VERTEX

RECORD OF TRANSMITTAL

DATE: November 21, 2011

TO: New York State Department of Environmental Conservation
Division of Environmental Remediation
1115 Route 86
Ray Brook, NY 12977

ATTENTION: Mr. Russell Huyck

SUBJECT: Irving Tissue, Inc.
1 Eddy Street
Fort Edward, NY
Site No. 558041
VERTEX Project No. 15243

MESSAGE: Dear Mr. Huyck,

In accordance with the requirements of the Order on Consent, Index No. A5-0638-06-10, Site No. 558041, enclosed please find Final Report pursuant to 6 NYRR 375 Section 1.6(C). Please do not hesitate to contact me should you have any questions or require additional information.

COPY: Mr. Andrew Guglielmi, Esq.
NYSDEC Office of the General Counsel

Arie BarJosef, P.G.
Sr. Project Manager

VERTEX℠
Environmental Services, Inc.

Massachusetts Office
400 Libbey Parkway
Weymouth, Massachusetts
Office: (781) 952-6000
Fax: (781) 335-3543

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DATE: November 21, 2011

TO: New York State Department of Environmental Conservation
Office of the General Counsel
625 Broadway, 14th Floor
Albany, NY 12233-5500

ATTENTION: Mr. Andrew Guglielmi, Esq.

SUBJECT: Irving Tissue, Inc.
1 Eddy Street
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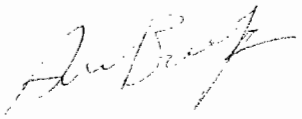
Site No. 558041
VERTEX Project No. 15243

MESSAGE: Dear Mr. Guglielmi,

In accordance with the requirements of the Order on Consent, Index No. A5-0638-06-10, Site No. 558041 enclosed please find Final Report pursuant to 6 NYRR 375 Section 1.6(C). Please do not hesitate to contact me should you have any questions or require additional information.

COPY: Mr. Russell Huyck
NYSDEC Division of Environmental Remediation

Arie BarJosef, P.G.
Sr. Project Manager



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Final Report
Site No. 558041
Irving Tissue, Inc.
1 Eddy Street
Fort Edward, NY
VERTEX Project No. 15243

VERTEX

Prepared By:

VERTEX Environmental Services, Inc.
400 Libbey Parkway
Weymouth, MA 02189

November 21, 2011

Prepared For:

Irving Tissue, Inc.
1 Eddy Street
Fort Edward, NY

Attn: Mr. Tom Nash

Submitted To:

New York State Department of
Environmental Conservation
Division of Environmental Remediation
1115 Route 86, Ray Brook, NY 12977
Attention: Mr. Russell Huyck

VERTEX®

Vertex Environmental Services, Inc.
Vertex Environmental Insurance Services, Inc.
Vertex Construction Services, Inc.
Vertex International Services
Vertex Air Quality Services, LLC
Vertex Ingenieros Consultores, S. de R.L. de C.V.

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November 21, 2011

New York State Department of Environmental Conservation
Division of Environmental Remediation
1115 Route 86
Ray Brook, NY 12977

Attention: Mr. Russell Huyck

RE: **Final Report**
Irving Tissue, Inc.
1 Eddy Street
Fort Edward, NY
VERTEX Project No. 15243
Site No. 558041

Dear Mr. Huyck:

On behalf of Irving Tissue, Inc. Vertex Environmental Services, Inc. (VERTEX) is pleased to submit this Final Report for Site No. 558041 located at the Irving Tissue, Inc. facility (Irving) at 1 Eddy Street in Fort Edward, New York. This Final Report had been prepared in accordance with the requirements contained in Section D of the Order on Consent and Administrative Settlement (the "Consent order") Index No. A5-0638-06-10 dated August 4, 2010 and pursuant to the provisions contained in 6 NYRR Part 375 Section 1.6(c).

The Subject Site contains an industrial facility engaged in the manufacturing and packaging of paper products. On August 4, 2010 the New York State Department of Environmental Conservation (NYSDEC) entered into a Consent Order with Irving to facilitate regulatory response activities during construction of a new industrial building. The new industrial building is located at a portion of the Irving property known as the Forebay Area (the "Subject Site") that had been affected by contaminated sediments from the Hudson River and by Historic Fill material as defined in 6 NYCRR 375-1.2(x).

Based on the results of investigatory work performed at the Subject Site by VERTEX and by others the Subject Site subsurface soil and groundwater had been affected by concentrations of polychlorinated biphenyls (PCBs) that required implementation of response actions pursuant to 6 NYCRR 375 and in accordance with 40 CFR 761.

Response actions at the Subject Site were implemented in conjunction with the construction of a new industrial building within a portion of the Forebay Area. Response actions were performed at the Subject Site in accordance with a Site Management Plan (SMP) dated July 29, 2010 that was prepared by VERTEX and previously submitted to and approved by NYSDEC.

This Final Report summarizes the response actions performed at the Subject Site and contains the following elements:

- A summary of the Subject Site information, boundaries and subsurface conditions;
- A description of the response actions completed pursuant to the SMP, and
- A description of the institutional controls implemented at the Subject Site.

In summary, based on the results of the regulatory response activities performed at the Subject Site and as a result of the implementation of appropriate institutional controls, a condition of No Significant Risk exists at the Subject Site for the intended industrial usage.

Our professional opinion and the conclusions contained herein are based solely on the scope of work conducted as described in the Final Report and are subject to the Qualifications contained herewith.

Please do not hesitate to contact us should you have any questions or require additional information. Thank you.

Sincerely,

Vertex Environmental Services, Inc.

Arie BarJosef, PG
Sr. Project Manager

Benjamin B. Strong
Vice President

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APPENDICES

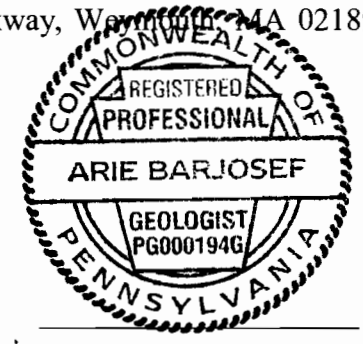
CERTIFICATION

I, Arie BarJosef, am currently a registered Professional Geologist licensed by the Commonwealth of Pennsylvania License No. PG0194G, I had primary direct responsibility for implementation of the regulatory response activities, and I certify that the Site Management Plan was implemented and that all relevant activities were completed in substantial conformance with the Department-approved Site Management Plan (SMP) prepared in accordance with 6 NYCRR 375 and NYSDEC DER-10.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

I certify that the data generated in support of this report have been submitted in accordance with the Department's electronic data delivery and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Arie BarJosef of Vertex Environmental Services, Inc., 400 Libbey Parkway, Weymouth, MA 02189 certifying as Owner's Designated Site Representative for the site.



11/21/2011

Seal | Date | Signature

FINAL REPORT

Irving Tissue, Inc.
1 Eddy Street
Fort Edward, New York
VERTEX Project No: 15243
NYSDEC Site No. 558041

1.0 SUMMARY OF THE GENERAL SUBJECT SITE INFORMATION

1.01 Introduction

This Final Report had been prepared pursuant to the provisions contained in the New York Department of Environmental Conservation (NYSDEC), Division of Environmental Remediation regulations 6 NYCRR Part 375-1.6(b)(3) and in accordance with Order on Consent and Administrative Settlement (the "Consent Order") Index No. A5-0638-06-10 for site No. 558041 dated August 4, 2010.

The purpose of this Final Report is to summarize the regulatory response actions performed at the Subject Site under the above referenced Consent Order and pursuant to the provisions contained in a Site Management Plan (SMP) dated July 29, 2010 that was prepared by VERTEX and previously submitted to NYSDEC. A summary of the provisions contained in the SMP is presented below. The regulatory response actions were performed in conjunction with the construction of a new industrial building at the Subject Site. Details regarding the new industrial building are presented below.

This Final Report should be reviewed together with the above referenced SMP that is made a part of this report by reference.

