9	Aircell Pipe Insulation on the hot water heating system – 12 LM	O & M
1010	Koom 133	9	Aircell Pipe Insulation on the domestic cold water system – 5 LM	O & M



		9	Aircell Pipe Insulation on the domestic hot water system – 5 LM	O & M								
		10	Mud Joint Compound Fitting Insulation on the domestic cold water system. – 6 units	O & M								
		10	Mud Joint Compound Fitting Insulation on the domestic hot water system. – 2 units	O & M								
		6	Mud Joint Compound Fitting Insulation on the hot water heating system. – 7 units	O & M								
		6	One damaged Mud Joint Compound Fitting Insulation on the hot water heating system. – 1 unit	1 removal								
		6	Mud Joint Compound Fitting Insulation on the hot water heating system. – 90 units	O & M								
1012	Rooms 101,	6	One damaged Mud Joint Compound Fitting Insulation on the hot water heating system. – 1 unit	1 encap								
1012	102, 103, 133, 135	10	Mud Joint Compound Fitting Insulation on the domestic cold water system. – 9 units	O & M								
		6	Mud Joint Compound Fitting Insulation on the domestic hot water system. – 7 units	O & M								
			Mud Joint Compound Fitting Insulation on the hot water heating system. – 10 units	O & M								
1015	Room 149	9	Aircell Pipe Insulation on the chiller system – 6 LM	O & M								
			One section of damaged Aircell Pipe Insulation on the chiller system – 0.5 LM	1 encap.								
1010	Hallway	3	Transite panel on the wall – 36m ²	O & M								
1018	Hallway	3	Transite panel on the ceiling – 8m ²	O & M								
		6	Mud Joint Compound Fitting Insulation on the hot water heating system. – 15 units	O & M								
						9	Aircell Pipe Insulation on the hot water heating system – 26 LM	O & M				
			9	Aircell Pipe Insulation on the domestic cold water system – 27 LM	O & M							
1019	Hallway	10	Mud Joint Compound Fitting Insulation on the domestic cold water system. – 5 units	O & M								
										9	Aircell Pipe Insulation on the domestic hot water system – 6.5 LM	O & M
1019				6	Mud Joint Compound Fitting Insulation on the domestic hot water system. – 3 units	O & M						
		12	Mud Joint Compound / Parging Duct Insulation on the HVAC system. – 90 LM	O & M								



Tunnel	3	Transite panel on the wall – 290m ²	O & M
1020 Diffuser		Mud Joint Compound Fitting Insulation on the hot water heating system. – 4 units	O & M
	8	Exterior stucco finish on the wall – 429m ²	O & M
Annex	6	Mud Joint Compound Fitting Insulation on the hot water heating system. – 61 units	O & M
	10	Mud Joint Compound Fitting Insulation on the domestic cold water system. – 13 units	O & M
		Mud Joint Compound Tank Insulation on the Tank system – 14 m ²	O & M
Tunnel Room	6	Mud Joint Compound Fitting Insulation on the hot water heating system. – 153 units	O & M
1	10	Mud Joint Compound Fitting Insulation on the drain system. – 38 units	O & M
	Mud Joint Compound Fitting Insulation on the domestic cold water system. – 33 units		O & M
	6	Mud Joint Compound Fitting Insulation on the hot water heating system. – 112 units	O & M
Tunnel Room 2	6	Two damaged Mud Joint Compound Fitting Insulation on the hot water heating system. – 2 units	2 removals
	10	Mud Joint Compound Fitting Insulation on the drain system. – 24 units	O & M
	10	Mud Joint Compound Fitting Insulation on the domestic cold water system. – 8 units	O & M
Room 157	6	Mud Joint Compound Fitting Insulation on the domestic hot water system. – 6 units	O & M
or			
D 020	7	Mud Joint Compound Tank Insulation on the Tank system – 4 m ²	O & M
2001 Room 029		Mud Joint Compound Fitting Insulation on the hot water heating system. – 17 units	O & M
2011 Room 257		Mud Joint Compound / Parging Duct Insulation on the HVAC system. – 30m ²	O & M
		One section of damaged Mud Joint Compound / Parging Duct Insulation on the HVAC system. – 1m ²	1 encap.
Room 259	13	9"x9" floor tile (beige) – 102 m ²	O & M
Hallway	3	Transite panel on the wall – 24m ²	O & M
	Annex Tunnel Room 1 Tunnel Room 2 Room 157 Room 029 Room 257	Tunnel Diffuser 6 8 Annex 6 10 7 Tunnel Room 1 10 10 10 10 Room 157 6 7 Room 029 7 Room 257 12 Room 259 13	Tunnel Diffuser 6



		3	Transite panel on the ceiling – 8m ²	O & M
Penthouse				
PH01		4	Sweatwrap Pipe Insulation on the domestic cold water system –22LM	O & M
		4	One section of damaged Sweatwrap Pipe Insulation on the domestic cold water system - 0.5LM	1 removal
	Penthouse	10	Mud Joint Compound Fitting Insulation on the domestic cold water system. – 8 units	O & M
	Tentilouse	Mud Joint Compound / Parging Duct Insulation on the HVAC system. – 182m ²		O & M
		9	Aircell Pipe Insulation on the domestic hot water system – 7 LM	O & M
		6	Mud Joint Compound Fitting Insulation on the domestic hot water system. – 2 units	O & M
Stairwells				
SW02	Stairwell	6	Mud Joint Compound Fitting Insulation on the hot water heating system. – 16 units	O & M
Building Ext	erior			
F X U I	Building	8	Exterior stucco finish on the wall – 8,400m ²	O & M
	exterior	3	Transite panel on the wall – 11m ²	O & M
LM -	- Linear Metre	1	O&M – Operations & Maintenance	

Asbestos was detected in eleven homogeneous building materials sampled from the facility. The ACM was categorized as to whether it was friable or non-friable. Further, the materials were grouped according to their similar composition, system and general appearance. The following sub-sections are the result of which materials were considered friable or non-friable. Photographs are provided along with a brief description of the material.

Mat. -Materials

Homo. – Homogeneous

Encap – Encapsulation



5.1.2 Friable ACM

Mud Joint Compound

A representative photograph of mud joint compound fitting insulation. This material is a malleable grey insulation that has the appearance of granular mud. It appears smooth, round and hard when it is intact with appropriate exterior jacketing.



A representative photograph of Aircell pipe insulation. This material is grey and white in colour. Aircell is layers of corrugated paper, which gives it the appearance of a honeycomb pattern when the profile is observed.

Sweat Wrap (with tar paper layer)

A representative photograph of sweat wrap with tar paper layer pipe insulation. This material has several layers of brown or grey waffle pattern paper layers with the outer layer consisting of a tar paper layer that contains asbestos.









Tank Insulation

A representative photograph of tank insulation. This material is a malleable grey insulation that has the appearance of granular mud. It appears hard when it is intact with appropriate jacketing and is very similar to mud joint compound.

MJC Parging

A representative photograph of parging fitting insulation. This material is a malleable grey insulation that has the appearance of granular mud. It appears smooth, round and soft. It is similar to mud joint compound but is softer and can be pulverized by hand pressure much easier.





5.1.3 Non-Friable ACM

9" x 9" Floor Tile

A representative photograph of 9" x 9" vinyl asbestos floor tile (VAT). This material may be found in any number of different colours and patterns. VAT's are normally rigid and non-friable. VAT's are sometimes found under carpeting or they may be present as the only flooring.





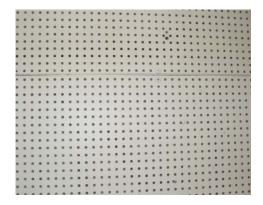
Exterior Finish

A representative photograph of exterior finishing material. This material is white / off-white and hard, with a cement-like appearance. Exterior finishing is a thin layer that is applied on top of the various structural materials that make up the exterior wall system.

Transite Panel

Representative photographs of transite panel. Transite is a composite material made up of asbestos and cement that was a manufactured product at the time of installation. It was generally used in areas as a fire retardant. It is a rigid material that fractures when broken and may appear as other types of non-ACM panel.





5.1.4 Survey Recommendations

Under O. Reg. 278/05 damaged and exposed ACM is required to be repaired or removed. In building U-66, the damaged asbestos containing materials, found in Table 3 and summarized in Table 1, will require Type 2 asbestos abatement procedures for removal or repair of 1 square meter or less of material and Type 3 asbestos abatement precautions for removal of greater than 1 square meter of material. These issues should be addressed as soon as possible.

The O. Reg. 278/05 also requires the removal of all ACM's that have a potential of being disturbed during renovations or demolition. Should friable ACM's remain in the building, in GOOD condition, the regulation also requires that an Asbestos Management Plan be implemented and kept in place until such time that the ACM's have been removed. The management plan will include periodic assessment and record updating to be performed on the remaining ACM at least every 12 months.

Building staff and contractors should be made aware of the location and hazards associated with the ACM's and instructed to not disturb this material. Any disturbance of this material should be reported immediately to property management and appropriate control measures put into place without delay.



5.2 Lead

5.2.1 Survey Findings

Based on visual observations during Oakhill's room-by-room surveys, potential lead was sampled in one paint finish. Samples were collected from the painted surfaces in building U-66 and were analysed for lead content.

The analytical results are provided in Appendix C and are summarized below in Table 4.

Table 4 – Results of Lead Investigation

	10010 1 1	10001100 01 20000 111 100115	*****	
Sample	Location	Colour	Results (ppm Lead)	Considered Lead Based Paint*
L01	Room 006 (FS# B005)	Peach paint	22,400	Yes

^{*}Note: Ontario Ministry of Labour (MOL) considers 5,000ppm lead to be a lead-based paint (LBP).

5.2.2 Survey Recommendations

Based on the analytical results, the peach paint sample on the metal doors contained greater than 5,000 ppm lead and therefore is classified as a lead-based paint.

Lead may be present in the solder used on copper domestic water lines, as caulking in bell fittings for castiron drainage pipes and in electrical equipment, wiring or fixtures.

Direct disturbance of the materials can minimize the impact of lead products during removal. Removal of lead materials as an intact unit is the preferred method of removal. Mechanically powered tools increase the airborne concentration of lead dust.

Contractors are responsible to ensure that the workers are not exposed to airborne lead dust levels in excess of 0.05 mg/m3. This can be accomplished by:

- Providing respiratory protection and coveralls
- Suppressing dust levels by wetting with amended water, mops or HEPA vacuums
- Using drop-sheets and polyethylene barriers to control dust
- Ensuring the work areas have adequate ventilation
- Provide workers with the means to practice good hygiene practices when leaving the work area

The removal of metallic lead materials should be carried out in accordance with Ontario Regulation 490.09 and the Ontario Ministry of Labour (MOL) draft Proposed Lead Regulation on Construction Projects, both



made under the Occupational Health and Safety Act. Any lead-containing materials should also be disposed of in accordance with Ontario Regulation 558 (formerly O. Reg. 347).

In addition, it is recommended that the United States Department of Housing and Urban Development Guideline, of 0.5 % lead (by weight) or 5,000 parts per million (ppm) lead be used as a guideline for determining whether the use of precautions as outlined in the proposed regulation would be required during the above noted operations. Airborne lead dust or fumes should not exceed the MOL TWAEV of 0.05 milligram per cubic metre (mg/m³) during the removal of lead based paints and products.

5.3 Mercury

5.3.1 Survey Findings

Mercury vapour is present inside fluorescent light fixtures. Tubes should be removed intact prior to removing the fixtures. Liquid mercury may also be present inside thermostats and manometers in mechanical equipment.

5.3.2 Survey Recommendations

Prior to removal of fluorescent light fixtures, the tubes should be removed from the fixtures intact to prevent the mercury vapour from escaping. As long as the tubes are not broken, workers will not be exposed to hazardous mercury vapour. Prior to demolition of the facility, mercury-containing materials must be removed as per Ontario Regulation 490/09. During demolition, ensure that the maximum concentration of exposure to airborne mercury does not exceed 0.025 mg mg/m³ of air.

If applicable, mercury should be collected from thermostats, thermometers, and manometers prior to demolition; however care should be taken to control the release of mercury into the air.

5.4 Silica

5.4.1 Survey Findings

Based on the historic composition of building materials, crystalline silica is present in the following building materials:

- Concrete floor slabs:
- Masonry block walls;
- Mortar; and



Acoustic ceiling tiles.

5.4.2 Survey Recommendations

Contractors are responsible to ensure workers are not exposed to airborne silica levels in excess of 0.10 mg/m³ when dealing with the above materials. This can be accomplished by:

- Minimize disturbance of the material
- Providing respiratory protection and coveralls
- Suppressing dust levels by wetting with amended water, mops or HEPA vacuums
- Using drop-sheets and polyethylene barriers to control dust
- Ensuring the work areas have adequate ventilation
- Provide workers with the means to practice good hygiene practices when leaving the work area

Use of mechanically powered tools for any demolition work increases the concentration of airborne silica and therefore requires more stringent respiratory protection and controlled work procedures.

5.5 Isocyantes

5.5.1 Survey Findings

At the time of the site inspection, no evidence of isocyantes was noted as part of the structure or finishes.

5.6 Vinyl Chloride Monomer

5.6.1 Survey Findings

At the time of the site inspection, no evidence of vinyl chloride monomer was noted as part of the structure or finishes.

5.7 Benzene

5.7.1 Survey Findings

Benzene may be present in a stable form within roofing materials, paints and adhesives.

5.7.2 Survey Recommendations

It is not expected that benzene concentrations in air will exceed the maximum allowable TWAEV for a worker to benzene (0.5 ppm). To minimize potential benzene exposure, apply paints and adhesives in well-ventilated areas.



5.8 Acrylonitrile

5.8.1 Survey Findings

At the time of the site inspection, no evidence of acrylonitrile was noted as part of the structure or finishes.

5.9 Coke Oven Emissions

5.9.1 Survey Findings

At the time of the site inspection, no evidence of coke oven emissions was noted as part of the structure or finishes.

5.10 Arsenic

5.10.1 Survey Findings

At the time of the site inspection, no evidence of arsenic was noted as part of the structure or finishes.

5.10.2 Survey Recommendations

Arsenic or arsenic-containing compounds may be present in stable form in paints and adhesives. It is not expected that arsenic concentrations in air will exceed the maximum allowable TWAEV for a worker to arsenic (0.01 mg/m³). To minimize potential arsenic exposure, apply paints and adhesives in well-ventilated areas.

5.11 Mould

5.11.1 Survey Findings

At the time of the site inspection, evidence of mould was found to be present in the following eight locations in building U-66:

- Suspect mould was identified in one location on the water supply system in room 135 (FS#1012);
- Suspect mould was identified in five locations on the chiller system in room 135 (FS#1012);
- Suspect mould was identified in one location on the chiller system in the stairwell (FS#SW03); and
- Suspect mould was identified in one location on the chiller system in the penthouse (FS#PH01).



5.11.2 Survey Recommendations

Continued diligence is recommended to avoid scenarios, which can support fungi growth specifically: <u>water in the presence of cellulose-based surfaces</u>. There must be moisture (such as leaking pipes, cracked window seals, etc.) as well as an indoor substrate (such as the paper layer of drywall, wood, potted plants, etc.) to support fungal growth. Simply replacing the substrate is not a solution to the problem. The root cause is required to be identified.

Designated Substances Survey Building U-66, Ottawa

6.0 **CLOSURE**

This report has been prepared for the sole benefit of the National Research Council of Canada.

The conclusions presented represent the best judgement of the assessor based on current environmental standards and on the site conditions observed from February 6th to February 16th, 2012. Due to the nature of the investigation and the limitations of the available data, the assessor cannot warrant against undiscovered environmental liabilities. It is possible that additional, concealed designated substances may become evident during demolition activities.

Should additional information become available, Oakhill requests that this information be brought to our attention so that we may re-assess the conclusions presented herein.

We trust that the report meets your current requirements. Should you have any questions or concerns regarding the above, please do not hesitate to contact the undersigned.

Oakhill Environmental Inc.

Fil Barillaro, M.A.S.c., P.Eng.

Project Manager

APPENDIX A DESIGNATED SUBSTANCES BACKGROUND INFORMATION

Acrylonitrile

Acrylonitrile is regulated in Ontario under Regulation 490/09 of the Occupational Heath and Safety Act. Acrylonitrile is a clear liquid that may be colourless or yellow and that readily reacts with other chemicals to produce long, chain-like molecules (polymers). Acrylonitrile-based polymers are used to produce nitrile rubbers, plastics, acrylic fibres, coatings and adhesives. Workers are typically exposed to acrylonitrile at manufacturing facilities that produce the aforementioned products through inhaling its vapour, direct skin contact, or through ingestion. Although acrylonitrile may be present in some of the building materials, including adhesives and coatings, the chemical will likely be bonded in the polymer form. Therefore, it is not expected that an adverse exposure to acrylonitrile will occur unless the building materials are heated to extreme temperatures. Acrylonitrile vapours may become released from the acrylonitrile-based polymers during a process where high temperatures are applied. Acrylonitrile is classified as *possibly carcinogenic to humans (Group 2b)* as evidence from long-term epidemiological studies since 1980 is conflicting. It is not expected that acrylonitrile concentrations in the air will exceed the maximum allowable time weighted average exposure value (TWAEV) for a worker to acrylonitrile (2 ppm).

Arsenic

Arsenic is regulated in Ontario under Regulation 490/09 of the Occupational Heath and Safety Act. The presence of arsenic in the paint coating on interior and exterior finishes is possible. There are no regulated procedures for the removal of paint containing arsenic. If the paint does not contain lead, but does contain arsenic, the comments concerning lead paint, discussed in below, are expected to address the potential arsenic emissions. As the painted surfaces will be handled as per the proposed lead regulation, it is not expected that arsenic concentrations in the air will exceed the maximum allowable TWAEV for a worker to arsenic (0.01 mg/m³). Human health studies from Argentina and Chile have concluded that arsenic ingestion can result in increased risk of bladder and lung cancer. Non-cancer effects include skin lesions and chronic respiratory disease.

Asbestos

The term "asbestos" describes six naturally occurring fibrous minerals, namely chrysotile, amosite, crocidolite, tremolite, anthophylitte and actinolite. Of the six forms of asbestos, chrysotile (white asbestos), amosite (brown asbestos) and crocidolite (blue asbestos) are the most commonly used. Asbestos has been known to man for centuries and has been used in literally hundreds of products. Asbestos was used because it is strong, insulates well, and resists fire and corrosion.

The Regulation for Asbestos, Ontario Regulation 278/05, made under the Occupational Health and Safety Act defines asbestos as any of the following fibrous silicates:

Actinolite, Amosite, Anthophyllite, Chrysotile, Crocidolite and Tremolite.

It is important to note that asbestos is defined further as either "friable" or "non-friable". O. Reg. 278/05 defines friable as:

"friable material" means material that,

- when dry, can be crumbled, pulverized or powdered by hand pressure, or
- o is crumbled, pulverized or powdered;

Non-friable is any material that doesn't fit the criteria for friable. Essentially, any material that cannot be crumbled, pulverized or powdered by hand pressure or is not crumbled, pulverized or powdered.

The distinction between whether an asbestos-containing material (ACM) is friable or non-friable is a notable characteristic as the 'friability' of the ACM translates the **potential** risk of producing an airborne fibre release.

Non-friable ACM's offer far less potential risk of producing an airborne fibre release. These materials should not be cut or shaped using power tools, because this procedure allows for the release of asbestos fibres. Materials that contain asbestos are commonly referred to as ACM's. O. Reg. 278/05, defines an ACM as:

o material that contains 0.5 per cent or more asbestos by dry weight;

The Revised Regulations of Ontario (1990), Regulation 347 (The General Waste Regulation) requires the disposal of asbestos waste in a double sealed container, properly labelled and free of cuts, tears or punctures. The waste must be disposed of in a licensed waste facility, which has been properly notified of the presence of asbestos waste. The federal "Transportation of Dangerous Goods Act" covers the transport of asbestos waste to the disposal site. Asbestos waste is to be handled by a licensed waste hauler.

Asbestos is typically found in plaster, mechanical insulation, gaskets, thermal insulation on pipes, refractory material, roofing felts, floor tiles, ceiling tiles and parging, heat resistant panels, incandescent light fixture reflector plates, and any other material requiring a high degree of durability or thermal resistance. The common use of potential friable (breakable by hand) ACM's in construction ceased voluntarily in the mid 1970s; however, the spray application of asbestos-containing fireproofing was not prohibited until 1986. The airborne maximum allowable TWAEV for a worker is 0.1 fibres/cm³. Asbestos fibres cumulate in the lungs. Human health effects are proportional to exposure. Studies show long term or high dose exposure can result in scarring of the lung and restricted breathing. Mesothelioma (cancer of the pleural lining) and other lung cancers are also related to asbestos exposure.

Benzene

Benzene is regulated in Ontario under Regulation 490/09 of the Occupational Heath and Safety Act Historically; benzene has been produced as a by-product of coal gasification and metallurgical coke production in steel making. The light oil product from such processes contains benzene, toluene, ethyl benzene and xylene, and these components are separated by distillation. Today, most benzene is produced from the refining of petroleum.

Benzene has applications as a solvent in synthetic rubber manufacturing and processing, and in paints, varnishes, stains, adhesives, roofing materials and sealants. The use of benzene in tire and other rubber goods manufacturing and as a solvent and component of paints and adhesives has declined considerably as a result of concerns about workplace exposure. Nevertheless, it is often present in trace quantities in petroleum and aromatic solvents, some of which have replaced benzene in many uses. Benzene is also a minor component of gasoline sold in Canada.

The maximum allowable TWAEV for a worker to benzene is 0.5 ppm. Based on the age of the facility, it is possible that benzene was present in the paints, adhesives and roofing materials used during the original construction of the facilities. However, over time, the benzene component typically volatilizes out of the paints, solvents and roofing bitumens and is released into the ambient air. Therefore, it is likely that only trace levels of benzene presently exist in these building materials. It is not expected that benzene emissions from any existing building materials on site will exceed the allowable TWAEV.

Exposure to benzene can range in severity from nausea to suppression of the immune system and death. Long-term exposure to benzene can potentially result in Acute Myeloid Leukemia, Secondary Aplastic Leukemia and damage to the reproductive system.

Ethylene Oxides

Ethylene Oxides are regulated in Ontario under Regulation 490/09 of the Occupational Heath and Safety Act. Ethylene oxide is a common by-product of fumigation or sterilization procedures. The airborne maximum allowable TWAEV for a worker to Ethylene Oxides is 1.8 mg/m³. Acute exposure may result in vomiting,

shortness of breath and dizziness. Chronic exposure has been associated with the occurrence of cancer, reproductive effects, mutagenic changes and neurotoxicity.

Isocyanates

Isocyanates is regulated in Ontario under Regulation 490/09 of the Occupational Heath and Safety Act Isocyanates are a class of chemicals used in the manufacture of certain types of plastics, foams and roof insulation. The Isocyanate (-CNO) group reacts very readily with certain other types of molecules, a property responsible for the usefulness of Isocyanates in industry. Due to the high reactivity of the Isocyanate group, exposure to Isocyanates can result in primary irritation, sensitization and hypersensitivity reactions. The respiratory system, the eyes and the skin are the main areas affected by exposure. Isocyanates in their initial form are found as a vapour, a mist, or a dust which become airborne and then taken into the body. Once the Isocyanates are chemically bonded to other chemicals during manufacturing processes, the Isocyanates are not readily available to become airborne unless heated. Therefore, Isocyanate exposure is not expected to be a concern as long as the burning of plastics, foams, and insulation is not carried out. The airborne maximum allowable TWAEV for a worker to Isocyanates is 0.005 ppm.

Lead

Lead is regulated in Ontario under Regulation 490/09 of the Occupational Heath and Safety Act. The Ontario Ministry of Labour (MOL) draft Proposed Lead Regulation on Construction Projects, made under the Occupational Health and Safety Act, May 5, 1995, states that the removal of lead paint is not required unless work on these materials are likely to produce airborne lead dust or fumes, for example during welding, torch cutting, sanding and sand blasting. If these operations are likely to occur during building renovations or demolition, it is recommended that the removal of lead paint be carried out in accordance with procedures outlined in the proposed regulation.

Based on conversations with the MOL, it is recommended that the United States Department of Housing and Urban Development Guideline, of 0.5 % lead (by weight) or 5,000 parts per million (ppm) lead be used as a guideline for determining whether the use of precautions as outlined in the proposed regulation would be required during the above noted operations. Airborne lead dust or fumes should not exceed the MOL TWAEV of 0.05 milligram per cubic metre (mg/m³) during the removal of lead based paints and products.

Lead may be used in its pure metallic form or combined chemically with other elements to form lead compounds. Metallic lead is used to make products such as electric storage batteries, ammunition, lead solder, radiation shields, pipes, and sheaths for electric cables. Metallic lead is sometimes combined with other metals such as copper, tin and antimony as lead alloys for use in the manufacture of a variety of metal products.

Organic lead compounds contain a lead atom covalently bonded to carbon. Common examples of organic lead compounds include lead "soaps" such as lead oleates, high-pressure lubricants, and anti-knock agents in gasoline.

Inorganic lead compounds (or lead salts) result when lead is combined with an element other than carbon. Examples are lead oxide, lead chromate, lead carbonate and lead nitrate. Inorganic lead compounds may occur as solids or in solutions, and are used in insecticides, pigments, paints, frits, glasses, plastics, and rubber compounds.

Lead may affect the health of workers if it is in a form that may be inhaled, ingested or absorbed through the skin. Lead dust consists of small, solid particles of metallic lead or lead compounds that are generated by sanding, grinding, polishing, and sawing operations. Lead fume is produced in significant amounts when solid lead or materials containing lead are heated to temperatures above 500° C, as in welding and flame cutting or burning.

Mercury

Mercury is regulated in Ontario under Regulation 490/09 of the Occupational Heath and Safety Act. Mercury is commonly found in buildings as mercury vapour lighting, in thermometers, thermostats and some electrical switches. Mercury can also be found in minor amounts in fluorescent lamp tubes and in paints and adhesives.

Mercury, or mercury vapour within light fixtures, thermometers, thermostats and electrical switches poses no risk to workers or occupants provided the mercury containers remain intact and undisturbed. Prior to demolition, remove mercury containers and store in a safe location. The airborne maximum allowable TWAEV for a worker to mercury is 0.025 mg/m³.

Short-term exposure to mercury is a rare occurrence due to the more stringent controls. Historically, short-term exposure to high concentrations of mercury vapour included: harmful effects of the nervous, respiratory and digestive systems and the kidneys.

Silica

Silica is regulated in Ontario under Regulation 490/09 of the Occupational Heath and Safety Act Silica, also referred to as free crystalline silica, is found in concrete, cement, mortar, ceramic wall and floor tiles, stucco finishes and acoustic ceiling tiles. Prolonged exposure to, and inhalation of free crystalline silica, may result in respiratory disease known as silicosis, which is characterised by progressive fibrosis of the inner lung tissue and marked shortness of breath or impaired lung function. The maximum TWAEV for airborne Silica dust is 0.10 mg/m³.

Precautions should be taken during work on concrete (coring etc.) and ceiling tiles to minimize exposure to free crystalline silica dust. Silica exposure should not exceed the MOL TWAEV of 0.10 milligrams per cubic metre (mg/m³) during demolition activities. This can be achieved by:

- providing workers with respiratory protection;
- wetting the surface of the materials to prevent dust emissions;
 - provide workers with facilities to properly wash prior to exiting the work area.

Vinvl Chloride

Vinyl Chloride is regulated in Ontario under Regulation 490/09 of the Occupational Heath and Safety Act. Vinyl chloride is found in many applications in buildings such as plumbing pipes, protective coatings on insulated pipes and interior finishes (i.e., vinyl baseboard trim). Vinyl chlorides in the above materials are bound in a solid matrix and are unlikely to become airborne such that it would exceed the maximum allowable TWAEV of 1ppm.

Human health effects from long-term exposure include: cancer of the liver, damage to the immune and reproductory systems.

Fungi

There is essentially no fungus-free environment in our daily lives. Fugal spores are abundant in outdoor air and exposure to fungi occurs commonly in indoor environments.

Continued cleaning diligence is recommended to avoid scenarios which can support fungi growth such as water in the presence of cellulose-based surfaces. There must be a moisture or water problem to support fungal growth.

APPENDIX B ANALYTICAL RESULTS – ASBESTOS



CLIENT NAME: OAKHILL ENVIRONMENTAL 530A EASTCHESTER AVENUE ST. CATHERINES, ON L2M7P3

ATTENTION TO: Fil Barillaro PROJECT NO: PR-08-043

AGAT WORK ORDER: 12T574805

OCCUPATIONAL HYGIENE REVIEWED BY: lan Seddon, Analyst

DATE REPORTED: Feb 21, 2012

PAGES (INCLUDING COVER): 5

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 12T574805

PROJECT NO: PR-08-043

ATTENTION TO: Fil Barillaro

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: OAKHILL ENVIRONMENTAL						ATTENTION TO: Fil Barillaro				· · · · · · · · · · · · · · · · · · ·	,agaaassissi
					Asbestos	(Bulk)					
DATE SAMPLED: Feb 06, 2012			DATE RE	CEIVED: Feb 1	5, 2012	DATE	REPORTED: F	eb 21, 2012	SAN	IPLE TYPE: Otl	ner
Parameter	Unit	G/S	RDL	U66 - 01B 3120773	U66 - 01C 3120774	U66 - 01D 3120775	U66 - 02A 3120779	U66 - 02B 3120780	U66 - 02C 3120781	U66 - 05A 3120800	U66 - 05B 3120801
Asbestos (Bulk)	%		0.5	ND	ND	ND	50-75	SP	SP	50-75	SP
Parameter	Unit	G/S	RDL	U66 - 05C 3120802	U66 - 06A 3120803	U66 - 06B 3120804	U66 - 06C 3120805	U66 - 07A 3120806	U66 - 07B 3120807	U66 - 07C 3120808	U66 - 09A 3120809
Asbestos (Bulk)	%		0.5	SP	>75	SP	SP	50-75	SP	SP	30-50
Parameter	Unit	G/S	RDL	U66 - 09B 3120810	U66 - 09C 3120811	U66 - 10A 3120812	U66 - 10B 3120813	U66 - 10C 3120814	U66 - 11A 3120815	U66 - 11B 3120816	U66 - 11C 3120817
Asbestos (Bulk)	%		0.5	SP	SP	50-75	SP	SP	ND	ND	ND
Parameter	Unit	G/S	RDL	U66 - 08A 3120818	U66 - 08B 3120819	U66 - 08C 3120820	U66 - 12A 3120821	U66 - 12B 3120822	U66 - 12C 3120823		
Asbestos (Bulk)	%		0.5	0.5-5	SP	SP	50-75	SP	SP		

Certified By:



CLIENT NAME: OAKHILL ENVIRONMENTAL

Certificate of Analysis

AGAT WORK ORDER: 12T574805

PROJECT NO: PR-08-043

ATTENTION TO: Fil Barillaro

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Asbestos (Bulk)

DATE SAMPLED: Feb 06, 2012	DATE RECEIVED: Feb 15, 2012	DATE REPORTED: Feb 21, 2012	SAMPLE TYPE: Other

DATE SAMPLEI	D: Feb 06, 2012	DATE RECEIVED:
Comments: F	RDL - Reported Detection Limit; G / S - Guideline	/ Standard
3120773-3120775	Condition of sample was satisfactory at time of a "ND" - Not Detected	arrival in laboratory.
3120779	Condition of sample was satisfactory at time of a Asbestos present - Chrysotile	arrival in laboratory.
3120780-3120781	Condition of sample was satisfactory at time of a "SP" - Stop Positive	arrival in laboratory.
3120800	Condition of sample was satisfactory at time of a Asbestos present - Chrysotile	arrival in laboratory.
3120801-3120802	Condition of sample was satisfactory at time of a "SP" - Stop Positive	arrival in laboratory.
3120803	Condition of sample was satisfactory at time of a Asbestos present - Chrysotile	arrival in laboratory.
3120804-3120805	Condition of sample was satisfactory at time of a "SP" - Stop Positive	arrival in laboratory.
3120806	Condition of sample was satisfactory at time of a Asbestos present - Chrysotile	arrival in laboratory.
3120807-3120808	Condition of sample was satisfactory at time of a "SP" - Stop Positive	arrival in laboratory.
3120809	Condition of sample was satisfactory at time of a Asbestos present - Chrysotile	arrival in laboratory.
3120810-3120811	Condition of sample was satisfactory at time of a "SP" - Stop Positive	arrival in laboratory.
3120812	Condition of sample was satisfactory at time of a Asbestos present - Chrysotile	arrival in laboratory.
3120813-3120814	Condition of sample was satisfactory at time of a "SP" - Stop Positive	arrival in laboratory.

3120815-3120817 Condition of sample was satisfactory at time of arrival in laboratory.

3120819-3120820 Condition of sample was satisfactory at time of arrival in laboratory.

3120822-3120823 Condition of sample was satisfactory at time of arrival in laboratory.

Condition of sample was satisfactory at time of arrival in laboratory.

Condition of sample was satisfactory at time of arrival in laboratory.

"ND" - Not Detected

"SP" - Stop Positive

"SP" - Stop Positive

Asbestos present - Chrysotile

Asbestos present - Chrysotile

3120818

3120821

Certified By:

Mach.



Certificate of Analysis

AGAT WORK ORDER: 12T574805

PROJECT NO: PR-08-043

ATTENTION TO: Fil Barillaro

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: OAKHILL ENVIRONMENTAL

Asbestos (Bulk)											
DATE SAMPLED: Feb 06, 2012	DATE RECEIVED: Feb 15, 2012			DATE REPORTED: Feb 21, 2012			SAMPLE TYPE: Other				
				U66 - 01A	U66 - 01E	U66 - 01F	U66 - 01G	U66 - 04A	U66 - 04B	U66 - 04C	
Parameter	Unit	G/S	RDL	3120771	3120776	3120777	3120778	3120786	3120787	3120788	
Asbestos (Bulk) Phase 1	%		0.5	ND	ND	ND	ND	ND	ND	ND	
Asbestos (Bulk) Phase 2	%		0.5	ND	ND	ND	ND	>75	SP	SP	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

3120771-3120778 Condition of sample was satisfactory at time of arrival in laboratory.

"ND" - Not Detected

Phase 1 - Beige Phase 2 - White

3120786 Condition of sample was satisfactory at time of arrival in laboratory.

Asbestos present - Chrysotile

"ND" - Not Detected

Phase 1 - Beige Phase 2 Black

3120787-3120788 Condition of sample was satisfactory at time of arrival in laboratory.

"SP" - Stop Positive "ND" - Not Detected

Phase 1 - Beige Phase 2 - Black

Certified By:

Male.



Method Summary

CLIENT NAME: OAKHILL ENVIRONMENTAL

PROJECT NO: PR-08-043

AGAT WORK ORDER: 12T574805

ATTENTION TO: Fil Barillaro

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Occupational Hygiene Analysis			
Asbestos (Bulk)	INORG 93-6010	EPA 600/R-93/116 & NIOSH 9002	PLM
Asbestos (Bulk) Phase 1	INORG 93-6010	EPA 600/R-93/116 & NIOSH 9002	PLM
Asbestos (Bulk) Phase 2	INORG 93-6010	EPA 600/R-93/116 & NIOSH 9002	PLM



CLIENT NAME: OAKHILL ENVIRONMENTAL 530A EASTCHESTER AVENUE ST. CATHERINES, ON L2M7P3

ATTENTION TO: Fil Barillaro
PROJECT NO: PR-08-043

AGAT WORK ORDER: 12T576429

OCCUPATIONAL HYGIENE REVIEWED BY: lan Seddon, Analyst

DATE REPORTED: Feb 24, 2012

PAGES (INCLUDING COVER): 3

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

-	*NOTES	

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 12T576429

PROJECT NO: PR-08-043

ATTENTION TO: Fil Barillaro

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Asbestos	(Bulk)
----------	--------

Addition (Bully)									
DATE SAMPLED: Feb 16, 2012			DATE RECEIVED: Feb 21, 2012			DATE	E REPORTED: Feb 24, 2012	SAMPLE TYPE: Other	
				U66-08D	U66-08E	U66-08F	U66-08G		
Parameter	Unit	G/S	RDL	3134118	3134119	3134120	3134121		
Asbestos (Bulk)	%		0.5	0.5-5	SP	SP	SP		

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

3134118 Condition of sample was satisfactory at time of arrival in laboratory.

Asbestos present - Chrysotile

3134119-3134121 Condition of sample was satisfactory at time of arrival in laboratory.