1.02 Summary of the Subject Site History and Physical Setting

The property that contains the Subject Site is located at 1 Eddy Street in Fort Edward, New York. Refer to **FIGURE 1** for the Subject Site locus. The Subject Site constitutes a portion of the above referenced industrial property that is owned and operated by Irving Tissue, Inc. ("Irving") and utilized for the final manufacturing and packaging of paper products. Former owners of the Subject Site include International Paper (1898-1944), Marinette Paper (1944-1961), Scott Paper Co. (1961-1996) and Kimberly Clark (February 1996-August 1996). Detailed information regarding the Subject Site history and usage are contained in a Record Search Report that was prepared by VERTEX and is contained in Exhibit B of the above referenced Consent Order and is made a part of this Final Report by reference. In summary, the property that contains the Subject Site had been utilized for the manufacturing of paper products for over one-hundred years.

The Subject Site occupies an area of approximately 43,800 square-feet that is located within a former forebay created by a dam that was constructed during the early 1900s across the Hudson River. Ground surface across the Subject Site slopes gently towards the south. Refer to **FIGURE 2** for depiction of the Subject Site limits.

The dam diverted Hudson River water through the forebay into a turbine house for the purposes of hydroelectric power generation. As a result, sediments from the Hudson River were carried into the forebay and deposited across the forebay area and at the foot of the turbine house. In 1973 usage of the hydroelectric turbines ceased, the dam was demolished and the Hudson River reverted to its adjacent natural channel. Subsequently, the area of the forebay was filled and the current Subject Site configuration, as shown on the enclosed **FIGURE 2**, was achieved. Based on readily available historic information, and on the results of investigatory work performed at the Subject Site to-date, the fill that was utilized at the former forebay area appears to contain significant amounts of rubble that was generated during the demolition of the former dam as well as pulp and wood that resulted from past utilization of the Site for the manufacturing of paper products. It should be noted that current industrial activities do not include pulp manufacturing or wood processing.

The fill material and sediments present within the forebay area are considered Historic Fill, as defined in 6 NYCRR 375-1.2(x). The results of the investigatory work performed at the Subject Site to-date indicate that the fill material and more particularly the sediments situated across the forebay area had been affected by polychlorinated biphenyls (PCBs) at concentrations that required implementation of response actions under 6 NYCRR Part 375 and under US EPA regulations 40

CFR 761. In addition, groundwater samples obtained from the forebay area exhibited the presence of PCBs at concentrations in excess of applicable NYSDEC risk-based standards. Other contaminants (metals and polynuclear aromatic hydrocarbons – PAHs) were detected in the tested soil and groundwater samples. However, the detected concentrations of PCBs at levels that require implementation of response actions are considered the major Contaminant of Concern (COC) at the Subject Site. It should be noted that based on readily available historic information the industrial activities at the Subject Site did not involve the presence or usage of PCBs or PCB-containing materials. The source of the PCBs detected in the tested soil and groundwater samples was identified as likely associated with historic industrial activities at locations along the Hudson River upstream from the Subject Site. Sediments affected by PCBs had been historically transported by the Hudson River and deposited across the forebay area.

Results of the investigatory work performed at the Subject Site to-date indicate that in general the Subject Site geology consists of fill material that overlies an alluvial sediment deposit, the maximum thickness of which was encountered at the foot of the turbine house that is located at the southern portion of the forebay area. The thickness of the sediments deposit and the fill material diminish significantly towards the northern portion of the forebay area. The sediments deposit and the fill material are underlain by an irregular bedrock surface that generally slopes towards the south. Groundwater flow across the forebay area is inferred generally towards the south-southwest towards the Hudson River at a gradient of approximately 10 feet over a horizontal distance of 600 feet. However, it should be noted that the groundwater flow across the Subject Site is influenced by the presence of existing subsurface structures such as the historic turbine house. There are no drinking water supply wells located at the Subject Site and none are known to be located within 0.5 miles from the Subject Site. In addition, there are no private non-potable water supply wells located at the Subject Site and none are known to be located in the vicinity of the Subject Site.

1.03 Summary of the Site Management Plan

On July 29, 2010 a Site Management Plan (SMP) was submitted to the NYSDEC as part of the submittal associated with the Consent Order. The SMP was prepared by VERTEX in accordance with the above referenced Consent Order and pursuant to the provisions contained in 6 NYCRR 375 and the NYSDEC Technical Guidance for Site Investigation and Remediation DER-10, dated May 2010.

The purpose of the SMP was to facilitate the on-site management and off-site disposal of excess soil generated during the construction of the new industrial building at the forebay area. In addition, the SMP addressed the on-site management and off-site disposal of excess groundwater generated during construction activities. Finally, the SMP contained provisions for environmental monitoring to be implemented, if needed, during the construction of the new industrial building and other related activities.

In summary, the SMP provided that:

- Excess soil generated during construction of the industrial building such as drill cuttings from the drilled-in piles or other localized excavation to be containerized in accordance with the provisions contained in 40 CFR 761.61(B) utilizing appropriate US Department of Transportation (DOT) containers as described in 49 CFR 171-180.

- Excess groundwater generated during construction such as groundwater expelled during the drilling of the foundation piles to be containerized in accordance with the provisions contained in 40 CFR 761.61(b)(1) utilizing an appropriate frac tank.

- Solid waste such as rubble consisting of steel, concrete, asphalt and brick be temporarily stockpiled on-site following appropriate segregation to remove excess soil.

- Off-site disposal of the containerized excess soil to be facilitate at a NYSDEC-regulated facility as waste under the Toxic Substance Control Act (TSCA) and in accordance with 40 CFR 761.61.

- Off-site disposal of the containerized excess groundwater to be facilitate at a NYSDEC-regulated facility as waste under TSCA in accordance with 40 CFR 761.61.

- Off-site disposal of the rubble and solid waste to be facilitate at a NYSDEC-regulated facility as TSCA waste under 40 CFR 761.61.

- Soil or fill material brought to the Subject Site from off-site sources would meet the criteria contained in 6 NYCRR 375-6.7(d) and DER-10 Section 5.4. Any capping or soil cover would meet the criteria contained in 6 NYCRR 375-6.8(a) of (b) and DER-10(5.4), or a minimum of six (6) inches of asphalt pavement or concrete.

- Temporary stockpiles to be maintained appropriately including placement on a 6-mil polyethylene substrate and covered, and if necessary, surrounded with hay bales and/or other erosion control measures.

- Implementation, if necessary, of an air quality monitoring in accordance with a Community Air Monitoring Plan (CAMP) that was appended to the SMP. The CAMP was prepared by VERTEX in accordance with the Consent Order and pursuant to the provisions contained in DER-10, dated May 2010.

- Implementation of health and safety provisions in accordance with a Health and Safety Plan (HASP) prepared in accordance with relevant Occupational Safety and Health Administration (OSHA) regulations.

- Documentation would include appropriate and timely progress reports in accordance with the provisions contained in the Consent Order.

Activities relevant to this Final Report were conducted in accordance with the provisions summarized above.

1.04 Summary of Groundwater Solute Transport Analyses

As part of the SMP, the NYSDEC required that an analysis be performed to evaluate the potential for the COCs identified during the chemical testing of the soil and groundwater samples to migrate off-site and potentially pose a threat of adverse affects to the surface water at the adjacent Hudson River. To address these concerns, VERTEX performed a groundwater transport modeling and analysis the results of which are summarized in a report titled "Solute Transport Analyses" dated May 14, 2010. The solute transport analysis report was previously submitted to the NYSDEC, a summary of which is presented below.