"SP" - Stop Positive

CLIENT NAME: OAKHILL ENVIRONMENTAL

Certified By:



Method Summary

CLIENT NAME: OAKHILL ENVIRONMENTAL

PROJECT NO: PR-08-043

AGAT WORK ORDER: 12T576429

ATTENTION TO: Fil Barillaro

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Occupational Hygiene Analysis			
Asbestos (Bulk)	INORG 93-6010	EPA 600/R-93/116 & NIOSH 9002	PLM

APPENDIX C ANALYTICAL RESULTS – LEAD



CLIENT NAME: OAKHILL ENVIRONMENTAL 530A EASTCHESTER AVENUE ST. CATHERINES, ON L2M7P3

ATTENTION TO: Fil Barillaro PROJECT NO: PR-08-043

AGAT WORK ORDER: 12T574809

OCCUPATIONAL HYGIENE REVIEWED BY: Anthony Dapaah, PhD (Chem), Inorganic Lab Manager

DATE REPORTED: Feb 23, 2012

PAGES (INCLUDING COVER): 4

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



CLIENT NAME: OAKHILL ENVIRONMENTAL

Certificate of Analysis

AGAT WORK ORDER: 12T574809

PROJECT NO: PR-08-043

ATTENTION TO: Fil Barillaro

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

1 1: D: (
Lead in Paint

DATE SAMPLED: Feb 06, 2012	DATE RECEIVED: Feb 15, 2012	DATE REPORTED: Feb 23, 2012	SAMPLE TYPE: Other
----------------------------	-----------------------------	-----------------------------	--------------------

					U66-L01
	Parameter	Unit	G/S	RDL	3120830
ead		ug/g		10	22400

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:

Storythach



Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL AGAT WORK ORDER: 12T574809
PROJECT NO: PR-08-043 ATTENTION TO: Fil Barillaro

Occupational Hygiene Analysis															
RPT Date: Feb 23, 2012			UPLICAT	JPLICATE		REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE					
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured Value		ptable nits	Recovery	Acceptable Limits		Recovery	Acceptable Limits	
		ld		·				Lower	Upper		Lower	Upper		Lower	Upper
Lead in Paint															
Lead	1		3910	3780	3.4%	< 10	108%	80%	120%	101%	80%	120%	102%	70%	130%

Certified By:

Story Thanh



Method Summary

CLIENT NAME: OAKHILL ENVIRONMENTAL AGAT WORK ORDER: 12T574809

PROJECT NO: PR-08-043

PARAMETER

AGAT S.O.P

LITERATURE REFERENCE

ANALYTICAL TECHNIQUE

Occupational Hygiene Analysis

Lead MET 1006 EPA SW 846 3050B & 6010C ICP/OES

APPENDIX D PHOTOGRAPH LOGS

<u>U-66 ASBESTOS PHOTOGRAPH LOG</u>

Photo #	Functional Space #	Location	Comments	Photograph
A01	В009	Room 020	(Tunnel): 1 damaged mud joint compound fitting insulation elbow require(s) (1) encapsulation (1 unit(s).	
A02	В009	Room 020	(Tunnel): 1 damaged mud joint compound fitting insulation elbow require(s) (1) encapsulation (1 unit(s).	
A03	B009	Room 020	(Tunnel): 1 damaged mud joint compound fitting insulation elbow require(s) (1) encapsulation (1 unit(s).	
A04	B009	Room 020	(Tunnel): 1 damaged mud joint compound fitting insulation elbow require(s) (1) encapsulation (1 unit(s).	
A05	B009	Room 020	(Tunnel): 1 damaged mud joint compound fitting insulation elbow require(s) (1) encapsulation (1 unit(s).	

A06	B009	Room 020	(DCW): 1 damaged mud joint compound fitting insulation elbow require(s) (1) removal (1 unit(s).	
A08	1009	Room 151	(DCW): 1 open end of Aircell pipe insulation require (1) encapsulation(s) (0.5 LM).	
A09	1010	Room 155	(HWH): 1 damaged mud joint compound fitting insulation elbow require(s) (1) removal(s) (1 unit(s)).	
A10	1011	Room 102	(HWH): 1 damaged mud joint compound fitting insulation elbow require(s) (1) encapsulation (1 unit(s)).	
A11	1015	Room 149	(Chiller): (1) damaged section of Aircell pipe insulation require(s) (1) encapsulation(s) (0.5 LM).	

A12	1023	T.R.#2	(HWH): 1 damaged mud joint compound fitting insulation elbow require(s) (1) encapsulation (1 unit(s)).	
A13	1023	T.R.#2	(HWH): 1 damaged mud joint compound fitting insulation elbow require(s) (1) encapsulation (1 unit(s)).	
A14	2011	Room 257	(HVAC): 1 damaged section of mud joint compound fitting insulation require(s) (1) encapsulation (1m2)).	
A15	PH01	Penthouse	(DCW): (1) damaged section(s) of Sweatwrap pipe insulation require(s) (1) removal(s) (0.5 LM).	

U-66 MOULD PHOTOGRAPH LOG

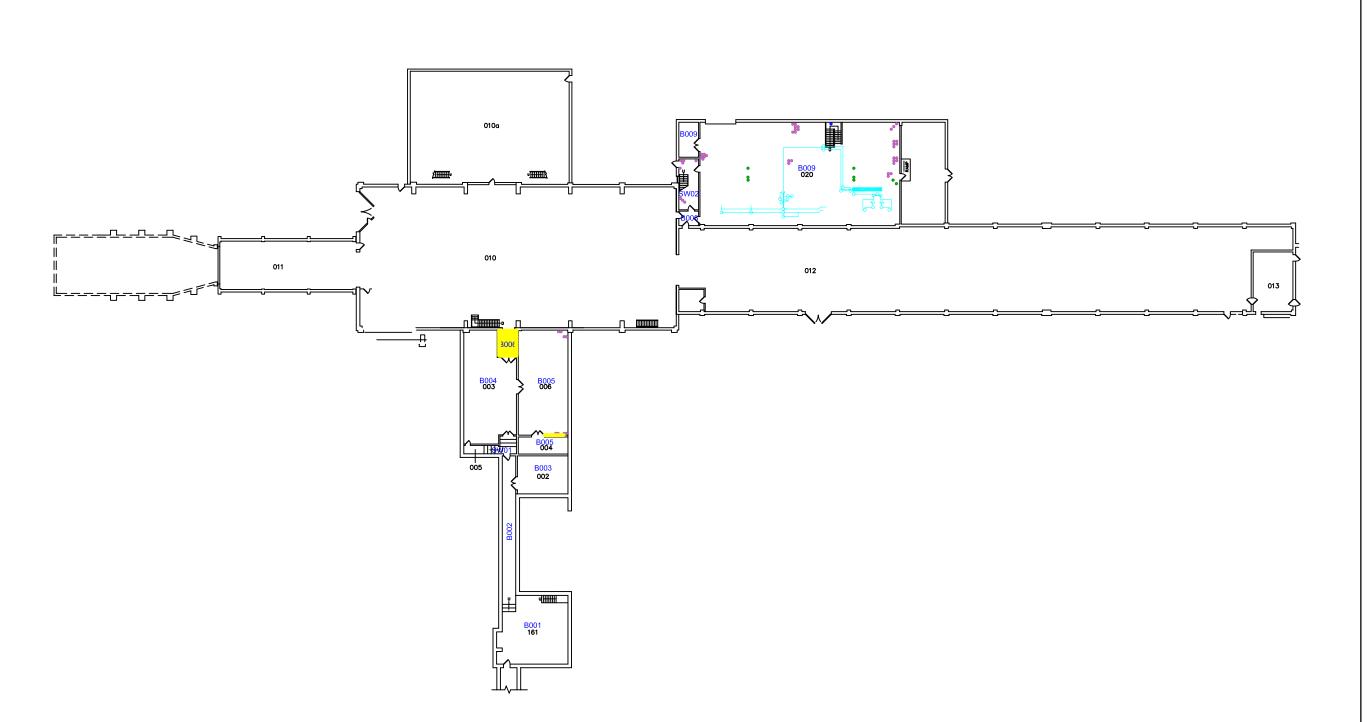
Photo #	Functional Space #	Location	Comments	Photograph
M01	1012	Room 135	Suspect mould on Water Supply	
M02	1012	Room 133	Suspect mould on Chiller Pipe	
M03	1012	Room 133	Suspect mould on Chiller Pipe	
M04	1012	Room 133	Suspect mould on Chiller Pipe	

M05	1012	Room 103	Suspect mould on Chiller Pipe	
M06	1012	Room 103	Suspect mould on Chiller Pipe	
M07	SW03	Stairwell	Suspect mould on Chiller Pipe	
M08	PH01	Penthouse	Suspect mould on Chiller Pipe	

U-66 LEAD PHOTOGRAPH LOG

Photo #	Functional Space #	Location	Comments	Photograph			
L01`	B005	Room 006	Peach Paint on Metal Doors				

APPENDIX E FLOOR PLANS





1001 FUNCTIONAL SPACE#

1001 AREA NOT INSPECTED (INACCESSIBLE)

ACM FITTING INSULATION: HW HEATING

ACM PIPE INSULATION: TUNEL SYSTEM
ACM FITTING INSULATION: TUNEL SYSTEM
ACM FITTING INSULATION: DRAIN

ACM FITTING INSULATION: DRAIN
ACM TRANSITE DECKING

ACM TRANSITE PANEL

NOTE:
ACM fitting insulation locations are shown only on systems where NON-ACM pipe insulation was found. ONLY ACM ELBOWS are shown. These systems may also have ACM on: t's, valves, ends, hangers, etc.

CLIENT

NATIONAL RESEARCH COUNCIL CANADA ADMINISTRATIVE SERVICES AND PROPERTY MANAGEMENT BUILDING M-19 1200 MONTREAL RD. OTTAWA, ON, K1A 0R6

PROJECT

DESIGNATED
SUBSTANCE SURVEY
BUILDING U-66

PROJECT NO.

PR-08-043

DATE FEBRUARY 2012

SCALE

NTS

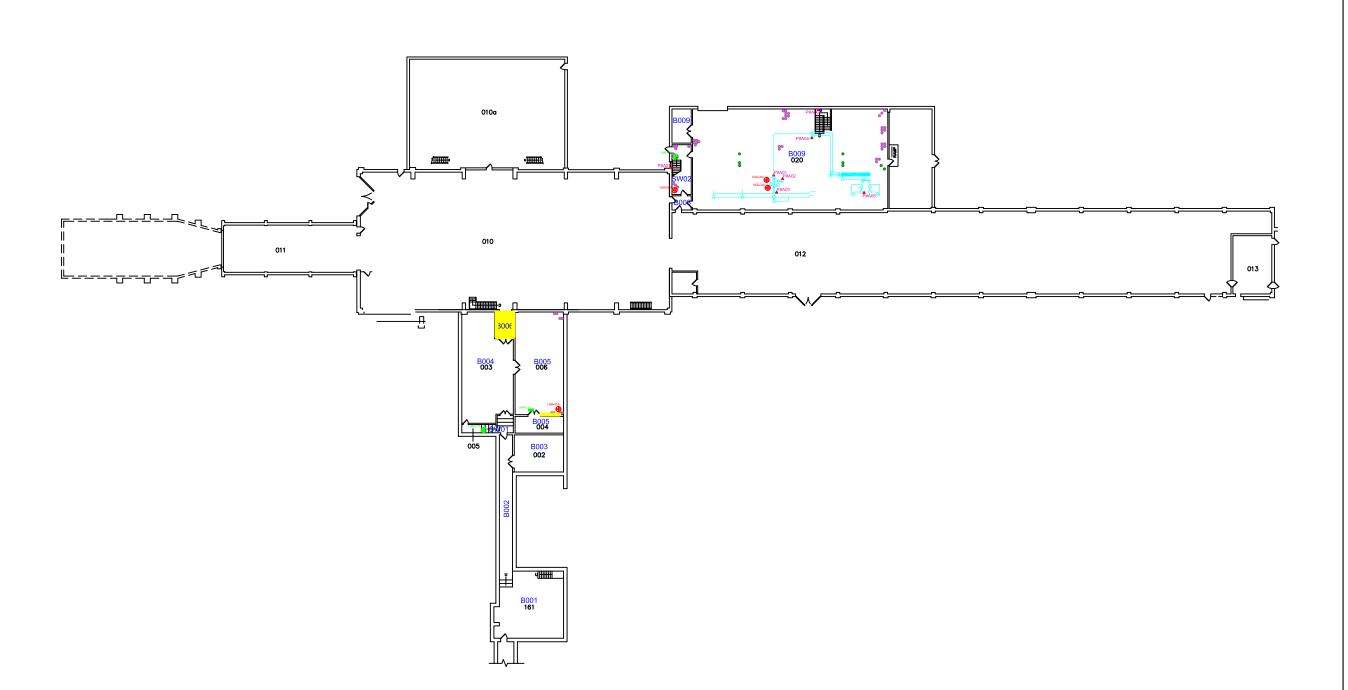
TITLE

-BASEMENT-

ASBESTOS LOCATIONS

SHEET

B-1





1001 FUNCTIONAL SPACE#

SAMPLE LOCATION: NON-ACM

SAMPLE LOCATION: ACM ▲ DAMAGED ACM LOCATION

P# PHOTOGRAPH#

1001 AREA NOT INSPECTED (INACCESSIBLE) ACM FITTING INSULATION: HW HEATING

ACM PIPE INSULATION: TUNEL SYSTEM ACM FITTING INSULATION: TUNEL SYSTE

ACM FITTING INSULATION: DRAIN
ACM TRANSITE DECKING

ACM TRANSITE PANEL

NOTE:
ACM fitting insulation locations are shown only on systems where
NON-ACM plpe insulation was found.
ONLY ACM ELBOWS are shown. These systems may also have ACM on: 't's, valves, ends, hangers, etc.

CLIENT

NATIONAL RESEARCH COUNCIL CANADA ADMINISTRATIVE SERVICES ADMINISTRATIVE SERVICES
AND PROPERTY MANAGEMENT
BUILDING M-19
1200 MONTREAL RD.
OTTAWA, ON, K1A 0R6

PROJECT

DESIGNATED SUBSTANCE SURVEY **BUILDING U-66**

PROJECT NO.

PR-08-043

DATE

FEBRUARY 2012

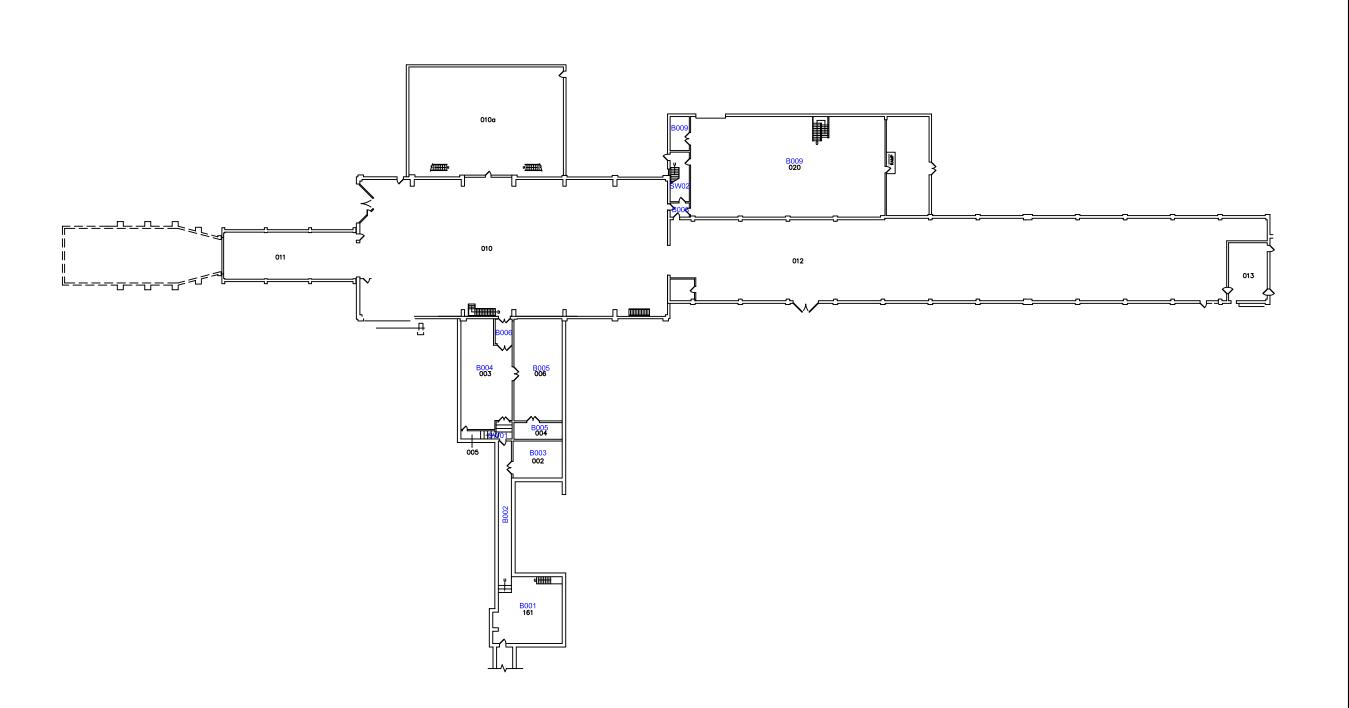
SCALE

NTS

TITLE

- BASEMENT -**ASBESTOS SURVEY**

SHEET





1001 FUNCTIONAL SPACE #

SAMPLE LOCATION: NON-LEAD PAINT

SAMPLE LOCATION: LEAD PAINT

SUSPECT MOULD LOCATION

1001 AREA NOT INSPECTED (INACCESSIBLE)

CLIENT

NATIONAL RESEARCH COUNCIL CANADA ADMINISTRATIVE SERVICES AND PROPERTY MANAGEMENT BUILDING M-19 1200 MONTREAL RD. OTTAWA, ON, K1A 0R6

PROJECT

DESIGNATED
SUBSTANCE SURVEY
BUILDING U-66

PROJECT NO.

DATE

FEBRUARY 2012

SCALE

NT

TITLE

- BASEMENT -

LEAD SAMPLES & MOULD LOCATIONS

SHEET

B-3





1001 FUNCTIONAL SPACE #

1001 AREA NOT INSPECTED (INACCESSIBLE)

ACM FITTING INSULATION: HW HEATING

 ACM FITTING INSULATION: DOMESTIC CW ACM FITTING INSULATION: DOMESTIC HV

 ACM FITTING INSULATION; DRAIN ACM TRANSITE DECKING

ACM TRANSITE PANEL

ACM PIPE INSULATION: HW HEATING

ACM PIPE INSULATION: DOMESTIC CW
ACM PIPE INSULATION: DOMESTIC HW

ACM PIPE INSULATION: HVAC

NOTE: ACM fitting insulation locations are ACM fitting insulation locations are shown only on systems where NON-ACM pipe insulation was found. ONLY ACM ELBOWS are shown. These systems may also have ACM on: t's, valves, ends, hangers, etc.

CLIENT

NATIONAL RESEARCH COUNCIL CANADA ADMINISTRATIVE SERVICES ADMINISTRATIVE SERVICES
AND PROPERTY MANAGEMENT
BUILDING M-19
1200 MONTREAL RD.
OTTAWA, ON, K1A 0R6

PROJECT

DESIGNATED SUBSTANCE SURVEY **BUILDING U-66**

PROJECT NO.