The Solute Transport Analyses utilized the BIOSCREEN-AT groundwater model (the "Model") and relevant Hudson River 7Q10 flow data to estimate the potential un-attenuated migration of PCBs, RCRA-8 metals and polynuclear aromatic hydrocarbons (PAHs). The Model considered the maximum detected concentrations of the above referenced COCs and developed appropriate groundwater contours and a flow net analyses. Results of the Solute Transport Analyses indicate that 8.8E-04 grams per day (g/day) of PCB would have the potential of reaching the Hudson River. This PCB mass flux is considered insignificant and would not result in adverse effect to the surface water of the Hudson River. Similarly, extremely low levels of dissolved metals or PAHs were estimated to have the potential of reaching the Hudson River. The estimated levels of metals or PAHs were in the orders of magnitude 1E-07 milligrams per liter (mg/l) or below.

Based on the results of the Solute Transport Analyses, VERTEX concluded that the detected concentrations of the above COCs in the tested soil and groundwater samples obtained from the forebay area are not likely to migrate off-site or pose a threat of adverse effects to the surface water of the Hudson River.

1.05 Public Notification

On August 31, 2010 Irving Tissue, Inc. recorded a Public Notice at the Washington County Clerk's Office. The Public Notice was prepared and recorded in accordance with the requirements contained in the Consent Order and pursuant to the provisions contained in 6 NYCRR 375-1.5(a) and NY Real Property Laws (RPL) 1909, Chap. 52 Article 9. A copy of the Public Notice was previously submitted to the NYSDEC.

The purpose of the Public Notice had been to notify the general public of the Consent Order and the requirements thereof and to notify the public of the regulatory status of the Subject Site as an Inactive Hazardous Waste Disposal Site under Article 27, Titles 9 and 13, and Article 71 of the Environmental Conservation Law. In addition, the purpose of the Public Notice was to inform the public of protective measures to be implemented during the construction of the new industrial building. Finally, the Public Notice contained contact information for additional inquiries.

2.0 RESPONSE ACTION OBJECTIVES AND SELECTED APPROACH

2.01 Identification of Remedial Action Objectives

Section 4.1 of DER-10 contains provisions for the identification of Remedial Action Objectives (RAOs). Based on the results of the investigatory work performed at the Subject Site prior to the commencement of the construction activities, and based on details regarding the construction of the new industrial building, the RAOs that were identified for the Subject Site included the following:

Soil RAOs. Prevent direct contact with or incidental ingestion of soil affected by the COCs. Prevent potential inhalation of or exposure to, vapors of the COCs that may volatilize from soil affected by the COCs. Prevent potential surface exposures of soil affected by the COCs.

There had been no groundwater RAOs established for the Subject Site because the results of a Solute Transport Analyses indicate that there is no evidence suggesting potential off-site migration or adverse impact to surface water (refer to Section 1.03 above) from groundwater at the Subject Site. In addition, the Subject Site groundwater is not considered a current or potential source of drinking water and is not considered a current or potential source of water for irrigational or any other non-potable uses. Any groundwater that was recovered during the SMP-related activities was containerized appropriately and subsequently disposed off-site in accordance with the provisions contained in the SMP and in a manner consistent with relevant NYSDEC and US EPA requirements and regulations. Records of the groundwater disposal were previously provided to the NYSDEC together with appropriate Progress Reports.

2.02 Response Action Approach

Since the subsurface soil at the Subject Site is defined as a Historic Fill [6 NYCRR 375-1.2(x)], the regulatory response action approach that was considered appropriate and feasible for the Subject Site was to minimize the potential for soil excavation and thus to mitigate potential exposures to

soil affected by the COCs. The SMP indicated that the removal of any such soil would be limited to localized excavations, drill cuttings or localized pre-drilling associated with the installation of the drilled-in piles for the new building foundation. This approach was approved by the NYSDEC. As indicated in the previously submitted SMP, any such soil would be located either beneath the footprint of the new industrial building or beneath a cap that meets relevant NYSDEC and US EPA requirements. As noted in the SMP, any excess soil generated during the SMP-related activities at the Subject Site was categorized as TSCA waste and was managed and disposed off-site pursuant to relevant NYSDEC and US EPA regulations.

3.0 SUMMARY OF SMP ACTIVITIES AND RELEVANT INFORMATION

Activities relevant to the SMP and to this Final Report are summarized in eight (8) Progress Reports that were prepared by VERTEX and submitted to the NYSDEC between September 9, 2010 and August 9, 2011. The Progress Reports were prepared in accordance with the requirements contained in the Consent Order. Details regarding the activities relevant to the SMP are included in the above referenced Progress Reports dated September 9, 2010, October 7, 2010, November 9, 2010, December 9, 2010, January 7, 2011, February 9, 2011, July 8, 2011 and August 9, 2011. The following is a summary of the activities relevant to the SMP and to this Final Report.

3.01 Relevant Construction Activities

The new industrial building had been constructed without a basement. The foundation of the building consists of a concrete slab supported by drilled-in piles. The piles were drilled through the overburden materials into the underling bedrock. A total of 106 piles were installed across the footprint of the new building and at the locations of associated loading docks. Refer to **FIGURE 2** for the location of the building footprint. Prior to the commencement of the pile installation, a trench approximately 2 feet wide and 2 feet deep was excavated along the perimeter of the construction area and filled with crushed stone. The purpose of the trench was to provide a temporary measure of surface run-off control during precipitation events and during the drilling operation. The soil that was removed from the trench was placed in an appropriate Department of Transportation (DOT) container and subsequently disposed off-site in a manner consistent with the provisions contained in the SMP, as described above. Details regarding the waste management are presented below.

The pile drilling activities resulted in drill cuttings that consisted of a mixture of soil and water that was collected at the drill head through a special vacuum system and conveyed into appropriate DOT containers equipped with polyethylene liners and cover tarps. The cuttings were then decanted to the extent feasible to remove the water which was pumped into an 18,000-gallon frac tank. The water stored in the frac tank was pumped into vacuum trucks and transported under Hazardous Waste Manifests to a NYSDEC-permitted facility. Details regarding the waste management are presented below.

Subsequent to the installation of the drilled-in piles, concrete pile caps were installed at surface and the building concrete floor slab was constructed. The finished floor elevation is approximately three (3) feet above the ground surface surrounding the new industrial building. The space between the concrete slab and the existing ground surface was filled mostly with common fill that was brought to the Subject Site from a source located outside the forebay.

3.02 Management of Waste Materials

Management of the excess soil and water generated during the construction of the new industrial building was conducted in accordance with the SMP and pursuant to relevant NYSDEC regulations contained in 6 NYCRR 375 and in accordance with the provisions contained in 40 CFR 761.61. Specifically, all of the excess soil and water generated during the construction of the new industrial building was disposed off-site under the Toxic Substance Control Act (TSCA). The soil and groundwater were pre-characterized for off-site disposal as detailed in the previously submitted SMP. Based on the pre-characterization results, the soil and groundwater was accepted for disposal at the CWM Chemical Services, LLC (Waste Management) facility located at Model City, New York.

A total of 521 tons of soil and 22,573 gallons of water were transported under Hazardous Waste Manifests to the above referenced Waste Management facility. Copies of all of the Manifests were appended to the above referenced Progress Reports that were previously submitted to the NYSDEC.

Finally, solid waste such as wood and rubble was transported to the above referenced facility as TSCA waste under appropriate Manifests.

4.0 RISK CHARACTERIZATION

A Qualitative Human Health Exposure Assessment and a Qualitative Ecological Exposure assessment was conducted for the Subject Site in accordance with the provisions contained in DER-10. In addition, a quantitative Human Health Risk Assessment was performed to address temporary exposures during activities of limited duration such as construction or utility-related work.

The Exposure Assessment evaluated the following:

- Description of the Contaminants of Concern and environmental fate and transport;
- Identification of potential exposure points where actual or potential contact with an affected environmental media may occur;
- Description of exposure pathways, and
- Identification of receptor populations.

4.01 Contaminants of Concern (COCs) and Fate and Transport

Based on the results of the investigation performed to-date, the COCs were identified as PCBs, PAHs and metals in the Subject Site soil and groundwater. However, it should be noted that PCBs are considered the major COC at the Subject Site.

In general, PCBs are considered relatively stable compounds and thus are known to be persistent in the environment. The rate of degradation is slow due to the strong bond between the chlorine atoms as a result of the biphenyl structure. The solubility of PCBs is relatively low but these compounds readily absorbed into suspended soil particles, particularly into fine-grained sediments such as those encountered at the Subject Site. As shown by the results of the Solute Transport Analyses, there is no evidence of a significant off-site migration or adverse effects to the surface water of the Hudson

River due to the detected levels of PCBs in tested soil and groundwater samples. In addition, since the fill material at the Subject Site is considered to be a Historic Fill, as defined by NYSDEC, the presence of PCBs is related to historic releases that occurred upstream and came to be located at the Subject Site through migration of sediments from off-site sources. None of the former or current manufacturing activities at the Subject Site are known to have involved the usage, storage or dispensing of PCB-containing materials. In addition, PCBs are not considered to readily volatilize into ambient or indoor air under normal conditions such as room or ambient temperatures. The more likely human exposure scenarios generally consist of inhalation or incidental ingestion of PCBs entrained in dust or soil particles.

In general, PAHs are found in fill material associated with ash, cinder, coal or asphalt. Samples of the fill material obtained from explorations conducted across the Subject Site were observed to contain ash, cinder and asphalt fragments. These PAHs are generally attributed to partial combustion of materials such as coal or wood and are known to be present in asphalt at elevated levels. The majority of the PAHs that were detected in the tested soil samples are considered moderately persistent in the environment and their degradation is relatively slow. These PAHs are known to be non-petroleum related and their solubility in groundwater is low to moderate. Other PAHs that are known to be petroleum-related degrade more readily in the environment. Based on the results of the Solute Transport Analyses that was previously submitted to the NYSDEC and that considered the potential migration of PAHs, there is no evidence for a significant off-site migration of PAHs and no evidence for adverse affects on the surface water of the Hudson River.

Metals are generally considered persistent in the environment and are known to have low to moderate solubility in groundwater, depending on localized geochemical conditions. However, as noted above, the results of the Solute Transport Analyses indicate that also considered the potential migration of dissolved metals, there is no evidence for a significant off-site migration of dissolved metals and the potential impact to the surface water at the adjacent Hudson River is considered insignificant.

In summary, based on the above VERTEX has concluded that although the subsurface media at the Subject Site had been affected by concentrations of PCBs, PAHs or metals at levels in excess of relevant NYSDEC risk-based standards, there is no evidence suggesting potential adverse impacts to identified ecological receptors. The potential risk to human health and to the identified ecological receptors is discussed below.

4.02 Potential Exposure Points

Exposure Points are defined as those locations where potential human or ecological receptors could come in contact or be exposed to environmental media affected by the COCs. The following are the potential Exposure Points that are considered relevant to the Subject Site:

- Subsurface soil;
- Ambient or indoor air;
- Groundwater, and
- Surface water.

The majority of the subsurface soil at the Subject Site that is affected by PCBs, PAHs or metals at levels in excess of relevant NYSDEC risk-based standards is situated beneath the footprint of the newly completed industrial building, associated loading docks and beneath the remainder of the Subject Site area that is asphalt-paved.

Based on the results of the soil samples analyses performed to-date, the majority of the surface samples obtained from depths ranging up to one (1) foot from the ground surface did not exhibit the presence of PCBs at levels that require implementation of response actions under relevant NYSDEC or US EPA regulations. Thus it is concluded that surface or near surface soil at the Subject Site is not considered an Exposure Point. In general, the results of the investigatory work completed at the Subject Site to-date indicate that soil affected by PCBs at levels in excess of relevant NYSDEC risk-based standards are located at depths greater than one (1) foot below grade.

Therefore, subsurface soil is considered an Exposure Point. Similarly, groundwater at the Subject Site is considered an Exposure Point. Ambient and/or indoor air is considered Exposure Point and is addressed below.

4.03 Potential Exposure Pathways

For human receptors the following are considered potential exposure pathways:

- Direct contact and absorption through the skin;
- Incidental ingestion;
- Inhalation, and
- Ingestion through the food chain or intake of potable water.

For potential ecological receptors the following exposure pathways are considered applicable to the Subject Site:

- Potential adverse impacts to aquatic life and surface water, and
- Potential impacts to terrestrial habitats.

4.04 Potential Receptor Populations

The following potential receptor populations were identified as relevant to the Subject Site:

- Human receptors were identified as adult workers at the Irving industrial facility, adult and/or children as occasional visitors and/or trespassers, and the general public at locations outside the Subject Site limits or at the surrounding properties;
- Ecological receptors were identified as aquatic life at the adjacent Hudson River and terrestrial habitats that may potentially be located outside the Subject Site limits on nearby properties.

It should be noted that additional human receptors that are considered relevant to this Risk Characterization include future construction and/or utility workers that may be exposed to the COCs during temporary construction or utility-related activities.

Other human receptors such as recreational park users, users of potable water, on-site residents or children at a child day care facility or a playground are not considered applicable to the Subject Site because: (1) the property that contains the Subject Site is occupied by an active industrial facility the usage of which is limited to manufacturing activities and does not contain any residential properties, (2) the Subject Site does not contain a child daycare, a recreational park or a playground, (3) groundwater at the Subject Site is not considered a current or potential source of potable or non-potable water and (4) the current industrial usage of the Subject Site is not anticipated to change in the foreseeable future.

Other ecological receptors such as on-site terrestrial habitats or aquatic life are not considered applicable to the Subject Site because: (1) there are no terrestrial habitats located within the Subject Site limits and the Subject Site conditions are not considered desirable for such habitat, (2) there are no surface water bodies or wetlands located at the Subject Site, and (3) the current Subject site usage as an industrial facility is not expected to change for the foreseeable future thus the absence of on-site ecological receptors is anticipated to continue.

4.05 Risk to Human Receptors

The potential risk of harm to the identified human receptors is addressed in this Risk Characterization as referenced to the identified exposure scenarios associated with the current industrial usage of the Subject Site and addressed in this Risk Characterization qualitatively. A quantitative assessment of the risk of harm to human health under current Subject Site conditions is considered not necessary because: (1) there are no surface exposures of soil affected by the COCs across the entire Subject Site area, (2) there are no surface exposures of groundwater at the Subject Site, (3) groundwater at the Subject Site is not consumed or used for potable or non-potable

purposes, and (4) the entire Subject Site area is either covered by the footprint of the industrial building, concrete loading docks and by asphalt-paved surfaces. In addition, the industrial building does not have a basement and the finished floor slab elevation is approximately three (3) feet above the ground surface. However, a quantitative evaluation of the potential risk of harm to temporary construction and/or utility workers had been conducted as part of this Risk Characterization.

- **Risk to site workers, trespassers, visitors and the general public**

  The industrial building that is situated at the Subject Site could be considered a High Occupancy facility under 40 CFR 761.3. A High Occupancy means any area where PCB remediation waste has been disposed of on-site and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is: 840 hours or more (an average of 16.8 hours or more per week) for non-porous surfaces and 335 hours or more (an average of 6.7 hours or more per week) for bulk PCB remediation waste. Examples could include a residence, school, day care center, sleeping quarters, a single or multiple occupancy 40 hours per week work station, a school class room, a cafeteria in an industrial facility, a control room, and a work station at an assembly line. However, since the industrial building has been constructed without a basement and since the finished concrete slab is situated at an elevation of approximately 3 feet above the existing ground surface, the potential exposures associated with non-porous surfaces or bulk waste is considered insignificant due to the incomplete exposure pathway.