PR-08-043

DATE

FEBRUARY 2012

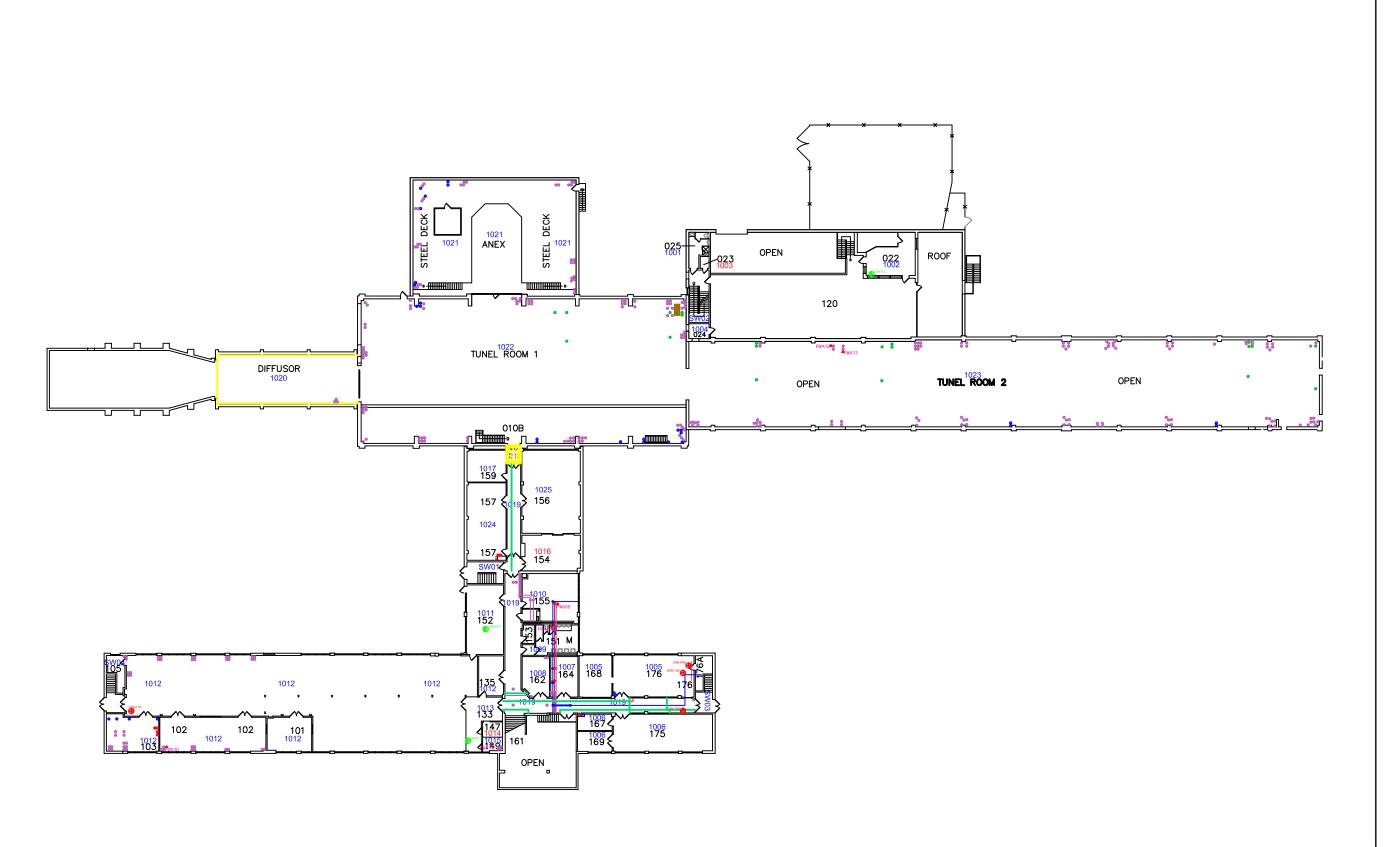
SCALE

TITLE

- 1st FLOOR -

ASBESTOS LOCATIONS

SHEET





1001 FUNCTIONAL SPACE #

SAMPLE LOCATION: NON-ACM

SAMPLE LOCATION: ACM ▲ DAMAGED ACM LOCATION

P# PHOTOGRAPH #

1001 AREA NOT INSPECTED (INACCESSIBLE)

ACM FITTING INSULATION: HW HEATING

ACM FITTING INSULATION; DOMESTIC CW ACM FITTING INSULATION: DOMESTIC HV

ACM FITTING INSULATION: DRAIN

ACM TRANSITE DECKING ACM TRANSITE PANEL
ACM PIPE INSULATION: HW HEATING

ACM PIPE INSULATION: DOMESTIC CW

ACM PIPE INSULATION; DOMESTIC HW

ACM PIPE INSULATION: HVAC

NOTE:
ACM fitting insulation locations are shown only on systems where
NON-ACM pipe insulation was found.
ONLY ACM ELBOWS are shown. These systems may also have ACM on: t's, valves, ends, hangers, etc.

CLIENT

NATIONAL RESEARCH COUNCIL CANADA ADMINISTRATIVE SERVICES AND PROPERTY MANAGEMENT BUILDING M-19 1200 MONTREAL RD. OTTAWA, ON, K1A 0R6

PROJECT

DESIGNATED SUBSTANCE SURVEY **BUILDING U-66**

PROJECT NO.

PR-08-043

DATE

FEBRUARY 2012

NTS

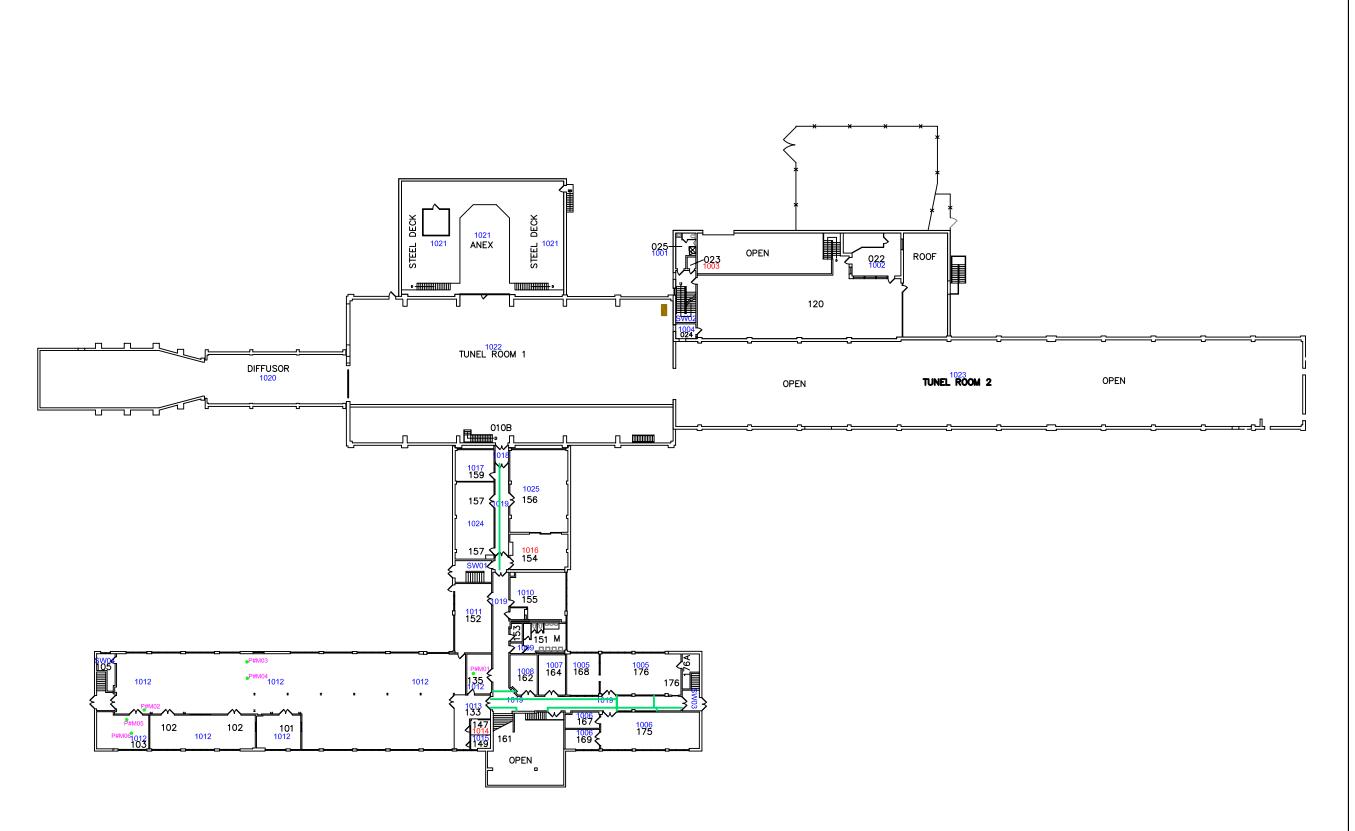
SCALE

TITLE

- 1st FLOOR -**ASBESTOS**

SURVEY

SHEET





1001 FUNCTIONAL SPACE #

SAMPLE LOCATION: NON-LEAD PAINT

SAMPLE LOCATION: LEAD PAINT

SUSPECT MOULD LOCATION

1001 AREA NOT INSPECTED (INACCESSIBLE)

CLIENT

NATIONAL RESEARCH COUNCIL CANADA ADMINISTRATIVE SERVICES AND PROPERTY MANAGEMENT BUILDING M-19 1200 MONTREAL RD. OTTAWA, ON, K1A 0R6

PROJECT

DESIGNATED SUBSTANCE SURVEY BUILDING U-66

PROJECT NO.

PR-08-043

DATE FEBRUARY 2012

SCALE

N

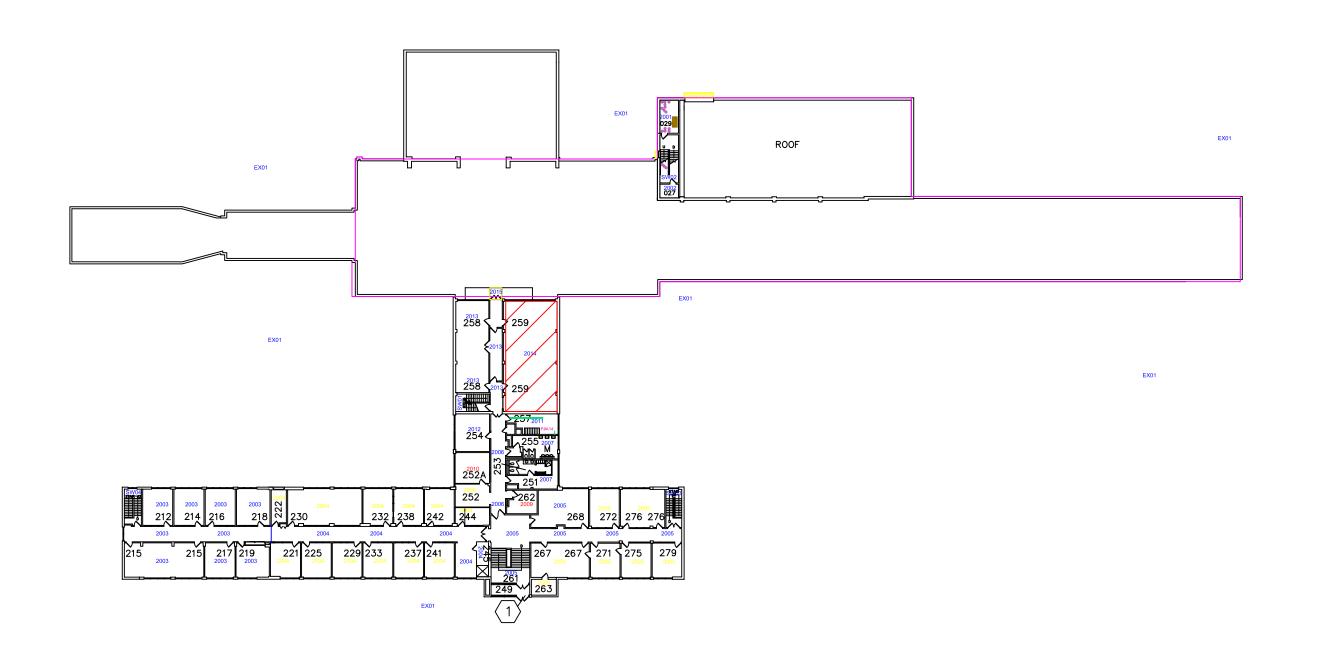
TITLE

- 1st FLOOR -

LEAD SAMPLES

MOULD LOCATIONS

SHEET





1001 FUNCTIONAL SPACE #

1001 AREA NOT INSPECTED (INACCESSIBLE)
1001 AREA NOT ACCESSIBLE ABOVE CEILING

AREA NOT ACCESSIBLE ABOVE CEILING
 ACM FITTING INSULATION: HW HEATING

ACM TANK INSULATION

- ACM FITTING INSULATION: HVAC

ACM FITTING INSULATION: ACM TRANSITE DECKING

ACM 9"X9" FLOOR TILE

ACM EXTERIOR STUCCO FINISH

NOTE:
ACM fitting insulation locations are shown only on systems where
NON-ACM pipe insulation was found.
ONLY ACM ELBOWS are shown. These systems may also have ACM on: t's, valves, ends, hangers, etc.

CLIENT

NATIONAL RESEARCH COUNCIL CANADA ADMINISTRATIVE SERVICES AND PROPERTY MANAGEMENT BUILDING M-19 1200 MONTREAL RD. OTTAWA, ON, K1A 0R6

PROJECT

DESIGNATED
SUBSTANCE SURVEY
BUILDING U-66

PROJECT NO.

PR-08-043

DATE

FEBRUARY 2012

SCALE

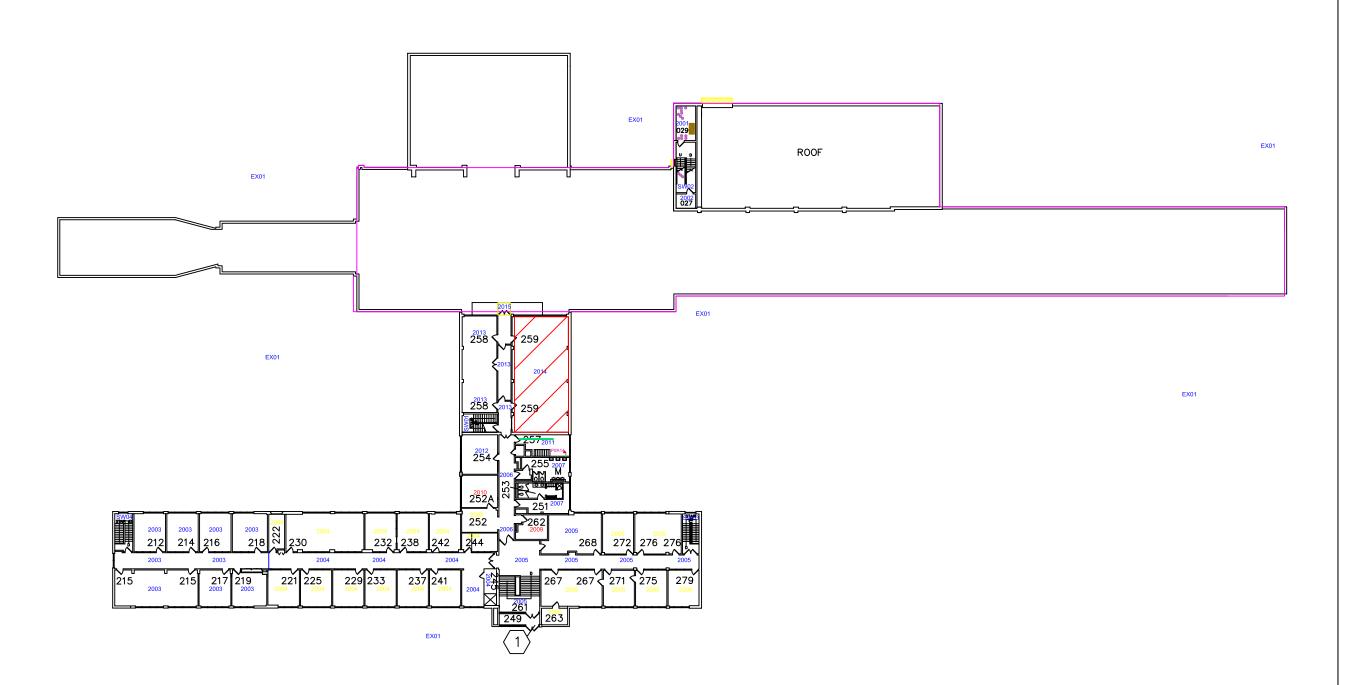
IN IS

TITLE

- 2nd FLOOR -

ASBESTOS LOCATIONS

SHEE





1001 FUNCTIONAL SPACE #

SAMPLE LOCATION: NON-ACM

SAMPLE LOCATION: ACM
DAMAGED ACM LOCATION

P# PHOTOGRAPH #

1001 AREA NOT INSPECTED (INACCESSIBLE)
1001 AREA NOT ACCESSIBLE ABOVE CEILING

ACM FITTING INSULATION: HW HEATING

ACM TANK INSULATION

ACM FITTING INSULATION: HVAC
ACM TRANSITE DECKING

ACM 9"X9" FLOOR TILE

ACM EXTERIOR STUCCO FINISH

NOTE:
ACM fitting insulation locations are shown only on systems where NON-ACM pipe insulation was found, ONLY ACM ELBOWS are shown. These systems may also have ACM on: t's, valves ends, hangers, etc.

CLIENT

NATIONAL RESEARCH COUNCIL CANADA ADMINISTRATIVE SERVICES AND PROPERTY MANAGEMENT BUILDING M-19 1200 MONTREAL RD. OTTAWA, ON, K1A 0R6

PROJECT

DESIGNATED SUBSTANCE SURVEY BUILDING U-66

PROJECT NO.

PR-08-043

DATE FEBRUARY 2012

SCALE

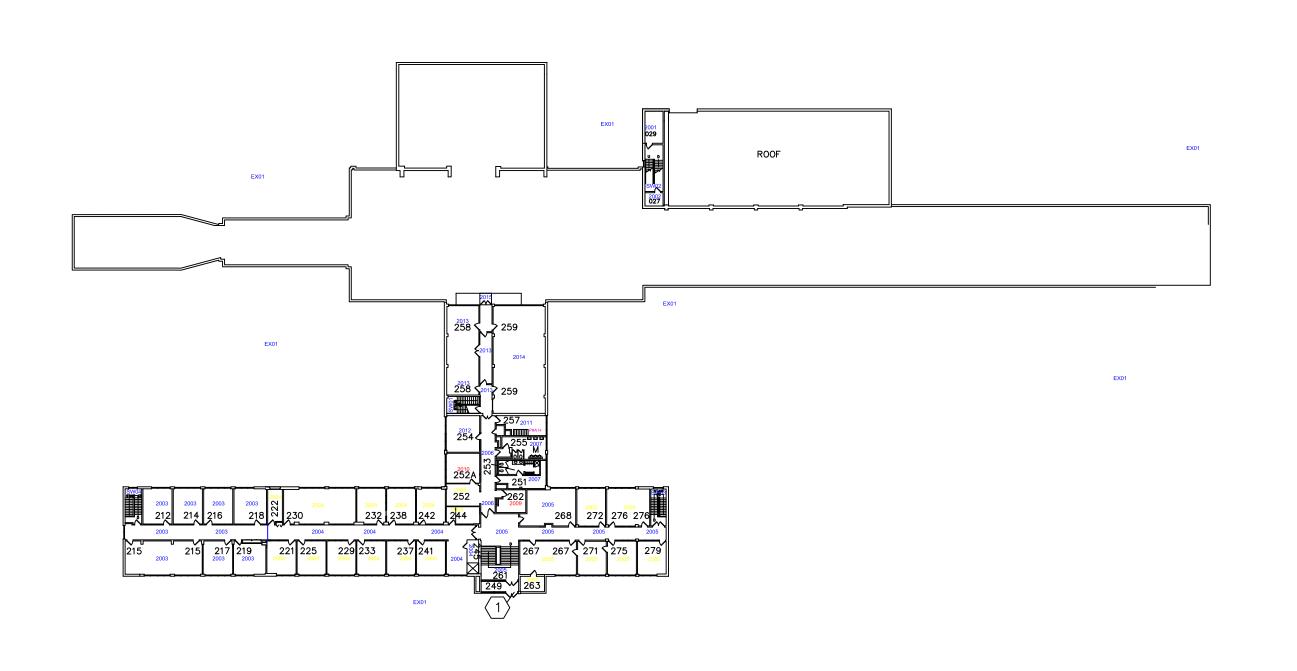
NTS

TITLE

- 2nd FLOOR -ASBESTOS

ASBESTOS SURVEY

SHEE





1001 FUNCTIONAL SPACE#

SAMPLE LOCATION: NON-LEAD PAINT

SAMPLE LOCATION: LEAD PAINT

SUSPECT MOULD LOCATION

1001 AREA NOT INSPECTED (INACCESSIBLE)

CLIENT

NATIONAL RESEARCH COUNCIL CANADA ADMINISTRATIVE SERVICES AND PROPERTY MANAGEMENT BUILDING M-19 1200 MONTREAL RD. OTTAWA, ON, K1A 0R6

PROJECT

DESIGNATED SUBSTANCE SURVEY BUILDING U-66

PROJECT NO.