  Under current Subject Site condition and usage exposure pathways that consist of direct contact, inhalation or incidental ingestion are considered incomplete. In accordance with the provisions contained in the US EPA Risk Assessment Guidance for Superfund (2001) an incomplete exposure pathway poses No Significant Risk of harm to human health because of the absence of potential contact or exposure and thus absence of identifiable exposure routes. As noted above, there are no exposures of soil or groundwater at the Subject Site since the entire site area is either covered by the footprint of the industrial building, concrete

loading docks and asphalt pavement. The industrial building does not have a basement and that the finished floor slab is situated approximately three (3) feet above the ground surface. Therefore, a condition of No Significant Risk is considered to exist at the Subject Site for the site workers, occasional visitors and trespassers. Additionally, in the absence of surficial exposures of soil and groundwater at the Subject Site there is no evidence suggesting off-site migration of the COCs entrained in air borne dust particles. Thus the potential exposure pathway of the general public to the COCs is considered incomplete and a condition of No Significant Risk exists.

Finally, as noted above, the Subject site groundwater is not considered a current or potential source of drinking water, and is not used for any potable or non-potable uses including but not limited to irrigation or industrial uses. Therefore, there is no evidence suggesting adverse impacts to human health with regards to the Subject Site groundwater. There are no known drinking water supply wells located within 0.5 miles from the Subject Site and groundwater flow beneath the Subject Site is generally inferred in a south-southwesterly direction towards the Hudson River. Properties that may contain private water supply wells are located to the north of and upgradient with regards to the Subject Site. Thus there is no evidence suggesting a potential adverse impact to a hypothetical private water supply well that may be located within 0.5 miles from the Subject Site.

- **Risk to future construction/utility workers, future trespassers/visitors during construction**

Evaluation of the risk of harm to construction and/or utility workers was conducted in general accordance with the provisions contained in the US EPA Risk Assessment Guidance for Superfund (2001). The risk of harm to future construction workers was evaluated quantitatively for PCBs and lead that are considered the COCs that could pose the highest risk of harm to human health due to their toxicity. Other identified contaminants such as PAHs and other metals were generally detected at levels below the NYSDEC Part 375

Industrial Soils thus are not considered to contribute significantly to the cumulative risk quotients estimated for total PCBs and lead.

The US EPA considers a condition of No Significant Risk to exist at any location if the Excess Lifetime Cancer Risk (ELCR) is below the risk limit of one in one-million (1E-06) for individual contaminants, below one in one-hundred thousand (1E-05) for the cumulative risk of all the contaminants considered in a risk characterization, and the cumulative non-cancer Hazard Index (HI) is below one (1). In order to estimate the risk quotients for construction/utility workers, Exposure Point Concentrations (EPCs) were identified for PCBs and lead detected in the tested soil samples. An EPC is defined as the concentration of a contaminant to which a receptor is exposed or come into contact at the point of exposure. The exposure assumptions for adult construction workers include a typical exposure frequency of 8 hours per day, 5 days per week for 182 days per year, averaging period of 70 years for cancer risk and 7 years for non-cancer risk.

The EPC for total PCBs and lead detected in the tested soil samples was estimated as the average concentrations of these COCs detected in soil samples that were obtained from depths ranging from ground surface to approximately fifteen (15) feet below grade that represent the typical depth range for most construction or utility work (results of the soil samples analyses were previously submitted to the NYSDEC as appended to the Site Management Plan). Based on the results of the soil sampling conducted to-date an EPC of 7.7 milligrams per kilogram (mg/kg) was estimated for total PCBs and an EPC of 47.6 mg/kg for lead that potentially may be encountered at depths ranging up to approximately fifteen (15) feet below grade or beneath the slab of the industrial building (up to a depth of about 15 feet below the slab) in the event utility repairs are required and may involve excavation into PCBs or lead-affected soil.

Utilizing the equations contained in the US EPA Risk Assessment Guidance for Superfund (refer to **APPENDIX A**), the estimated risk quotients are as follows:

1. For construction workers the cumulative ELCR is estimated at 3E-07 and the cumulative HI is 5E-01. The risk to utility workers would be lower because the general exposure during utility work is significantly shorter in comparison to construction work;
2. For trespassers and occasional visitors during construction or during utility related work that may involve exposure to PCBs the cumulative ELCR is estimated at 5E-07 and the cumulative HI is estimated at 2E-01.

In summary, based on the above, VERTEX has concluded that a condition of No Significant Risk exists at the Subject Site for potential exposure by future construction/utility workers. The condition of No Significant Risk also exists for occasional visitors or trespassers that may be exposed during such future excavation activities.

4.06 Risk to Ecological Receptors

As noted above, ecological receptors that are considered relevant to the Subject Site are associated with the adjacent Hudson River and consist chiefly of aquatic life. There are no terrestrial habitats located within the Subject Site limits and this condition is not anticipated to be altered in the foreseeable future due to the continued industrial usage of the Subject Site. The nearest known terrestrial habitat is located at Rogers Island Park approximately 0.5 miles to the southeast from the Subject Site on the opposite side of the Hudson River.

The results of the Solute Transport Analyses that was performed for the COCs detected in the tested groundwater samples indicate that there is no evidence suggesting a significant off-site migration of PCBs, dissolved metals or PAHs. Specifically, the Solute Transport Analyses (previously submitted to the NYSDEC) concluded that the surface water at the adjacent Hudson River would not be adversely affected by the detected levels of these contaminants. Furthermore, since the detected levels of the COCs in the tested groundwater samples are not considered to pose a

significant risk of harm to the surface water at the Hudson River, it is also concluded that there is no evidence suggesting that the levels of the COCs detected in the tested soil samples would pose such ecological risk as a result of off-site transport in the direction of groundwater flow.

4.07 Summary of the Risk Characterization

In summary, with regards to the identified COCs at the Subject Site and based on the above, VERTEX has concluded the following:

- A condition of No Significant Risk exists at the Subject Site for the identified human receptors under the current and future usage of the Subject Site as an industrial facility;
- A condition of No Significant Risk exists and will continue to exists for the identified off-site human receptors during current and future industrial usage of the Subject Site;
- A condition of No Significant Risk exists and will continue to exist for construction and/or utility workers under the above referenced exposure scenarios, and
- A condition of No Significant Risk exists for current and future identified ecological receptors.

However, it should be noted that any exposure scenarios associated with residential (multi-unit or single family homes) usage of the Subject Site or any other uses that involve the potential presence of children at high frequency and at a potential exposure at high intensity (such as but not limited to a school, play ground, daycare facility or a recreational park) were excluded from the Risk Characterization. Thus VERTEX has concluded that implementation of Declaration of Covenants and Restriction ("Deed Restriction") is required in order to prevent uses of the Subject Site that could result in a significant risk of harm to human health. In addition, the Deed Restriction contains provisions for implementation of risk-reduction measures during construction or utility work and obligations for maintaining the condition of No Significant risk that currently exists at the Subject Site. A summary of the Deed Restriction is presented below.

5.0 DECLARATION OF COVENANTS AND RESTRICTIONS

Pursuant to the provisions contained in 6 NYCRR Part 375 a Declaration of Covenants and Use Restriction ("Deed Restriction") had been recorded on November 14, 2011 at the Washington County Registry of Deeds for the Subject Site. A copy of the recorded Deed Restriction is contained in **APPENDIX B**. The Deed Restriction intends to ensure that a condition of No Significant Risk continues to exist at the Subject Site for the identified human and ecological receptors.

The following is a summary of the Deed Restriction:

5.01 Permitted Uses and Activities

Activities that are consistent with the results of the Risk Characterization and would not pose a significant risk of harm to human health are as follows:

- Any usage of the Subject site that is consistent with the current industrial uses.

5.02 Prohibited Uses and Activities

Activities and uses which are considered inconsistent with the condition of No Significant Risk, and which if implemented at the Subject Site may result in a significant risk of harm to human health are as follows:

- Any use of the Subject Site, or a portion thereof, other than for the current industrial usage including but not limited to a single-family or multi-unit residences, child day care facility, a recreational park or playground, cultivation of fruit and/or vegetables for human consumption;

- Any use of the Subject Site groundwater for any purpose, including but not limited to irrigation, potable uses or any other non-potable uses, and

- Any use or occupancy of the Subject Site that results in unacceptable human exposure to contaminated soil without obtaining a prior written approval from a relevant New York State agency that has such jurisdiction, without the implementation of a Health and Safety Plan prepared in accordance with all applicable regulatory requirements, and without the implementation of all of the provisions contained in the Site Management Plan (SMP).