PR-08-043

DATE

FEBRUARY 2012 SCALE

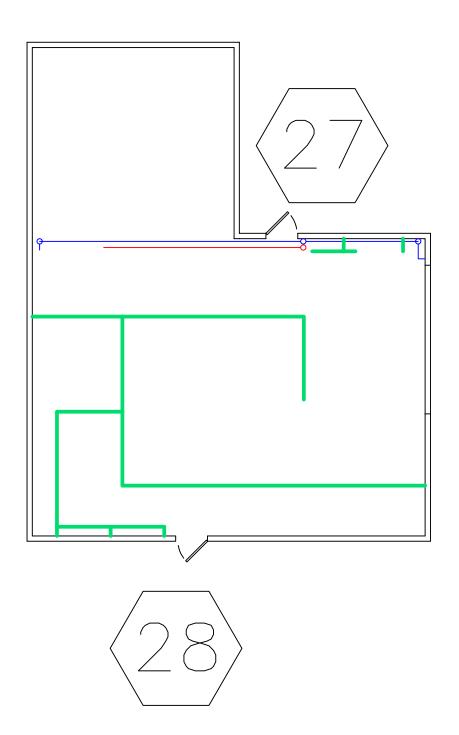
N

TITLE

- 2nd FLOOR -

LEAD SAMPLES & MOULD LOCATIONS

SHEE





1001 FUNCTIONAL SPACE #

1001 AREA NOT INSPECTED (INACCESSIBLE)

ACM FITTING INSULATION: DOMESTIC CW
 ACM FITTING INSULATION: DOMESTIC HW
 ACM PIPE INSULATION: DOMESTIC CW
 ACM PIPE INSULATION: DOMESTIC HW

- ACM PIPE INSULATION: HVAC

NOTE:
ACM fitting insulation locations are shown only on systems where NON-ACM pipe insulation was found. ONLY ACM ELBOWS are shown. These systems may also have ACM on: t's, valves, ends, hangers, etc.

CLIENT

NATIONAL RESEARCH COUNCIL CANADA ADMINISTRATIVE SERVICES AND PROPERTY MANAGEMENT BUILDING M-19 1200 MONTREAL RD. OTTAWA, ON, K1A 0R6

PROJECT

DESIGNATED SUBSTANCE SURVEY **BUILDING U-66**

PROJECT NO.

PR-08-043

DATE

FEBRUARY 2012

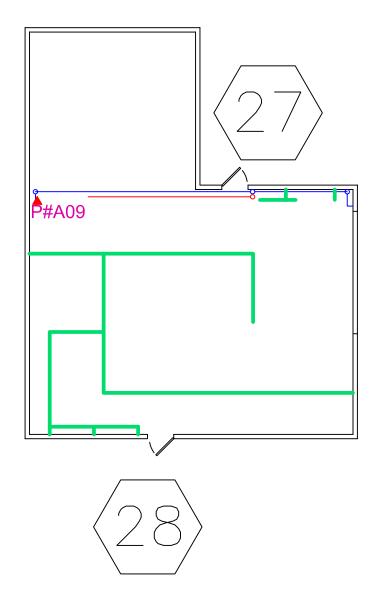
SCALE

TITLE

-PENTHOUSE-

ASBESTOS LOCATIONS

SHEET





1001 FUNCTIONAL SPACE #

SAMPLE LOCATION: NON-ACM SAMPLE LOCATION: ACM

P# PHOTOGRAPH #

1001 AREA NOT INSPECTED (INACCESSIBLE)

 ACM FITTING INSULATION: DOMESTIC CW ACM FITTING INSULATION: DOMESTIC HW
 ACM PIPE INSULATION: DOMESTIC CW
 ACM PIPE INSULATION: DOMESTIC HW ACM PIPE INSULATION: HVAC

NOTE:
ACM fitting insulation locations are shown only on systems where
NON-ACM pipe insulation was found.
ONLY ACM ELBOWS are shown. These systems may also have ACM on: t's, valves, ends, hangers, etc.

CLIENT

NATIONAL RESEARCH COUNCIL CANADA ADMINISTRATIVE SERVICES AND PROPERTY MANAGEMENT BUILDING M-19 1200 MONTREAL RD. OTTAWA, ON, K1A 0R6

PROJECT

DESIGNATED SUBSTANCE SURVEY **BUILDING U-66**

PROJECT NO.

PR-08-043

DATE FEBRUARY 2012

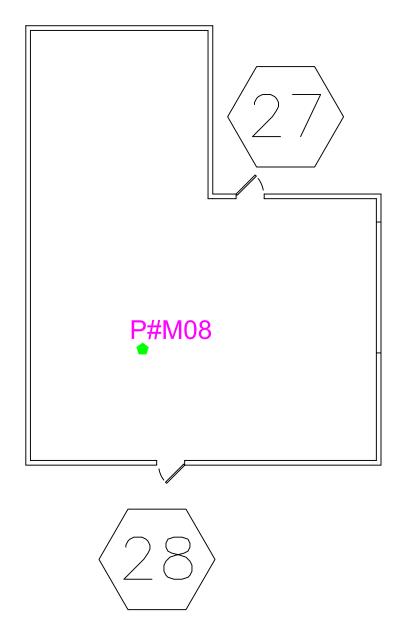
SCALE

TITLE

-PENTHOUSE-

ASBESTOS SURVEY

SHEET





LEGEND 1001 FUNCTIONAL SPACE

SAMPLE LOCATION: NON-LEAD PAINT



SUSPECT MOULD LOCATION

1001 AREA NOT INSPECTED (INACCESSIBLE)

CLIENT

NATIONAL RESEARCH COUNCIL CANADA ADMINISTRATIVE SERVICES
AND PROPERTY MANAGEMENT
BUILDING M-19
1200 MONTREAL RD.
OTTAWA, ON, K1A 0R6

PROJECT

DESIGNATED SUBSTANCE SURVEY **BUILDING U-66**

PROJECT NO.

PR-08-043

DATE FEBRUARY 2012

SCALE

TITLE

-PENTHOUSE-

LEAD SAMPLES & MOULD LOCATIONS

APPENDIX F FUNCTIONAL SPACE FORMS

Functional Space Forms

The functional space form provides a general guide of information collected in each room or area of the facility and is considerate of but is not limited to the following:

- (a) **Building Materials** Each building material is given a description as to the location, homogenous material number, location and system;
- (b) ACM Assessment Each building material that is found to contain ACM is assessed as to friability, ACM type, quantity, condition, access and appropriate response;
- (c) Report Reference Report references to building materials with respect to drawings and photographs numbers is made available for convenience. Drawings and photographs are located in the Appendices section of this report.

Each functional space is assigned a four digit number beginning with 1001 for the first floor, 2001 for the second floor, 3001 for the third floor, and so on. Functional spaces are determined on a room-to-room or area-to-area basis. Also, included on each form is: building, date, Oakhill job number, functional space area name, inspector and notes. In the notes section important additional comments are made regarding ACM found in this area, samples collected and any areas within this functional space that were considered inaccessible at the time of inspection.

The functional space form is a useful tool for the collection of survey data and communication of such data for your record keeping purposes.

Criteria for Assessing Condition of ACM

The following criteria were used for evaluating the condition of ACM:

GOOD (G): The building material has no evidence of exposed ACM and exhibits no signs of damage or deterioration

FAIR (F): The building material has minor damage (less than 2%) and the potential for an airborne release of asbestos is low to moderate.

POOR (*P*): The building material has moderate to major damage (greater than 2%) and the potential for an airborne release of asbestos is moderate to moderate to high.

The evaluation of the potential for an airborne release of asbestos from an ACM is also considerate of fibre generating mechanisms. This involves any form of action that can cause deterioration of the ACM resulting in the generation of airborne asbestos fibres. Typical fibre generating mechanisms may include: water damage, grinding, vibration, air movement, etc. This determination is made based on the best professional judgement of the experienced inspector.

Criteria for Assessing Access to ACM

The accessibility of ACM identified was rated as:

Access A: All building occupants may have access to this area.

Access B: Restricted to building staff only.

Access C: Areas of the building located behind walls or ceiling systems.

Response

Each ACM material, after all considerations, is given an appropriate response. The following is an explanation of each response that may be given:

Removal: For extensively damaged materials that cannot sustain encapsulation or materials that pose a significant potential for an airborne release and exposure to building occupants (i.e. debris). Requires immediate attention and encapsulation is not an option.

Encapsulation: Encapsulation involves the repair of damaged materials (i.e. canvas and lagging of damaged ACM pipe insulation). Materials that require encapsulation pose a potential risk of an airborne release ranging from low to high but restoration of the ACM is still a viable option. Encapsulation is not applicable if the material is severely deteriorated.

O & M Operations & Maintenance: These materials were found in good condition and should be periodically inspected.



Project #:

Functional Space Forms

Building ID: U66 Date: 06-Feb-12

PR-08-043

Notes:

1) No ACM's were observed at the time of inspection.

Functional Space (FS #): Location: RM#161 Inspector (s): SB JB

	Building Materials:					ACM	Assessmer	nt:			Report Re	ference:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-
Walls	-	Concrete	Walls	-	-	-	-	-	-	-	-	-
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
Below Ceiling	-	FG PI & FI with Aluminum	Chiller	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	HWH	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	DCW	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	DHW	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	Drain	-	-	-	-	-	-	-	-	-
	-	Metal	Drain	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-
	-	Metal	HVAC	-	-	-	-	-	-	-	-	-

Material Description:

MJC: Mud Joint Compound FI: Fitting Insulation: PI: Pipe Insulation

DI: Duct Insulation FG: Fibreglass

FT: Floor Tile
CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage F: ACM is in FAIR condition; Less than 2% damage P: ACM is in POOR condition; Greater than 2% damage Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66 Notes:
Date: 06-Feb-12 Project #: PR-08-043 Notes:
Date: PR-08-043 Space (FS #): B002 Location: Hallway Inspector (s): SB JB

	Building Materials:					ACN	Assessmer	nt•			Report Reference:		
Location:	Homo. Mat.	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:	
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-	
Walls	-	Concrete	Walls	-	-	-	-	-	-	-	-	-	
Ceiling	-	Concrete	Deck	-	-	•	-	-	-	-	-	-	
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-	
Below Ceiling	-	FG PI & FI	HWH	-	-	-	-	-	-	-	-	-	
	-	FG PI & FI	DCW	-	-	-	-	-	-	-	-	-	
	-	FG PI & FI	Drain	-	-	-	-	-	-	-	-	-	
			-										
			-										
			 										
			 										
			 										

Material Description:

MJC: Mud Joint Compound FI: Fitting Insulation: PI: Pipe Insulation DI: Duct Insulation Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage F: ACM is in FAIR condition; Less than 2% damage P: ACM is in POOR condition; Greater than 2% damage Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.

C: Areas of the building behind walls or ceiling system.

FG: Fibreglass
FT: Floor Tile
CT: Ceiling Tile



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Functional Space Forms

	- 				
Ī	Building ID:	U66	Notes:	Functional Space (FS #):	B003
	Date:	06-Feb-12	1) No ACM's were observed at the time of inspection.	Location: RM#002	
	Project #:	PR-08-043		Inspector (s): SB JB	

	Building Materials:					ACM	1 Assessmer	nt:			Report Reference:	
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):		Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-
Walls	-	Concrete	Walls	-	-	-	-	-	-	-	-	-
	-	Brick	Walls	-	-	-	-	-	-	-	-	-
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
Below Ceiling	-	FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-
	-	Metal	HVAC	-	-	-	-	-	-	-	-	-
							1					

Material Description:

MJC: Mud Joint Compound FI: Fitting Insulation:

PI: Pipe Insulation
DI: Duct Insulation

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage F: ACM is in FAIR condition; Less than 2% damage P: ACM is in POOR condition; Greater than 2% damage Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.

C: Areas of the building behind walls or ceiling system.

FG: Fibreglass
FT: Floor Tile
CT: Ceiling Tile



Functional Space Forms

Building ID: Date: Project #:

U66 06-Feb-12 PR-08-043

1) No ACM's were observed at the time of inspection.

Functional Space (FS #): Location: RM#003 & 005

Inspector (s): SB JB

	Building Materials:					ACN	nt•		Report Reference:			
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-		-	-	-	-
Walls	-	Concrete	Walls	-	-	•	-	-	-	-	-	-
	-	Brick	Walls	-	-	-	-	-	-	-	-	-
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
		27.1										
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
Below Ceiling	_	FG PI & FI	DCW	_	_	-			_	_	-	-
Below Celling	_	1011&11	DC W	-	-	-	-	-	-	-	-	-
		_									·	· ·

Material Description:

MJC: Mud Joint Compound FI: Fitting Insulation:

PI: Pipe Insulation DI: Duct Insulation

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage F: ACM is in FAIR condition; Less than 2% damage P: ACM is in POOR condition; Greater than 2% damage Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.

C: Areas of the building behind walls or ceiling system.

FG: Fibreglass

FT: Floor Tile CT: Ceiling Tile



Functional Space Forms

Building ID: U66 No

Date: 06-Feb-12 1)

1) All ACM's were observed to be in good condition during the survey.

Project #: PR-08-043 2) Samples U66-02A-C & U66-L01 were collected here.

Functional Space (FS #): Location: RM# 006 & 004 Inspector (s): SB JB

	Build	ing Materials:		ACM Assessment:						Report Re	ference:	
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-
Walls	-	Concrete	Walls	-	-	-	-	-	-	-	-	-
	-	Brick	Walls	-	-	-	-	-	-	-	-	-
	3	Transite Panel	Wall	Y	N	Suspect	3m2	G	A	O &M`	B-1	-
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
Below Ceiling	-	FG PI & FI	DCW	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	HWH	-	-	-	-	-	-	-	-	-
	2	MJC FI (HWH)	HWH	Y	Y	50%-75% Chrysotile	8 units	G	A	O & M	B-1	

Material Description:

MJC: Mud Joint Compound FI: Fitting Insulation:

PI: Pipe Insulation DI: Duct Insulation Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage F: ACM is in FAIR condition; Less than 2% damage P: ACM is in POOR condition; Greater than 2% damage Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.

C: Areas of the building behind walls or ceiling system.

FG: Fibreglass FT: Floor Tile CT: Ceiling Tile



Functional Space Forms

Building ID.	000
Date: Project #:	06-Feb-12
Project #:	PR-08-043

1) All ACM's were observed to be in good condition during the survey.

Location: Hallway Inspector (s): SB JB

Functional Space (FS #):

	Build	ling Materials:		ACM Assessment:					Report Reference:			
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-
Walls	3	Transite Panel	Wall	Y	N	Suspect	30m2	G	A	O &M	B-1	-
G 11:			G '''	**		a .	0.0			0.014	D.4	
Ceiling	3	Transite Panel	Ceiling	Y	N	Suspect	8m2	G	A	O &M	B-1	-
Above Ceiling	-	NA	_	_	_	_	_	_	_	_	-	_
Above Cennig	-	NA	-	-	-	•	-	-	-	-	-	-
Below Ceiling		NA	_	_	_	-	_	_	-	_	-	-
												-
						-				<u>'</u>	-	
			1									

Material Description:

MJC: Mud Joint Compound FI: Fitting Insulation:

PI: Pipe Insulation DI: Duct Insulation

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage F: ACM is in FAIR condition; Less than 2% damage P: ACM is in POOR condition; Greater than 2% damage Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.

C: Areas of the building behind walls or ceiling system.

FG: Fibreglass FT: Floor Tile

CT: Ceiling Tile



Oalshill	Environmental	In

Project #:

Functional Space Forms

Building ID:	U66	Not
Date:	06-Feb-12	1) N

PR-08-043

1) No ACM's were observed at the time of inspection.

Location: Hallway Inspector (s): SB JB

Functional Space (FS #):

	Building Materials:					ACM	1 Assessmer	nt:			Report Reference:		
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:	
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-	
Walls	-	Brick	Walls	-	-	-	-	-	-	-	-	-	
G :1:			D 1										
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-	
Above Ceiling	-	NA	-	_	-	-	-	-	_	_	-	-	
Above Cerning	<u> </u>	IVA		-		-	-	-	-	_	<u>-</u>	<u>-</u>	
Below Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-	

Material Description:

MJC: Mud Joint Compound FI: Fitting Insulation:

PI: Pipe Insulation DI: Duct Insulation Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage F: ACM is in FAIR condition; Less than 2% damage P: ACM is in POOR condition; Greater than 2% damage Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.

C: Areas of the building behind walls or ceiling system.

FG: Fibreglass FT: Floor Tile CT: Ceiling Tile



Functional Space Forms

Building ID:	U66	Notes:	Functional Space (FS #):	B009
Date:	06-Feb-12	1) Tunel: Five damaged mud joint compound fittings require five encapsulation (5 units).	Location: RM#020	
Project #:	PR-08-043	2) Samples U66-04A-C & U66-05A-C were collected here.	Inspector (s): SB JB	
		3) DCW: One damaged mud joint compound fittings require one removal (1 unit).		

	Build	ing Materials:		ACM Assessment:							Report Reference:		
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:	
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-	
Walls	-	Brick	Walls	-	-	·	-	-	-	-	ı	-	
	-	Metal	Walls	-	-	-	-	-	-	-	-	-	
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-	
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-	
D 1 G 11	4	C W DI	T 1	37	37	750/ Cl /:1		C		0014	D 1		
Below Ceiling	4	SweatWrap PI MJC FI	Tunel	Y	Y Y	75% Chrysotile	00:4	G G	A	0&M	B-1		
	5	MJC FI	Tunel Tunel	Y Y	Y	50%-75% Chrysotile 50%-75% Chrysotile	89 units 5 units	D D	A	O&M	B-1 B-2	A01, A02, A03, A04, A05	
	6	MJC FI	HWH	Y	Y	75% Chrysotile	48 units	G	A	5 Encap. O&M	B-2 B-1	A01, A02,A03,A04,A03	
	10	MJC FI	DCW	1	1	50%-75% Chrysotile	1 unit	P	A A	1 removal	B-2	A06	
	10	MJC FI	Drain	Y	Y	50%-75% Chrysotile	22 units	G	A	O&M	B-1	A00	
	-	FG PI & FI	Drain	-	-	5070-7570 CHI ysothe	- LZ units	-	- A	- Oælvi	D-1	_	
		FG PI & FI	DCW	-	-	-				-	-		
	_	FG PI	HWH	_	-	-	_	-	_	-	-	-	
	_	FG PI & FI	HVAC	_	_	-	_	_	_	_	_	_	
	_	Metal	HVAC	-	-	-	-	-	-	_	-	-	
			12.110										

Material Description:

FT: Floor Tile CT: Ceiling Tile

MJC: Mud Joint Compound
FI: Fitting Insulation:
PI: Pipe Insulation
DI: Duct Insulation
FG: Fibreglass

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage F: ACM is in FAIR condition; Less than 2% damage P: ACM is in POOR condition; Greater than 2% damage Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66

Notes: Date: 07-Feb-12 1) No ACM's were observed at the time of inspection.

PR-08-043 Project #:

Functional Space (FS #): Location: RM#025 Bathroom

Inspector (s): SB JB

	Build	ling Materials:				ACN	1 Assessmen	ıt:			Report 1	Reference:
Location:	Homo. Mat. #:	Material Description:	System:		Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Terrazzo	Floor	-	-	-	-	•	-	-	-	-
Walls	-	Terrazzo	Walls	-	-	-	-	-	-	-	-	-
	1	Plaster	Walls	N	-	ND	-	-	-	-	<u>-</u>	-
Ceiling	1	Plaster	Walls	N	-	ND	-	-	-	-	-	=
Alaras Cailina		NA										
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
Below Ceiling	_	NA	_	_	_	-	_	_	_	-	-	-
Below Cennig		1121										
M () ID ()			C ' . 6									

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66

Notes:

Date: 06-Feb-12 1) No ACM's were observed at the time of inspection.

Project #: PR-08-043

Functional Space (FS #): 100

Location: RM#022 Control Room

Inspector (s): SB JB

											Report Reference:		
		ling Materials:				ACN	Assessme	nt:			Report	Reference:	
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:	
Floor	-	Linoleum	Floor	-	-	-	-	-	-	-	-	-	
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-	
Ceiling	-	2' x 4' CT (scattered)	Ceiling	-	-	-	-	-	-	-	-	-	
Above Ceiling	-	12"X12" FG CT	Ceiling	-		-	-	-	-	-	-	-	
	-	Drywall	Ceiling	-		-	-	-	-	-	-	-	
	-	Concrete	Deck	-	-	-	-	-	-	-	-	-	
	-	FG PI & FI	HWH	-		-	-	-	-	-	-	-	
Below Ceiling	-	FG PI & FI	HWH	-	-	-	-	-	-	-	-	-	

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



		ironr		

Functional Space Forms

Building ID:	U66	Notes:	Functional Space (FS #):	1003
Date:	06-Feb-12	1) Inaccessible at time of survey.	Location: Closet 023	
Project #:	PR-08-043		Inspector (s): SB JB	

Building Materials:						ACM	Assessmen	Report Reference:				
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor												
Walls												
Ceiling												
Above Ceiling												
Below Ceiling												
		1	1						l			

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66

66 Notes:

Date: 06-Feb-12 Project #: PR-08-043 1) No ACM's were observed at the time of inspection.

Functional Space (FS #):

1004

Location: RM#024

Inspector (s): SB JB

Building Mate		ling Materials:	Aaterials:			ACM	1 Assessmer	Report Reference:				
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	=	-	-	ı	-	ı
Walls	-	Brick	Walls	-	-	-	-	-	-	-	-	-
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
				ļ								
				ļ								
Below Ceiling	-	NA										
below Celling	-	INA	-	-	-	-	-	-	-	-	-	-
			1									
			1									

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66

Notes: 09-Feb-12

1) All ACM's were observed to be in good condition during the survey.

Date: Project #:

PR-08-043

2) Samples U66-9A & U66-10A were collected here.

Location: RM#176, 176A, 168

Functional Space (FS #):

Inspector (s): SB JB

Building Materials:		ling Materials:		ACM Assessment:							Report Reference:	
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	12"X12" Floor Tile	Floor	-	-	-	-	-	-	-	=	-
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	ı	ī	-
Above Ceiling	-	NA	-	-	-	-	-	-	-	1	-	-
Below Ceiling	-	FG PI & FI	HWH	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	Chiller	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	DCW	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	DHW	-	-	-	-	-	-	-	-	-
	9	Aircell PI	HWH	Y	Y	30%-50% Chrysotile	3 LM	G	A	O&M	1-1	-
	9	Aircell PI	DCW	Y	Y	30%-50% Chrysotile	6 LM	G	A	O&M	1-1	-
	10	MJC FI	DCW	Y	Y	50%-75% Chrysotile	4 unit	G	A	O&M	1-1	-
	-	FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66

Date:

Notes: 09-Feb-12

Project #: PR-08-043 1) No ACM's were observed at the time of inspection.

Functional Space (FS #):

Location: RM#175, 167, 169

Inspector (s): SB JB

	Build	ling Materials:				ACN	1 Assessmen	nt:			Report Reference:		
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:	
Floor	-	12"X12" Floor Tile	Floor	-	-	-	-	-	-	ī	-	-	
Walls	1	Plaster	Walls	N	1	ND	-	-	-	1	-	-	
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	1	-	-	
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-	
Below Ceiling	-	FG PI & FI	HWH	-	-	-	-	-	-	-	-	-	
	-	FG PI & FI	Chiller	-	-	-	-	-	-	-	-	-	
	-	FG PI & FI	DCW	-	-	-	-	-	-	-	-	-	
	-	FG PI & FI	DHW	-	-	-	-	-	-	-	-	-	
	-	FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-	

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66 Notes:

Date: 09-Feb-12 Project #: PR-08-043 1) All ACM's were observed to be in good condition during the survey.

Functional Space (FS #): Location: RM#164 1007

Inspector (s): SB JB

	200										DD.4		
	Build	ling Materials:				ACM	1 Assessme	nt:			Report Reference:		
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:	
Floor	-	12"X12" Floor Tile	Floor	-	-	-	-	-	-	-	-	-	
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	=	-	
Ceiling	-	2'x4' CT(scattered)	Ceiling	-	-	-	-	-	-	-	-	-	
_		·											
Above Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-	
	-	FG PI & FI	HWH	-	-	-	-	-	-	-	-	-	
	-	FG PI & FI with Plastic	Chiller	-	-	-	-	-	-	-	-	-	
	-	FG PI & FI	DCW	-	-	-	-	-	-	-	-	-	
	-	FG PI & FI	DHW	-	-	-	-	-	-	-	-	-	
	9	Aircell PI	HWH	Y	Y	30%-50% Chrysotile	10 LM	G	A	O&M	1-1	-	
	9	Aircell PI	DCW	Y	Y	30%-50% Chrysotile	8 LM	G	A	O&M	1-1	-	
	9	Aircell PI	DHW	Y	Y	30%-50% Chrysotile	8 LM	G	A	O&M	1-1	-	
	10	MJC FI	DCW	Y	Y	50%-75% Chrysotile	4 unit	G	A	O&M	1-1	-	
	10	MJC FI	DHW	Y	Y	50%-75% Chrysotile	4 unit	G	A	O&M	1-1	-	
	6	MJC FI	HWH	Y	Y	50%-75% Chrysotile	7 unit	G	A	O&M	1-1	-	
	-	FG PI & FI	HVAC	-	-	-	-	-	-	1	-	-	
Below Ceiling	-	FG PI & FI	HWH	-	-	-	-	-	-	ı	-	-	
											·		
											•		
											-		

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66 Notes:

Date: 09-Feb-12 Project #: PR-08-043 1) All ACM's were observed to be in good condition during the survey.

Functional Space (FS #):

1008

Location: RM#162

Inspector (s): SB JB

									2 2 2				
	Build	ling Materials:				ACM	1 Assessme	nt:			Report Reference:		
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:	
Floor	-	12"X12" Floor Tile	Floor	-	-	-	-	-	-	-	-	ı	
Walls	1	Plaster	Walls	N	-	ND	-	-	-	1	-	-	
Ceiling	-	2'x4' CT(scattered)	Ceiling	-	-	•	-	-	-	-	ı	ı	
Above Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-	
	9	Aircell PI	HWH	Y	Y	30%-50% Chrysotile	2 LM	G	A	O&M	1-1	-	
	6	MJC FI	HWH	Y	Y	50%-75% Chrysotile	1 unit	G	A	O&M	1-1	-	
	-	FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-	
	-	Metal	HVAC	-	-	-	-	-	-	-	-	-	
Below Ceiling	9	Aircell PI	HWH	Y	Y	30%-50% Chrysotile	3 LM	G	A	O&M	1-1	-	
											-	-	
											_	•	
											_	_	
						03.5				~			

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66 Notes:

Date: 09-Feb-12 1) DCW: One open end of aircell pipe insulation requires one encapsulation(s) (0.5 LM).

Project #: PR-08-043 Inspector (s): SB JB

Functional Space (FS #): 1009 Location: RM#151 Mens Bathroom

Building Materials:						ACM	A Assessmen		Report Reference:			
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	12"X12" Floor Tile	Floor	-	-	-	-	-	-	-	-	-
	-	Ceramic Tile	Floor	-	-	•	-	-	-	-	-	-
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
	-	Ceramic Tile	Walls	-	-	•	-	-	-	-	-	-
Ceiling	-	2'x4' CT(scattered)	Ceiling	-	-	•	-	-	-	-	-	-
Above Ceiling	9	Aircell PI	HWH	Y	Y	30%-50% Chrysotile	4 LM	G	A	O&M	1-1	-
	9	Aircell PI	DCW	Y	Y	30%-50% Chrysotile	4 LM	G	A	O&M	1-1	-
	9	Aircell PI	DHW	Y	Y	30%-50% Chrysotile	4 LM	G	A	O&M	1-1	-
	10	MJC FI	DCW	Y	Y	50%-75% Chrysotile	2 unit	G	A	O&M	1-1	-
	10	MJC FI	DHW	Y	Y	50%-75% Chrysotile	2 unit	G	A	O&M	1-1	-
	6	MJC FI	HWH	Y	Y	50%-75% Chrysotile	2 unit	G	A	O&M	1-1	-
	9	Aircell PI	DCW	Y	Y	30%-50% Chrysotile	0.5 LM	P	A	1 encap.	1-2	A08
	-	FG PI & FI	HWH	-	-	•	-	-	-	-	-	-
	-	FG PI & FI with Plastic	Chiller	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	DCW	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	DHW	-	-	•	-	-	-	ı	-	-
	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
											·	
Below Ceiling	-	NA	-	-	-	•	-	-	-	ı	-	-
											· · · · · · · · · · · · · · · · · · ·	
						03.5				~		-

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66 Notes:

Date: 09-Feb-12 1) HWH: One damaged mud joint compound fitting insulation elbow require(s) one removal (1 unit). PR-08-043

Functional Space (FS #): Location: RM#155 Inspector (s): SB JB

Building Materials: Report Reference: **ACM Assessment:** Homo, Mat. ACM Friable Condition Access Response / Location: Material Description: System: ACM Type: Quantity: Drawing #: Photo #: (Y/N): (G,F,P): (A,B,C): Comments: Floor 12"X12" Floor Tile Floor -Walls Plaster Walls N ND 1 Ceiling 2'x4' CT(scattered) Ceiling Above Ceiling 9 Aircell PI HWH Y 30%-50% Chrysotile 12 LM G Α O&M 1-1 9 Aircell PI DCW Y Y 30%-50% Chrysotile 5 LM G Α O&M 1-1 9 Aircell PI DHW Y Y 30%-50% Chrysotile 5 LM G O&M 1-1 Α MJC FI O&M 10 DCW Y Y 50%-75% Chrysotile 6 unit G 1-1 Α 10 MJC FI DHW Y Y 50%-75% Chrysotile 2 unit G Α O&M 1-1 MJC FI HWH Y 50%-75% Chrysotile 7 unit G O&M 1-1 6 Y Α MJC FI HWH 50%-75% Chrysotile 1-2 A09 6 Y 1 unit P Α 1 removal FG PI & FI HWH FG PI & FI with Plastic Chiller FG PI & FI DCW --FG PI & FI DHW Concrete Deck --Below Ceiling NA

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66 Notes:

Date: 09-Feb-12 1) No ACM's were observed at the time of inspection.

Project #: PR-08-043 2) Sample U66-01D was collected here.

Functional Space (FS #): Location: RM#152 Inspector (s): SB JB

Building Materials: Report Reference: **ACM Assessment:** Homo, Mat. ACM Friable Condition Access Response / Material Description: Quantity: Location: System: ACM Type: Drawing #: Photo #: (Y/N): (G,F,P): (A,B,C): Comments: Floor Concrete Floor --Walls Plaster Walls N ND 1 Ceiling Concrete Deck Above Ceiling NA FG PI & FI with plastic Below Ceiling HWH FG PI & FI with plastic Chiller FG PI & FI with plastic DCW --------FG PI & FI with plastic DHW FG PI & FI HVAC Metal HVAC

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66 Notes:

Date: 09-Feb-12 1) Suspect Mould was observed on water supply pipe insulation in 1 location.

Project #: PR-08-043 2) Samples U66-11A-C were collected here.

3) Suspect Mould was observed on chiller pipe insulation in 7 location.
4) HWH: One damaged mud joint compound fitting insulation elbow require(s) one encapsulation (1 unit(s)).

Functional Space (FS #): Location: RM#101, 102, 103, 133, 135

Inspector (s): SB JB

	Build	ling Materials:				ACM	1 Assessmen				Report	Reference:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	ı	=
	-	Wood	Floor	-	-	-	-	-	-	-	-	-
		12"x12" Floor Tile	Floor	-	-	-	-	-	-	-	-	-
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
	-	Drywall	Wall	-	-	-	-	-	-	-	-	-
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
	-	2'x4' Ceiling Tile	Ceiling	-	-	=	-	-	-	-	=	=
Above Ceiling	· ·	NA	-	-	-	-	-	-	-	-	-	-
Below Ceiling	-	FG PI & FI with plastic	HWH	-	-	-	-	-	-	-	-	-
	-	FG PI & FI with plastic	Chiller	-	-	-	-	-	-	-	i	-
		FG PI & FI with plastic	DCW	-	-	-	-	-	-	-	-	-
	-	FG PI & FI with plastic	DHW	-	-	-	-	-	-	-	-	-
		FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-
		Metal	HVAC	-	-	-	-	-	-	-	-	-
	NA	Suspect Mould	Supply	N	-	-	-	-	-	1 Location	1-3	M01
	11	MJC FI (Chiller)	Chiller	N	-	ND	-	-	-	-	-	-
	6	MJC FI (HWH)	HWH	Y	Y	75% Chrysotile-	90 units	G	A	O&M	1-1	-
	NA	Suspect Mould	Chiller	N	-	-	-	-	-	7 Location	1-3	M02, M03,M04, M05, M06
	6	MJC FI (HWH)	HWH	Y	Y	75% Chrysotile-	1 units	P	A	1 encap	1-2	A10
	10	MJC FI (DCW)	DCW	Y	Y	50%-75% Chrysotile	9 units	G	A	O&M	1-1	-
	6	MJC FI (HWH)	DHW	Y	Y	75% Chrysotile	7 units	G	A	O&M	1-1	-
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Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66

Notes:

Date: 13-Feb-12 Project #: PR-08-043

1) No ACM's were observed at the time of inspection.

2) Samples U66-01E were collected here.

Functional Space (FS #):

1013

Location: RM#133 Inspector (s): SB JB

	Building Materials:					ACI	M Assessme	nt:			Report Reference:		
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:	
Floor	-	12"x12" Floor Tile	Floor	-	-	-	-	-	-	-	-	-	
Walls	-	Drywall	Wall	-	-	-	-	-	-	-	-	-	
	-	Concrete Block	Wall	-	-	-	-	-	-	-	-	-	
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-	
	-	2'x4' Ceiling Tile	Ceiling	-	-	-	-	-	-	-	-	-	
		-											
Above Ceiling	1	Plaster	Walls	N	-	ND	-	-	-	_	-	-	
Below Ceiling	-	FG PI & FI with plastic	HWH	-	-	-	-	-	-	_	-	-	
8		FG PI & FI with plastic	Chiller	-	-	-	-	_	-	_	-	-	
		FG PI & FI	HVAC	-	-	-	_	_	-	_	=	-	
							1						
							1						
			 										
			 										
M . ID :	atarial Despiration.									C ' ' C A	ess to an avec containing ACM.		

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



		antal	

Functional Space Forms

Building ID:	U66	Notes:	Functional Space (FS #):	1014
Date:	13-Feb-12	1) Area was innaccesible at the time of survey.	Location: RM#147	
Project #:	PR-08-043		Inspector (s): SB JB	

Building Materials:						ACM	1 Assessmei	nt:			Report Reference:		
Location:	Homo. Mat. #:	Material Description:	System:		Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:	
Floor													
Walls													
Ceiling													
Above Ceiling													
Below Ceiling													
												ļ	
												1	

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Project #:

Functional Space Forms

Building ID: U66 Notes:

Date: 13-Feb-12

PR-08-043

1) Chiller: One damaged section of aircell pipe insulation require(s) one encapsulation(s) (0.5 LM).

Functional Space (FS #): 1015

Location: RM#149 Inspector (s): SB JB

	Build	ling Materials:				ACM	A Assessmen	nt:			Report 1	Reference:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	•	-	-	-	1	-	-
Walls	1	Plaster	Walls	N	-	ND	-	-	-	1	-	-
	-	Concrete Block	Wall	-	-	-	-	-	-	-	-	-
G. Tr		DI .	0.31			N.D.						
Ceiling	1	Plaster	Ceiling	N	-	ND	-	-	-	-	-	-
Above Ceiling	-	NA	_	_	_	-	_	_	_	-	-	-
Above Cennig	<u> </u>	INA	_	-	_	-			_	-	<u> </u>	-
Below Ceiling	-	FG PI & FI with metal	HWH	-	-	-	-	-	-	-	-	-
	-	FG PI & FI with plastic	Chiller	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-
	6	MJC FI (HWH)	HWH	Y	Y	75% Chrysotile	10 units	G	A	O&M	1-1	-
	11	MJC FI (Chiller)	Chiller	N	-	ND	-	-	-	-	-	-
	9	Aircell PI	Chiller	Y	Y	30%-50% Chrysotile	6 LM	G	A	O&M	1-1	-
	9	Aircell PI	Chiller	Y	Y	30%-50% Chrysotile	0.5 LM	P	A	1 encap	1-2	A-11

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile CT: Ceiling Tile Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Building ID: U66 Notes: Date: 13-Feb-12 1) Area was innaccesible at the time of survey.

Project #: PR-08-043

Functional Space (FS #): Location: RM#154 Inspector (s): SB JB

Building Materials:					ACM	Assessmen		Report Reference:			
Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:		Condition	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
·											
					_						
					_						
	Homo. Mat.	Homo. Mat. Material Description:	Homo. Mat. Material Description: System:	Homo. Mat. ACM	Homo. Mat. Material Description: System: ACM Friable	Homo, Mat. ACM Friable ACM T	Homo, Mat. ACM Friable ACM Friable	Homo. Mat. ACM Friable ACM Condition	Homo, Mat. Access ACM Friable ACMT Condition Access	Homo, Mat. Condition Access Response /	Homo, Mat. C. ACM Friable ACM Condition Access Response / D.

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.

4

Oakhill Environmental Inc.