6.0 SUMMARY AND CONCLUSIONS

This report describes the results of regulatory response actions performed at a portion of the Irving Tissue, Inc. industrial facility known as the forebay area and located at 1 eddy Street in Fort Edward, New York. The work summarized in this report was performed pursuant to relevant NYSDEC and US EPA regulations.

This report contains the following elements:

- Summary of the Subject Site information;
- Summary of the regulatory response actions;
- A Risk Characterization, and
- Summary of Deed Restrictions.

The Subject Site is a portion of an existing paper manufacturing facility and is known as the forebay area. A historic dam diverted water from the Hudson River into a forebay for the purposes of hydroelectric power generation. During the 1970s hydropower generation ceased, the dam was demolished and the forebay area was backfilled with common fill, debris from the demolished dam and other materials including wood and pulp. River sediments that came to be located at the forebay are known to have been affected by releases of PCBs that occurred at other industrial facilities situated along the Hudson River, upstream from the Subject Site.

Prior to the current redevelopment, the filled forebay was utilized as a paved parking area for commercial trailers and other vehicles associated with the industrial usage of the Subject Site. Recently, a new industrial building was constructed across a portion of the forebay area. The new industrial building was constructed without a basement and the finished floor slab elevation is approximately three (3) feet above the existing ground surface. In addition, new concrete loading docks had been constructed adjacent to the new industrial building. The remainder of the forebay area not occupied by the footprint of the building and loading docks had been paved with asphalt.

Soil and groundwater generated during the construction activities had been collected into appropriate containers and disposed off-site as TSCA waste in accordance with all applicable NYSDEC and US EPA regulations. Records of the off-site disposal had been previously submitted to the NYSDEC along with appropriate Status Reports.

A Risk Characterization was performed for the identified Contaminants of Concern in accordance with relevant provisions contained in the US EPA Risk Characterization Guidance for Superfund Sites and applicable NYSDEC regulations.

The results of the Risk Characterization indicate that:

- A condition of No Significant Risk of harm to human health exists across the Subject Site under current conditions and usage as an industrial facility;
- A condition of No Significant Risk of harm to the identified ecological receptors exists with respect to the Subject Site Contaminants of Concern, and
- A condition of No Significant Risk of harm to current and future construction and/or utility workers and to trespassers/visitors exists and will continue to exist under the industrial usage of the Subject Site.

Excluded from the Risk Characterization were exposure scenarios incidental to residential (single family or multi-unit) usage of the Subject Site or any other uses that may involve the presence of children at high frequency with potential exposure of high intensity. Therefore, implementation of Declaration of Covenants and Restrictions ("Deed Restriction") is required in order to prevent any uses of the Subject Site that may result in an unacceptable level of risk to human health. Thus, on November 18, 2011 a Deed Restriction was recorded for the Subject Site at the Washington County registry of Deeds. The Deed Restriction prohibits the Subject Site from ever being used for any purposes other than the current industrial usage. Other risk mitigating measures are also included in the Deed Restriction.

Based on the information contained in this Final Report, VERTEX has concluded that no additional regulatory response actions are required in order to maintain the condition of No Significant Risk for the current Subject Site industrial usage and under current Subject Site conditions.

7.0 QUALIFICATIONS

Our professional services have been performed, our findings obtained, and our conclusions and professional opinion prepared in accordance with customary principles and standards of care practices in the fields of environmental science and engineering. This warranty is in lieu of all other warranties either expressed or implied. VERTEX is not responsible for the independent conclusions, opinions or recommendations made by others based on the records review, Site inspection, field exploration, and laboratory test data presented in this report. VERTEX professional opinion and conclusions contained herein are based solely on the scope of work performed.

It must be recognized that environmental investigations are inherently limited in the sense that conclusions are drawn and recommendations developed from information obtained from limited research and Site investigation. All site subsurface conditions were not field investigated as part of this study and may differ from the conditions implied by the limited investigation and described herein. Additionally, the passage of time may result in a change in the environmental characteristics at this Site and surrounding properties. This report does not warrant against future operations or conditions, nor does this warrant operations or conditions present of a type or at a location not investigated.

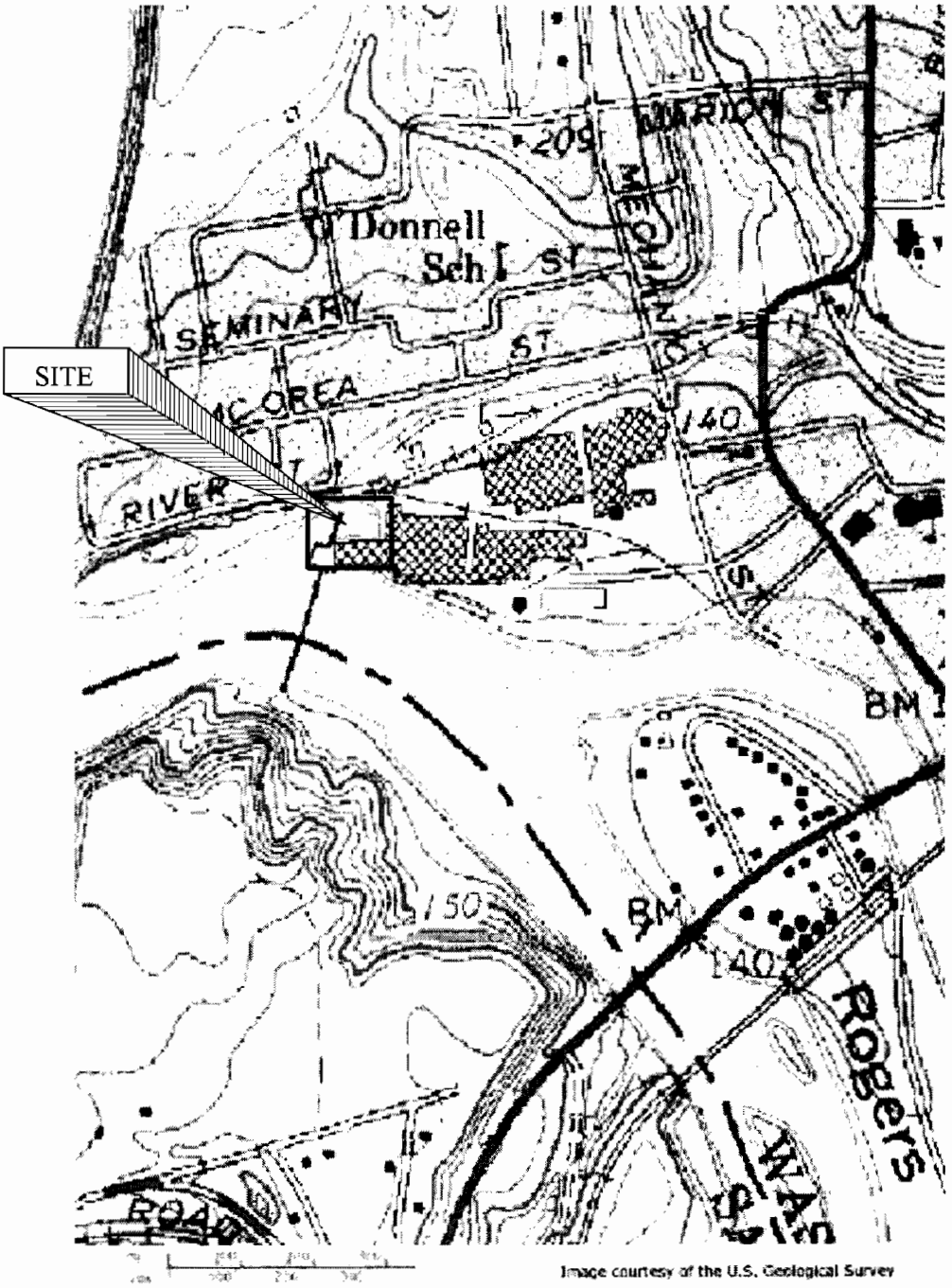
Our interpretation of the available historical information and documents reviewed, as described in this report, were also considered in the conclusions. The results of the chemical analyses that were performed on a limited number of samples of environmental media were reviewed and interpretations had been made in the text, contingent on their validity. VERTEX relied upon but did not attempt to independently verify the validity or accuracy of the findings and conclusions noted in the documentation reviewed.

This report is intended for the sole use of Irving Tissue, Inc. This report, in whole or in part, shall not be disseminated or conveyed to any other party other than the New York State Department of

Environmental Conservation, nor used in whole or in part by any other party without the written consent of Vertex Environmental Services, Inc. The scope of services performed during the investigation documented herein may not satisfy the needs of other users, and any use or re-use of this document or the findings, conclusions, or recommendations is at the sole risk of said user.

Due to the inherent flexibility in interpreting the applicable laws, regulations and policies, the Audits are often subjective and dependent on the opinion of the auditor. As a result, the auditor could require additional assessment of the Site and/or remedial action. Based on these considerations, VERTEX is not and will not be responsible for costs or other possible ramifications of any additional work required by the New York State Department of Environmental Conservation or any other government or private entity.

FIGURES



USGS Topographic Map, 1966
Ft. Edward, NY Quadrangle

N

SITE LOCUS MAP
Irving Tissue
1 Eddy Street
Ft. Edward, NY

Scale: As Shown

July 2010

Project No. 15243

VERTEX
Environmental Services, Inc.
FIGURE NO. 1

NORTH

SCALE 1"= 30'

0 30' 60'

VERTEX

Environmental Services, Inc.

VERTEX@vertexeng.com

Boston Denver San Francisco

Project:

IRVING TISSUE
1 EDDY STREET
FORT EDWARD, NEW YORK

Drawing Title:

SITE SCHEMATIC

Date: July 2010

Figure No. 2

Job Number: 15243

APPENDIX A

EQUATIONS AND RISK QUANTIFICATION

Construction Worker - Soil: Table CW-1
Exposure Point Concentration (EPC) and Risk
Based on Adult Construction Workers

Irving Tissue, Fort Edward, NY

NYSDEC Site No. 558041

ELCR (all chemicals) = 3E-07
HI (all chemicals) = 5E-01

Oil or Hazardous Material (OHM)	EPC (mg/kg)	ELCR ingestion	ELCR dermal	ELCR inhalation GI	ELCR inhalation pulmonary	$ELCR_{total}$	Subchronic HQ_{ing}	Subchronic HQ_{derm}	Subchronic HQ_{inh-GI}	Subchronic HQ_{inh}	Subchronic HQ_{total}
Polychlorinated biphenyls (PCBs)	7.7E+00	1.1E-07	2.2E-07	3.0E-09	2.0E-10	3.4E-07	1.6E-01	3.1E-01	4.2E-03	1.4E-02	4.9E-01
Lead	4.8E+01						3.9E-02	4.7E-03	1.0E-03	1.8E-03	4.7E-02

Construction Worker - Soil: Table CW-2
Equations For Adult Construction Workers Cancer Risk

Cancer Risk from Ingestion

$$ELCR_{ing} = LADD_{ing} * CSF_{oral}$$

$$LADD_{ing} = \frac{EPC * IR * RAF_{c\text{-}ing} * EF * ED_{ing} * EP * C1}{BW * AP_{lifetime}}$$

Cancer Risk from Dermal Absorption

$$ELCR_{derm} = LADD_{derm} * CSF_{oral}$$

$$LADD_{derm} = \frac{EPC * SA * AF * RAF_{c\text{-}derm} * EF * ED_{derm} * EP * C1}{BW * AP_{lifetime}}$$

Cancer Risk from Particulate Inhalation - Gastrointestinal Absorption

$$ELCR_{inh\text{-}GI} = LADD_{inh\text{-}GI} * CSF_{oral}$$

$$LADD_{inh\text{-}GI} = \frac{EPC * RCAF_{inh\text{-}gi} * PM_{10} * VR_{work} * RAF_{c\text{-}ing} * EF * ED_{inh} * EP * C2 * C3 * C4}{BW * AP_{lifetime}}$$

Cancer Risk from Particulate Inhalation - Pulmonary Absorption

$$ELCR_{inh} = LADD_{inh} * CSF_{inhalation}$$

$$LADD = \frac{EPC * RCAF_{inh} * PM_{10} * VR_{work} * RAF_{c\text{-}inh} * EF * ED_{inh} * EP * C2 * C3 * C4}{BW * AP_{lifetime}}$$

Parameter	Value	Units
CSF	OHM-specific	$(mg/kg\text{-}day)^{-1}$
LADD	age/OHM-specific	mg/kg-day
EPC	OHM-specific	mg/kg
IR	100	mg/day
$RAF_{c\text{-}ing}$	OHM-specific	dimensionless
$RAF_{c\text{-}derm}$	OHM-specific	dimensionless
$RAF_{c\text{-}inh}$	OHM-specific	dimensionless
EF	0.714	event/day
$ED_{ing\ \&\ derm}$	1	day/event
ED_{inh}	0.333	day/event
EP	182	days
C1	1.0E-06	kg/mg
C2	1.0E-09	kg/µg
C3	1440	min/days
C4	1.0E-03	m^3/L
BW	58.0	kg
$AP_{(lifetime)}$	25,550	days
VR_{work}	60	L/min
AF	0.29	mg/cm^2
SA	3473	cm^2/day
$RCAF_{inh\text{-}gi}$	1.5	dimensionless
$RCAF_{inh}$	0.5	dimensionless
PM_{10}	60	$\mu g/m^3$

Construction Worker - Soil: Table CW-3
Equations For Adult Construction Workers Noncancer Risk

Noncancer Risk from Ingestion

$$HQ_{ing} = \frac{ADD_{ing}}{RfD_{oral\text{-}subchronic}}$$

$$ADD_{ing} = \frac{EPC * IR * RAF_{nc\text{-}ing} * EF * ED_{ing} * EP * C1}{BW * AP_{noncancer}}$$

Noncancer Risk from Dermal Absorption

$$HQ_{derm} = \frac{ADD_{derm}}{RfD_{oral\text{-}subchronic}}$$

$$ADD_{dermal} = \frac{EPC * SA * AF * RAF_{nc\text{-}derm} * EF * ED_{dermal} * EP * C1}{BW * AP_{noncancer}}$$

Noncancer Risk from Particulate Inhalation - Gastrointestinal Absorption

$$HQ_{inh\text{-}GI} = \frac{ADD_{inh\text{-}GI}}{RfD_{oral\text{-}subchronic}}$$

$$ADD_{inh\text{-}GI} = \frac{EPC * RCAF_{inh\text{-}gi} * PM_{10} * VR_{work} * RAF_{nc\text{-}ing} * EF * ED_{inh} * EP * C2 * C3 * C4}{BW * AP_{noncancer}}$$

Noncancer Risk from Particulate Inhalation - Pulmonary Absorption

$$HQ_{inh} = \frac{ADD}{RfD_{inhalation\text{-}subchronic}}$$

$$ADD_{inh} = \frac{EPC_{soil} * RCAF_{inh} * PM_{10} * VR_{work} * RAF_{nc\text{-}inh} * EF * ED_{inh} * EP * C2 * C3 * C4}{BW * AP_{noncancer}}$$