Functional Space Forms

Building ID: U66

Notes:

Date: 13-Feb-12 Project #: PR-08-043 1) No ACM's were observed at the time of inspection.

Location: RM#159

Functional Space (FS #): 1017

Inspector (s): SB JB

	Build	ling Materials:				ACI	M Assessmer	nt:			Report 1	Reference:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	12"x12" Floor Tile	Floor	-	-	-	-	-	-	-	-	-
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
	_	Drywall	Walls	-	-	-	-	-	-	-	-	-
		7										
Ceiling	_	2'x4' CT(scattered)	Ceiling	-	_	_	_	_	-	_	-	1
		= ()										
Above Ceiling	1	Plaster	Ceiling	N	_	ND	-	_	_	-	-	-
Tibove cenning	-	Concrete	Deck	-	-	-	_	_	_	-	-	-
		Concrete	Deck									
Below Ceiling	_	FG PI & FI	HVAC	_	-	_	_	_	_	-	-	-
Delow Celling		Metal	HVAC	-		-	1 -			-		-
		FG PI & FI	HVAC	-			<u> </u>	-	-		-	
	_	FG PI & FI	Drain	-	-	-	-		-	-	-	-
	-	FG PI & FI	Chiller	-	-	-	-		-	-	-	-
		FG PI & FI	HWH	-					_			
	-	ru ri & ri	пмп	-	-	-	-	-	-	-	-	-
			-				1					
			-				-					
							1					
Matarial Decement	<u> </u>		Cuitouio fo								ess to an area centaining ACM.	

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66 Date: 13-Feb

Project #:

Notes:

13-Feb-12 1) PR-08-043

1) All ACM's were observed to be in good condition during the survey.

Functional Space (FS #):

1018

Location: Hallway

Inspector (s): SB JB

	Building Materials:											
		ling Materials:				ACN	Assessmen				Report	Reference:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	12"x12" Floor Tile	Floor	-	-	-	-	-	-	-	=	-
Walls	3	Transite Panel	Wall	Y	N	Suspect	36m2	G	Α	O &M	1-1	-
						•						
Ceiling	3	Transite Panel	Ceiling	Y	N	Suspect	8m2	G	A	O &M	B-1	-
	-					· · · · ·						
Above Ceiling	-	Brick	Walls	-	-	-	-	_	-	_	-	-
Below Ceiling		NA	_	-	_	-	-	-	-	_	-	-
												-

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



1019

Oakhill Environmental Inc.

Functional Space Forms

Building ID: U66 Notes:

Date: 13-Feb-12 1) All ACM's were observed to be in good condition during the survey.

Project #: PR-08-043 2) Sample U66-12A was collected here.

Functional Space (FS #): Location: Hallway Inspector (s): SB JB

	Build	ing Materials:				ACM	1 Assessmer	nt:			Report 1	Reference:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	12"x12" Floor Tile	Floor	-	-	-	-	-	-	-	=	=
Walls	1	Plaster	Walls	N	-	ND	-	-	-	1	-	-
	-	Drywall	Walls	-	-	-	-	-	-	-	-	-
		y										
Ceiling	-	Concrete	Deck	-	-	-	-	1	-	1	-	-
	-	2'x4' CT(scattered)	Ceiling	-	-	-	-	-	-	1 section		-
		,										
Above Ceiling	-	FG PI & FI	HWH	-	-	-	-	-	-	1	-	-
	-	FG PI & FI	Chiller	-	-	-	-	-	-	-	-	-
	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
	12	MJC DI (HVAC)	HVAC	Y	Y	50%-75% Chrysotile	20LM	G	A	O&M	1-1	-
	-	Brick	Walls	-	-	-	-	-	-	-	-	-
Below Ceiling	-	FG PI & FI with plastic	Chiller	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	Chiller	-	-	-	-	-	-	-	-	-
	-	Metal	HVAC	-	-	-	-	-	-	-	=	-
	-	FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-
	6	MJC FI (HWH)	HWH	Y	Y	75% Chrysotile	15 units	G	A	O&M	1-1	-
	9	Aircell PI	HWH	Y	Y	30%-50% Chrysotile	26 LM	G	A	O&M	1-1	-
	9	Aircell PI	DCW	Y	Y	30%-50% Chrysotile	27 LM	G	A	O&M	1-1	-
	10	MJC FI	DCW	Y	Y	50%-75% Chrysotile	5 unit	G	A	O&M	1-1	-
	9	Aircell PI	DHW	Y	Y	30%-50% Chrysotile	6.5 LM	G	A	O&M	1-1	-
	6	MJC FI (HWH)	DHW	Y	Y	75% Chrysotile	3 units	G	A	O&M	1-1	-
	12	MJC DI (HVAC)	HVAC	Y	Y	50%-75% Chrysotile	70LM	G	A	O&M	1-1	-
		•										

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66

Notes:

Date: 13-Feb-12 Project #: PR-08-043 1) All ACM's were observed to be in good condition during the survey.

Functional Space (FS #):

Location: Tunnel Diffusor

Inspector (s): SB JB

		ling Materials:				ACN	Assessme	nt:			Report	Reference:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-
Walls	3	Transite Panel	Walls	Y	N	Suspect	290m2	G	A	O &M	1-1	-
	-	Concrete	Walls	-	-	-	-	-	-	-	-	-
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
J												
Below Ceiling	6	MJC FI (HWH)	HWH	Y	Y	75% Chrysotile-	4 units	G	A	O&M	1-1	-
	-	FG PI & FI	HWH	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	Drain	-	-	-	-	-	-	-	-	-
		l .	1			l .	1					

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66 Date: 13-Feb-12

Project #:

Notes:

PR-08-043

1) All ACM's were observed to be in good condition during the survey.

Functional Space (FS #): Location: Annex

1021

Inspector (s): SB JB

	Build	ling Materials:				ACM	Assessmen	nt:			Report I	Reference:
Location:	Homo. Mat. #:	Material Description:	System:		Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-
Walls	-	Concrete	Wall	-	-	-	-	-	-	-	-	-
	8	Exterior Stucco	Walls	Y	N	0.5%-5% Chrysotile	420m2	G	A	O &M	1-1	-
Ceiling	-	Metal	Deck	-	-	-	-	-	-	-	-	-
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
D. I C. T.		MCELUMAN	HWH	Y	Y	750/ 61 41	(1 ')	C		0014	1.1	
Below Ceiling	6	MJC FI (HWH) FG PI & FI		Y	_	75% Chrysotile	61 units	G	A	O&M	1-1	-
	-	FG PI & FI	HWH Drain	-	-	-	-	-	-	-	-	-
	10	MJC FI	DCW	- Y	- Y	50%-75% Chrysotile	13 unit	G	A	O&M	- 1-1	-
	10	MIJC FI	DC W	1	1	3070-7376 CIII ySotile	13 unit	U	A	OæM	1-1	-
Madanial Danamia		L	Cuitania fa	C 11.1		CD #	•	•		C 11 1 C 1	4	

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile CT: Ceiling Tile Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66

Notes:

Date: 15-Feb-12 Project #: PR-08-043 1) All ACM's were observed to be in good condition during the survey.

Functional Space (FS #):

1022 Location: Tunnel Room 1

Inspector (s): SB JB

* Note ACM MJC's are located throughout room on level one and above

		* Note ACM MJC's are located	throughou	t room or	n level one	and above.						
	Build	ling Materials:				ACM	A Assessmen	nt:			Report 1	Reference:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	=
Walls	-	Concrete	Wall	-	-	-	-	-	-	-	-	-
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
Below Ceiling	7	MJC Tank Insulation	Tank	Y	Y	50%-75% Chrysotile	14m2	G	A	O & M	1-1	-
	-	FG PI	HWH	-	-	-	-	-	-	-	-	-
	-	FG PI	Tank	-	-	-	-	-	-	-	-	-
	6	MJC FI	HWH	Y	Y	75% Chrysotile	153 units	G	A	O & M	1-1	-
	10	MJC FI	Drain	Y	Y	50%-75% Chrysotile	38 units	G	A	O&M	1-1	-
	-	FG PI with metal	HWH	-	-	-	-	-	-	-	-	-
	-	FG PI	DCW	-	-	-	-	-	-	-	-	-
	-	Metal	DHW	-	-	-	-	-	-	-	-	-
	10	MJC FI	DCW	Y	Y	50%-75% Chrysotile	33 unit	G	A	O&M	1-1	-

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Date:

Functional Space Forms

Building ID: U66 Notes:

15-Feb-12

Project #: PR-08-043 1) HWH: Two damaged mud joint compound fitting insulation elbow require(s) Two encapsulation Two units.

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Functional Space (FS #): Location: Tunnel Room 2 1023

Inspector (s): SB JB

* Note ACM MJC's are located throughout room on level one and above.

		· Note ACM MIJC's are located	i unougnou	100111 01	i level one							
	Build	ling Materials:				ACM	1 Assessmen				Report	Reference:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-		-	-	-	-	-	-	-
	-	Stone	Floor	-	-	-	-	-	-	-	-	-
	-	Asphalt	Floor	-	-	-	-	-	-	-	-	-
Walls	-	Brick	Wall	-	-	-	-	-	-	-	-	-
	-	Fibreboard	Wall	-	-	-	-	-	-	-	-	-
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
		27.										
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
Below Ceiling	-	FG PI	HWH	_	_	_	_	_	_	_	<u>-</u>	-
Delow Celling	6	MJC FI	HWH	Y	Y	75% Chrysotile	112 units	G	A	O & M	1-1	_
	6	MJC FI	HWH	Y	Y	75% Chrysotile	2 units	P	A	2 removal	1-2	A12, A13
	10	MJC FI	Drain	Y	Y	50%-75% Chrysotile	24 units	G	A	O&M	1-1	-
	-	FG PI	DCW	-	-	-	-	-	-	-	-	-
		_										
	10	MJC FI	DCW	Y	Y	50%-75% Chrysotile	8 unit	G	A	O&M	1-1	-
	-	Metal	HVAC	-	-	-	-	-	-	-	-	-
	-	FG DI FI	HVAC	-	-	-	-	-	-	-	-	-
		_										_

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile CT: Ceiling Tile

PI: Pipe Insulation

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66 Date:

Project #:

13-Feb-12

PR-08-043

Notes:

1) All ACM's were observed to be in good condition during the survey.

Functional Space (FS #):

1024

Location: RM#157 Inspector (s): SB JB

Building Materials: ACM Assessment: Report Reference: Homo, Mat. ACM Friable Condition Access Response / Material Description: Location: System: ACM Type: Quantity: Drawing #: Photo #: (Y/N): (G,F,P): (A,B,C): Comments: Floor 12"x12" Floor Tile Floor -Walls Plaster Walls N ND 1 Ceiling 2'x4' CT(scattered) Ceiling Above Ceiling Plaster Ceiling N ND FG PI & FI DCW Deck Concrete _ Below Ceiling Metal HVAC HVAC FG PI & FI ---------FG PI & FI Drain FG PI & FI DHW FG PI & FI DCW ---FG PI & FI Chiller FG PI & FI HWH MJC FI (HWH) DHW 75% Chrysotile 6 units G O&M 1-1 6 Α -

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66

Notes:

Date: 13-Feb-12 Project #: PR-08-043

1) No ACM's were observed at the time of inspection.

Functional Space (FS #):

1025

Location: RM#156

Inspector (s): SB JB

	Build	ling Materials:				ACN	Assessmen	nt:			Report	Reference:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	12"x12" Floor Tile	Floor	-	-		-	-	-	ı	1	-
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
	-	Drywall	Walls	-	-	-	-	-	-	-	-	-
Ceiling	-	2'x4' CT(scattered)	Ceiling	-	-		-	-	-	-	-	-
Above Ceiling	1	Plaster	Ceiling	N	-	ND	-	-	-	-	-	-
	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
Below Ceiling	-	Metal	HVAC	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Oakhill Environmental Inc. Functional Space Forms

Functional Space (FS #): Location: RM#029 Inspector (s): SB JB Building ID: U66 Date: 07-Feb-12 1) All ACM's were observed to be in good condition during the survey.

PR-08-043 Project #:

	Build	ing Materials:				ACM	[Assessmei	nt:			Report Reference	ce:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-
Walls	-	Brick	Walls	-	-	-	-	-	-	-	-	-
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
												
												
D. I C. T.		EC N	1111/11									
Below Ceiling	-	FG PI	HWH	-	-	-	-	-	-	-	-	-
	7	FG PI	Tank	- Y	- Y	500/ 750/ Charactile	4m2	G	-	- O 0 M	2.1	-
	6	MJC Tank Insulation MJC FI	Tank HWH	Y	Y	50%-75% Chrysotile 75% Chrysotile	4m2 17 units	G	A A	O & M O & M	2-1 2-1	
	0	MJC FI	нин	Y	Y	75% Chrysothe	1 / units	G	A	O & M	Z-1	
			+									
			+									
			1									
			1									
			1	1	1			l				

Material Description:

Criteria for Condition of an ACM:

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

P: ACM is in POOR condition; Greater than 2% damage

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Oakhill Environmental Inc. Functional Space Forms

Building ID: Functional Space (FS #): U66 Location: RM027 Inspector (s): SB JB 07-Feb-12 Date: 1) No ACM's were observed at the time of inspection. Project #: PR-08-043

	Build	ling Materials:				ACM	I Assessmer	nt:			Report Reference	ce:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	O 1'4'	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-
Walls	-	Brick	Walls	-	-	-	-	-	-	-	-	-
												ļ
												ļ
Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
												
												
A1 0 11		27.4										
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
			-									
			+									
Below Ceiling	-	NA	-	-	_	-	_	_	_	-	-	-
Below Celling		11/1									_	
						·					_	
												·

Material Description:

Criteria for Condition of an ACM:

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage P: ACM is in POOR condition; Greater than 2% damage

PI: Pipe Insulation

DI: Duct Insulation

A: All building occupants may have access to this area.

B: Restricted to building staff only.

FG: Fibreglass

C: Areas of the building behind walls or ceiling system.

Criteria for Access to an area containing ACM:

FT: Floor Tile



Functional Space Forms Building ID: U66

Date: 16-Feb-12 1) No ACM's were observed at the time of inspection. Project #: PR-08-043

219 & Hallway Inspector (s): SB JB

Functional Space (FS #):

Location: RM#212, 214, 216, 218,215, 217

Report Reference: **Building Materials: ACM Assessment:** Homo. Mat. ACM Friable Condition Response / Access Location: Material Description: ACM Type: Quantity: Drawing #: Photo #: System: (Y/N): (Y/N): (G,F,P): (A,B,C): Comments: Floor 12"x12" Floor Tile (grey) Floor N ------12"x12" Floor Tile (orange) Floor N 12"x12" Floor Tile (tan) Floor N Walls Drywall Walls ------Ceiling 2' x 4' CT (scattered) -Ceiling --------Above Ceiling FG PI & FI with aluminum Chiller --FG PI & FI HVAC Metal HVAC -Below Ceiling FG PI & FI HWH --

Material Description:

Criteria for Condition of an ACM:

MJC: Mud Joint Compound FI: Fitting Insulation:

G: ACM is in GOOD condition; No damage

PI: Pipe Insulation

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

DI: Duct Insulation

B: Restricted to building staff only.

FG: Fibreglass

A: All building occupants may have access to this area. C: Areas of the building behind walls or ceiling system.

Criteria for Access to an area containing ACM:

FT: Floor Tile CT: Ceiling Tile



Building ID: U66

Date: 16-Feb-12 1) No ACM's were observed at the time of inspection. PR-08-043 Project #:

*Note all office spaces have no access above 12"x12" acoustical tile.

Location: RM#212, 214, 216, 218,215, 217 219 & Hallway

Functional Space (FS #):

Inspector (s): SB JB

	Build	ing Materials:				AC	M Assessmei	nt:			Report Referen	ce:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	12"x12" Floor Tile (grey)	Floor	N	-	-	-	-	-	-	-	-
	-	12"x12" Floor Tile (black)	Floor	N	-	-	-	-	-	-	-	-
Walls	-	Drywall	Walls	-	-	-	-	-	-	-	-	-
	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
Ceiling	_	2' x 4' CT (scattered)	Ceiling	_	_	-	_	-	_	-	_	_
Coming		12"x12" Acoustical Tile	Ceiling	-	-	-	-	-	-	-	-	-
Above Ceiling	-	Metal	Deck	-	-	-	-	-	-	-	-	-
	-	FG PI & FI with aluminum	Chiller	-	-	<u> </u>	-	-	-	-	-	-
	-	FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-
	-	Metal Concrete	HVAC Deck	-	-	-	-	-	-	-	-	-
	-	Concrete	Deck	-	-		+ -	-	-	-	-	-
Below Ceiling	-	FG PI & FI	HWH	-	-	-	-	-	-	-	-	-

Functional Space Forms

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

P: ACM is in POOR condition; Greater than 2% damage

B: Restricted to building staff only.

DI: Duct Insulation

C: Areas of the building behind walls or ceiling system.

A: All building occupants may have access to this area.

FG: Fibreglass

FT: Floor Tile



Building ID: U66 Date:

16-Feb-12 1) No ACM's were observed at the time of inspection.

PR-08-043 Project #:

Functional Space (FS #): 2005 Location: RM#261, 267, 268, 271,272, 275, 276, 279 & Hallway Inspector (s): SB JB

*Note all office spaces have no access above 12"x12" acoustical tile.

		ing Materials:		1	2 4004511		A Assessmen	nt.			Report Referen	001
		ing Materials:	1	ACM	P.3.1.1.	ACI	Assessme			D/	Keport Keieren	e:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	12"x12" Floor Tile (grey)	Floor	N	-	-	-	-	-	1	-	-
	-	12"x12" Floor Tile (black)	Floor	N	-	-	-	-	-	1	-	-
	-	Carpet	Floor	N	-	-	-	-	-	-	-	-
Walls	-	Drywall	Walls	-	-	-	-	-	-	-	-	-
	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
Ceiling	-	2' x 4' CT (scattered)	Ceiling	-	-	•	-	-	-	-	-	-
	-	12"x12" Acoustical Tile	Ceiling	-	-	-	-	-	-	-	-	-
	-	2' x 4' CT (square pattern)	Ceiling	-	-	-	-	-	-	-	-	-
Above Ceiling	-	Metal	Deck	-	-	-	-	-	-	-	-	-
	-	Brick	Wall	-	-	-	-	-	-	-	-	-
	-	FG	Deck	-	-	-	-	-	-	-	-	-
	-	Concrete	Deck	-	-	-	-	-	-	ı	-	-
	-	FG PI & FI with aluminum	Chiller	-	-	-	-	-	-	-	-	-
Below Ceiling	-	FG PI & FI	HVAC	-	-	-	-	-	-	1	-	-
	-	Metal	HVAC	-	-	-	-	-	-	ı	-	-
	-	Metal	Drain	-	-	-	-	-	-	-	-	-
Below Ceiling	-	FG PI & FI	HWH	-	-	-	-	-	-	-	-	-
Material Descript			Criteria fo	. C 1""		CM.				Cuitania fan i	cess to an area containing ACM:	

Functional Space Forms

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

P: ACM is in POOR condition; Greater than 2% damage

DI: Duct Insulation

B: Restricted to building staff only.

FG: Fibreglass FT: Floor Tile

C: Areas of the building behind walls or ceiling system.

A: All building occupants may have access to this area.



Oakhill Environmental Inc. Functional Space Forms

Building ID: U66 Date:

Functional Space (FS #): Location: Hallway #235 Inspector (s): SB JB 16-Feb-12 1) No ACM's were observed at the time of inspection. PR-08-043 Project #:

		ling Materials:				AC	M Assessme				Report Referen	ce:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	12"x12" Floor Tile (grey)	Floor	N	-	-	-	_	-	-	-	-
	-	12"x12" Floor Tile (black)	Floor	N	-	-	-	-	-	-	-	-
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	F	-
Cailing		21 n 41 CT (goodfoned)	Cailing									
Ceiling	-	2' x 4' CT (scattered)	Ceiling	-	-	-	-	-	-	-	-	-
Above Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
	-	Brick	Wall	-	-	-	-	-	-	-	-	-
	-	FG PI & FI with aluminum	Chiller	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-
Below Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
Material Descript	tion:		Criteria fo	r Conditi	on of an AC	CM:	ĺ	<u> </u>		Criteria for Acc	ess to an area containing ACM:	1

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

P: ACM is in POOR condition; Greater than 2% damage

B: Restricted to building staff only.

DI: Duct Insulation

A: All building occupants may have access to this area. C: Areas of the building behind walls or ceiling system.

FG: Fibreglass FT: Floor Tile



Functional Space Forms U66

Building ID: Functional Space (FS #): Date: 16-Feb-12 1) No ACM's were observed at the time of inspection.

Location: RM#251, 255, 257
Mens, Womans & Wheelchair Bathroom
Inspector (s): SB JB PR-08-043 Project #:

	Build	ling Materials:				ACM		Report Reference:				
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Ceramic Tile	Floor	N	-	-	-	-	-	-	-	-
Walls	1	Plaster	Walls	N	-	ND		-	-	ı	-	-
	-	Ceramic Tile	Walls	N	-	-	-	-	-	-	-	-
Ceiling	-	2' x 4' CT (scattered)	Ceiling	-	-	•	-	-	-	ı	-	-
												l
Above Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
	-	Brick	Wall	-	-	-	-	-	-	1	-	-
	-	FG PI & FI	HVAC	-	-	•		-	-	ı	-	-
Below Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
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												"

Material Description:

Criteria for Condition of an ACM:

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

P: ACM is in POOR condition; Greater than 2% damage

C: Areas of the building behind walls or ceiling system.

B: Restricted to building staff only.

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile



Oakhill Environmental Inc. Functional Space Forms

Building ID: U66 Date:

Functional Space (FS #): Location: RM#252 Inspector (s): SB JB 16-Feb-12 1) No ACM's were observed at the time of inspection. PR-08-043 Project #:

	Build	ding Materials:				ACN	M Assessmen	nt:			Report Reference	ce:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	12"x12" Floor Tile (grey)	Floor	N	-	-	-	-	-	-	-	-
	-	12"x12" Floor Tile (black)	Floor	N	-	-	-	-	-	-	-	-
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
Ceiling	-	12"x12" Acoustical Tile	Ceiling	-	-	-	-	-	-	-	-	-
				 								
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
			<u> </u>	 								
				+	† †		+					
Below Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
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				\vdash								
Material Descript	tion:		Criteria fo	r Conditi	on of an A	CM:				Criteria for Acc	cess to an area containing ACM:	

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

P: ACM is in POOR condition; Greater than 2% damage

DI: Duct Insulation

B: Restricted to building staff only.

A: All building occupants may have access to this area. C: Areas of the building behind walls or ceiling system.

FG: Fibreglass FT: Floor Tile



Environmental	

Functional Space Forms

Building ID:	U66	Notes:	Functional Space (FS #):	2009
Date:	16-Feb-12	1) Area was innaccesible at the time of survey.	Location: RM#262	
Project #:	PR-08-043		Inspector (s): SB JB	

	Building Materials:					ACM		Report Reference:				
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor				, .	(, , , ,			(-, , ,)-	, , , - , -			
Walls												
Ceiling												
Above Ceiling												
Below Ceiling												
			1	1								

Material Description:

Criteria for Condition of an ACM:

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

P: ACM is in POOR condition; Greater than 2% damage

DI: Duct Insulation

B: Restricted to building staff only.

A: All building occupants may have access to this area. C: Areas of the building behind walls or ceiling system.

Criteria for Access to an area containing ACM:

FG: Fibreglass FT: Floor Tile



Functional Space Forms

I	Building ID:	U66	Notes:	Functional Space (FS #):	2010
	Date:	13-Feb-12	1) Area was innaccesible at the time of survey.	Location: RM#252A	
	Project #:	PR-08-043		Inspector (s): SB JB	

	Building Materials:					ACV	I Assessmen	nt•			Report Reference:		
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:	
Floor													
Walls													
Ceiling													
Above Ceiling													
Below Ceiling													

Material Description:

Criteria for Condition of an ACM:

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

P: ACM is in POOR condition; Greater than 2% damage

DI: Duct Insulation

B: Restricted to building staff only.

A: All building occupants may have access to this area. C: Areas of the building behind walls or ceiling system.

Criteria for Access to an area containing ACM:

FG: Fibreglass

FT: Floor Tile



Oakhill Environmental Inc. Functional Space Forms

Building ID: Functional Space (FS #): U66 Date:

Location: RM#257 Inspector (s): SB JB 1) HVAC: 1 damaged section of mud joint compound fitting insulation require(s) (1) encapsulation (1m2)). 16-Feb-12 PR-08-043 Project #:

	Duit	ll ding Materials:				ACN		Report Reference:				
				ACM	T Eniolato	ACIV	1 Assessmen		1 1 2 2 2 2 2	Daggaran /	Report Reference	ce:
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	N	-	-	-	-	-	<u> </u>	-	-
					1							
					1							
			1		1						1	
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
			1	1	†			†	†		1	
					†							
Ceiling	-	Concrete	Deck	-	-	_	-	_	-	_	-	_
5			+	 	+			1	 		† †	
		†	+	 	+			1	 		† †	
			+	+	+			†	 			
Above Ceiling	-	NA	-	-	-	_	-	_	_	_	-	_
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		 	+	+	+			†	+		†	
		+	+	+	+			 	 		 	
		 	+	+	+			†	+		†	
Below Ceiling	-	FG PI & FI	HVAC	-	-	_	-	-	_	-	-	_
Below Coming	-	FG PI & FI	Cond.	 -	-	_	_	_	_	_	_	_
	12	MJC DI (HVAC)	HVAC	Y	Y	50%-75% Chrysotile	30m2	G	A	O&M	2-1	_
	12	MJC DI (HVAC)	HVAC	Y	Y	50%-75% Chrysotile	1m2	P	A	O&M	2-2	A14
	12	WIJC DI (II VIIC)	117710	-		3070-7370 CIII y30tile	11112	1	11	Occivi	2.2	Літ
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Material Descript	tion:		Criteria fo	r Conditi	ion of an A	CM:				Criteria for Acc	cess to an area containing ACM:	

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

P: ACM is in POOR condition; Greater than 2% damage

DI: Duct Insulation

B: Restricted to building staff only.

C: Areas of the building behind walls or ceiling system.

A: All building occupants may have access to this area.

FG: Fibreglass

FT: Floor Tile



Oakhill Environmental Inc. Functional Space Forms

Building ID: U66 Date:

Functional Space (FS #): Location: RM#254 Inspector (s): SB JB 16-Feb-12 1) All ACM's were observed to be in good condition during the survey. Project #: PR-08-043

	Building Materials:							D . D 4					
	Build	ing Materials:				ACM	I Assessmei				Report Reference:		
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:	
Floor	-	12"x12" Floor Tile (grey)	Floor	N	-	-	-	-	-	-	-	-	
	-	12"x12" Floor Tile (black)	Floor	N	-	-	-	-	-	-	-	-	
Walls	1	Plaster	Walls	N	N	-	-	-	-	-	-	-	
Ceiling	-	12"x12" Acoustical Tile	Ceiling	_	_		_	_	_	_		-	
Cerning		12 X12 Acoustical Tile	Cennig	_	_	-			_		-	_	
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-	
Below Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-	
												_	

Material Description:

Criteria for Condition of an ACM:

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

P: ACM is in POOR condition; Greater than 2% damage

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms Building ID: U66

Date: 16-Feb-12 1) All ACM's were observed to be in good condition during the survey. Project #: PR-08-043

Functional Space (FS #): 2 Location: RM#258 & Hallway Inspector (s): SB JB

	Building Materials:					ACN		Report Reference:				
Location:	cation: Homo. Mat. Material Description: System			ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	12"x12" Floor Tile (grey)	Floor	N	-	-	-	-	-	-	-	-
	-	12"x12" Floor Tile (black)	Floor	N	-	-	-	-	-	-	-	-
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
Ceiling	-	2' x 4' CT (scattered)	Ceiling	_	-	-	-	-	-	_	-	_
Above Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
	-	Brick	Wall	-	-	-	-	-	-	-	-	-
	-	FG PI & FI with aluminum	Chiller	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-
	-	Metal	HVAC	-	-	-	-	-	-	-	-	-
Below Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
										•		

Material Description:

Criteria for Condition of an ACM:

MJC: Mud Joint Compound FI: Fitting Insulation:

G: ACM is in GOOD condition; No damage

PI: Pipe Insulation

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

DI: Duct Insulation

B: Restricted to building staff only.

A: All building occupants may have access to this area. C: Areas of the building behind walls or ceiling system.

Criteria for Access to an area containing ACM:

FG: Fibreglass

FT: Floor Tile



Functional Space Forms

Building ID: U66 16-Feb-12 Date:

PR-08-043

Project #:

1) All ACM's were observed to be in good condition during the survey.

Location: RM#259 Inspector (s): SB JB

Functional Space (FS #):

	Building Materials:					A GN		Report Reference:				
	cation: Homo. Mat. Material Description: System					ACN	I Assessmen				Report Reference	ce:
Location:	#:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	13	9"x9" Floor Tile (Biege)	Floor	Y	N	Suspect	-	G	A	O&M	2-1	-
						•						
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
Ceiling	-	2' x 4' CT (scattered)	Ceiling	-	-	-	-	-	-	-	-	-
Above Ceiling	-	Concrete	Deck	-	-	-	-	-	-	-	-	-
	-	Brick	Wall	-	-	-	-	-	-	-	-	-
	-	FG PI & FI	HVAC	-	-	-	-	-	-	-	-	-
	-	Metal	HVAC	-	-	-	-	-	-	-	-	-
Below Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
												_

Material Description:

Criteria for Condition of an ACM:

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

DI: Duct Insulation

P: ACM is in POOR condition; Greater than 2% damage

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID: U66 Functional Space (FS #): Date: 16-Feb-12 1) All ACM's were observed to be in good condition during the survey. Location: Hallway PR-08-043 Inspector (s): SB JB Project #:

Building Materials: Report Reference: ACM Assessment: Homo. Mat. ACM Friable Condition Response / Access Location: Material Description: ACM Type: Quantity: Drawing #: Photo #: System: (Y/N): (Y/N): (G,F,P): (A,B,C): Comments: Floor 12"x12" Floor Tile Floor ------Transite Panel Walls 3 Wall Y N Suspect 24m2 G Α O &M 2-1 O &M 2-1 Ceiling 3 Transite Panel Ceiling Y N Suspect 8m2 G Α -Above Ceiling Brick Walls Below Ceiling NA -

Material Description:

Criteria for Condition of an ACM:

MJC: Mud Joint Compound FI: Fitting Insulation:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

P: ACM is in POOR condition; Greater than 2% damage

DI: Duct Insulation

B: Restricted to building staff only.

C: Areas of the building behind walls or ceiling system.

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

FG: Fibreglass FT: Floor Tile



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Functional Space Forms

Building ID:	U66	Notes:	Functional Space (FS #):	EX0
Date:	06-Feb-12	1) All ACM's were observed to be in good condition.	Location: Exterior	
Project #:	PR-08-043		Inspector (s): SB JB	

	Ruild	ling Materials:					ACM Assessment:				Report Reference	e:
Location:	Homo. Mat.	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	NA										
Walls	8	Exterior Stucco	Walls	Y	N	8400m2	0.5%-5% Chrysotile	G	A	O&M	2-1	
Ceiling	3	Transite Panel	OverHang	Y	N	11m2	Suspect	G	A	O&M	2-1	
Above Ceiling		NA										
Below Ceiling		NA										
			I	l	l							

Material Description:

Criteria for Condition of an ACM:

MJC: Mud Joint Compound

G: ACM is in GOOD condition; No damage

FI: Fitting Insulation:

F: ACM is in FAIR condition; Less than 2% damage

PI: Pipe Insulation

P: ACM is in POOR condition; Greater than 2% damage

DI: Duct Insulation

C: Areas of the building behind walls or ceiling system.

B: Restricted to building staff only.

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

FG: Fibreglass

FT: Floor Tile



Functional Space Forms

Building ID: U66 Notes:
Date: 16-Feb-12 | Discrete: PR-08-043 | Project #: PR-08-043 | 2) Suspect Mould was observed on chiller pipe insulation in 1 location. | Functional Space (FS #): PH01 | Location: Penthouse | Location: Penthouse | Inspector (s): SB JB

Building Materials: ACM Assessment: Report Reference: Homo. Mat. Friable Condition **ACM** Access Response / ACM Type: Photo #: Location: Material Description: System: Quantity: Drawing #: (Y/N): (Y/N): (G,F,P): (A,B,C): Comments: Floor Concrete Floor Walls Brick Floor Ceiling Concrete Deck Above Ceiling NA Below Ceiling FG PI & FI HWH FG PI & FI Drain 4 Sweatwrap PI DCW Y Y 75% Chrysotile 22 LM G Α O&M P-1 4 Sweatwrap PI DCW 75% Chrysotile .5LM Р Α Removal P-2 A15 50%-75% Chrysotile 10 MJC FI DCW Y 8 units G Α O&M P-1 12 MJC DI (HVAC) HVAC Y 50%-75% Chrysotile 182m2 O&M P-1 G Α -Aircell PI DHW 30%-50% Chrysotile 7LM O&M P-1 9 Y G Α 6 MJC FI DHW Y Y 50%-75% Chrysotile 2 units G Α O&M P-1 FG PI & FI DHW NA Suspect Mould Supply N 1 Location M08

Material Description:

MJC: Mud Joint Compound FI: Fitting Insulation: PI: Pipe Insulation

DI: Duct Insulation FG: Fibreglass

FG: Fibreglass
FT: Floor Tile
CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage F: ACM is in FAIR condition; Less than 2% damage P: ACM is in POOR condition; Greater than 2% damage Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID:	U66	Notes:	Functional Space (FS #):	SW01
Date:	06-Feb-12	1) No ACM's were observed at the time of inspection.	Location: Stairwell	
Project #:	PR-08-043	2) Samples U66-01A was collected here.	Inspector (s): SB JB	

Building Materials:						A	Report Reference:					
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	CM Assessn Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
Ceiling	-	12"X12" FG CT	Ceiling	-	-	-	-	-	-	-	-	-
								`				
Above Ceiling	-	NA	-	-	-	ı	-	-	-	-	-	-
Below Ceiling	-	FG PI & FI	HWH	-	-	ı	-	-	-	-	-	-
	-	FG PI & FI	DCW	-	-	1	-	-	-	-	-	-
	-	FG PI & FI	Drain	-	-	1	-	-	-	-	-	-
	-	FG PI & FI	DHW	-	-	1	-	-	-	-	-	-

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID:	U66	Notes:	Functional Space (FS #):	SW02
Date:	07-Feb-12	1) All ACM's were observed to be in good condition during the survey.	Location: Stairwell	
Project #:	PR-08-043	2) Samples U66-01B was collected here.	Inspector (s): SB JB	
		3) Plaster: One damaged section of plaster require(s) (1m2) encapsulation (1m2).		

Building Materials:						A	Report Reference:					
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	1	-	-
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
Ceiling	-	12"X12" FG CT	Ceiling	-	-	-	-	-	-	-	-	-
		27.1										
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
Dalam Cailina		EC DI	1133/11									
Below Ceiling	-	FG PI	HWH	- Y	- Y	750/ (1	16	-	- A	-	- D 1	-
	6	MJC FI	HWH	I	Ĭ	75% Chrysotile	16 units	G	A	O&M	B-1	

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation
DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



Functional Space Forms

Building ID:	U66	Notes:	Functional Space (FS #):	SW03
Date:	13-Feb-12	1) No ACM's were observed at the time of inspection.	Location: Stairwell	
Project #:	PR-08-043	2) Suspect Mould was observed on chiller pipe insulation in 2 location.	Inspector (s): SB JB	

Building Materials:						A	Report Reference:					
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Terrazzo	Floor	-	-	-	-	-	-	-	-	-
	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
Ceiling	1	Plaster	Ceiling	N	_	ND	_	-	_	_	-	-
	-	Concrete	Ceiling	-	-	-	-	-	-	-	-	-
Above Ceiling	-	NA	-	-	-	-	-	-	-	-	-	-
	_											
Below Ceiling	-	FG PI & FI	HWH	_	-	-	-	-	-	-	-	-
Below Cermig	-	FG PI & FI	Chiller	-	-	-	-	-	-	-	-	-
	NA	Suspect Mould	Chiller	N	_	-	-	-	-	2 Location	1-3	M07
	1471	Suspect Would	Cilinei	- 11						2 Location	1-5	14107
									_	-		

Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation

DI: Duct Insulation

FG: Fiberglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.



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Functional Space Forms

Building ID:	U66	Notes:	Functional Space (FS #):	SW04
Date:	06-Feb-12	1) No ACM's were observed at the time of inspection.	Location: Stairwell	
Project #:	PR-08-043		Inspector (s): SB JB	
			1	

Building Materials:						A	Report Reference:					
Location:	Homo. Mat. #:	Material Description:	System:	ACM (Y/N):	Friable (Y/N):	ACM Type:	Quantity:	Condition (G,F,P):	Access (A,B,C):	Response / Comments:	Drawing #:	Photo #:
Floor	-	Concrete	Floor	-	-	-	-	-	-	-	-	-
												<u> </u>
Walls	1	Plaster	Walls	N	-	ND	-	-	-	-	-	-
												ļ
												<u> </u>
G '''		AL HIGHT (0.31									
Ceiling	-	2' x 4' CT (scattered)	Ceiling	-	-	-	-	-	-	-	-	-
												
Above Ceiling	-	Metal	Deck	_	-	-	-	-	-	-	-	-
Above Cennig	-	ivietai	Deck	-	-	-	-	-	<u> </u>	-	-	
Below Ceiling	-	FG PI & FI with aluminum	HWH	-	-	-	-	_	-	_	-	-
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Material Description:

MJC: Mud Joint Compound

FI: Fitting Insulation:

PI: Pipe Insulation
DI: Duct Insulation

FG: Fibreglass

FT: Floor Tile

CT: Ceiling Tile

Criteria for Condition of an ACM:

G: ACM is in GOOD condition; No damage

F: ACM is in FAIR condition; Less than 2% damage

P: ACM is in POOR condition; Greater than 2% damage

Criteria for Access to an area containing ACM:

A: All building occupants may have access to this area.

B: Restricted to building staff only.