Parameter	Value	Units
RfD	OHM-specific	mg/kg-day
ADD	OHM-specific	mg/kg-day
EPC	OHM-specific	mg/kg
IR	100	mg/day
$RAF_{nc\text{-}ing}$	OHM-specific	dimensionless
$RAF_{nc\text{-}derm}$	OHM-specific	dimensionless
$RAF_{nc\text{-}inh}$	OHM-specific	dimensionless
EF	0.714	event/day
$EF_{cyanide}$	0	event/day
$ED_{ing\ \&\ derm}$	1	day/event
ED_{inh}	0.333	day/event
EP	182	days
$EP_{cyanide}$	1.00	day
C1	1.0E-06	kg/mg
C2	1.0E-09	kg/µg
C3	1440	min/days
C4	1.0E-03	m^3/L
BW	58.0	kg
$AP_{noncancer}$	182	days
$AP_{cyanide}$	1	day
VR_{work}	60	L/min
AF	0.29	mg/cm^2
SA	3473	cm^2/day
$RCAF_{inh\text{-}gi}$	1.5	dimensionless
$RCAF_{inh}$	0.5	dimensionless
PM10	60	$\mu g/m^3$

Construction Worker - Soil: Table CW-4
Definitions and Exposure Factors

Parameter	Value	Units	Notes
ELCR - Excess Lifetime Cancer Risk	chemical specific	dimensionless	Pathway specific (ing =ingestion, derm=dermal, inh=inhalation)
HI - Hazard Index	chemical specific	dimensionless	Pathway specific (ing =ingestion, derm=dermal, inh=inhalation)
CSF - Cancer Slope Factor	chemical specific	$(mg/kg\text{-}day)^{-1}$	see Table CW-5. EPA IRIS 2004
RfD - Reference Dose	chemical specific	mg/kg-day	see Table CW-5. EPA IRIS 2004
LADD - Lifetime Average Daily Dose	chemical specific	mg/kg-day	Pathway specific See Table CW-2.
ADD - Average Daily Dose	chemical specific	mg/kg-day	Pathway specific. See Table CW-3.
EPC - Exposure Point Concentration	chemical specific	µg/L	see Table CW-1.
IR - Soil Ingestion Rate	100	mg/day	US EPA Risk for Superfund (2001)
RAF_c - Relative Absorption Factor for Cancer Effects	chemical specific	dimensionless	Pathway specific - see Table CW-5
RAF_{nc} - Relative Absorption Factor for Noncancer Effects	chemical specific	dimensionless	Pathway specific - see Table CW-5
EF - Exposure Frequency	0.714	event/day	US EPA Risk for Superfund (2001)
$ED_{ing,derm}$ - Exposure Duration for ingestion or dermal exposure	1	day/event	
ED_{inh} - Exposure Duration for inhalation exposure	0.333	day/event	Represents 8 hours / event.
EP - Exposure Period	182	days	US EPA Risk for Superfund (2001)
$EP_{cyanide}$ - Exposure period for cyanide exposure	1	day	US EPA Risk for Superfund (2001)
BW - Body Weight	58.0	kg	U S. EPA. 1997. Exposure Factors Handbook. Table 7-7, Females, ages 18 - 25.
$AP_{(lifetime)}$ - Averaging Period for lifetime	25,550	days	Represents 70 years
$AP_{(noncancer)}$ - Averaging Period for noncancer	182	days	US EPA Risk for Superfund (2001)
$AP_{cyanide}$ - Averaging period for assessing cyanide exposure	1	day	US EPA Risk for Superfund (2001)
AF - Adherence Factor	0.29	mg/cm^2	US EPA Risk for Superfund (2001)
VR_{work} - Ventilation Rate during work (heavy exertion)	60	L/min	US EPA Risk for Superfund (2001)
SA - Surface Area	3473	cm^2/day	US EPA Risk for Superfund (2001)
$RCAF_{inh\text{-}gi}$ - Relative Concentration Adjustment Factor, gastrointestinal	1.5	dimensionless	
$RCAF_{inh}$ - Relative Concentration Adjustment Factor, inhalation	0.5	dimensionless	EPA Supplemental Guidance 2001
PM10 - Concentration of PM_{10}	60	$\mu g/m^3$	EPA Supplemental Guidance 2001

Construction Worker - Soil: Table CW-5
Chemical-Specific Data

Oil or Hazardous Material	Oral CSF $(mg/kg\text{-}day)^{-1}$	$RAF_{c\text{-}ing}$	$RAF_{c\text{-}derm}$	$RAF_{c\text{-}inh}$	Inhalation CSF $(mg/kg\text{-}day)^{-1}$	Subchronic Oral RfD mg/kg-day	Subchronic $RAF_{nc\text{-}ing}$	Subchronic $RAF_{nc\text{-}derm}$	Subchronic $RAF_{nc\text{-}inh}$	Subchronic Inhalation RfD
Polychlorinated biphenyls (PCBs)	2.0E+00	0.85	0.16	1	3.5E-01	5.0E-05	0.85	0.16	1	5.7E-06
Lead						7.5E-04	0.5	0.006	1	2.9E-04

Trespasser - Soil: Table TS-1

Exposure Point Concentration (EPC)

Adults and Children Trespassers/Visitors (Cancer and Non-Cancer)

Irving Tissue, Fort Edward, NY

NYSDEC Site No. 558041

ELCR (all chemicals) = 5E-07
Chronic HI (all chemicals) = 1E-01
Subchronic HI (all chemicals) = 1E-01

Oil or Hazardous Material	EPC (mg/kg)	$ELCR_{ingestion}$	$ELCR_{dermal}$	$ELCR_{total}$	Chronic HQ_{ing}	Chronic HQ_{derm}	Chronic HQ_{total}	Subchronic HQ_{ing}	Subchronic HQ_{derm}	Subchronic HQ_{total}
Polychlorinated biphenyls (PCBs)	7.7E+00	2.1E-07	3.3E-07	5.4E-07	5.3E-02	8.2E-02	1.4E-01	4.6E-02	6.1E-02	1.1E-01
Lead	4.8E+01				5.1E-03	5.1E-04	5.6E-03	1.1E-02	9.4E-04	1.2E-02

Trespasser - Soil: Table TS-2
Equations for Adults and Children Trespassers/Visitors (Cancer)

Cancer Risk from Ingestion

$$ELCR_{ing} = LADD_{ing} * CSF$$

$$LADD_{ing} = \frac{[OHM]_{soil} * IR * RAF_{e\text{-}ing} * EF_{ing} * ED * EP * C}{BW * AP_{lifetime}}$$

Cancer Risk from Dermal Absorption

$$ELCR_{derm} = LADD_{derm} * CSF$$

$$LADD_{derm} = \frac{[OHM]_{soil} * SA * RAF_{e\text{-}derm} * SAF * EF_{derm} * ED * EP * C}{BW * AP_{lifetime}}$$

Parameter	Value	Units
CSF	OHM specific	$(mg/kg\text{-}day)^{-1}$
LADD	age/OHM specific	mg/kg-day
$[OHM]_{soil}$	OHM specific	mg/kg
IR	50	mg/day
$RAF_{e\text{-}ing}$	OHM specific	dimensionless
$RAF_{e\text{-}derm}$	OHM specific	dimensionless
$EF_{ing,derm}$	0.164	event/day
ED	1	day/event
EP	7	years
C	0.000001	kg/mg
BW	50.7	kg
$AP_{(lifetime)}$	70	years
SA	2940	cm^2 / day
SAF	0.14	mg/cm^2

Trespasser - Soil: Table TS-3

Equations for Adults and Children Trespassers/Visitors (Non-Cancer)

Chronic Noncancer Risk from Ingestion

$$HQ_{ing} = \frac{ADD_{ing}}{RfD}$$

$$ADD_{ing} = \frac{[OHM]_{soil} * IR * RAF_{nc\text{-}ing} * EF_{ing} * ED * EP * C}{BW * AP}$$

Chronic Noncancer Risk from Dermal Absorption

$$HQ_{derm} = \frac{ADD_{ing,derm}}{RfD}$$

$$ADD_{derm} = \frac{[OHM]_{soil} * SA * RAF_{nc\text{-}derm} * SAF * EF_{derm} * ED * EP * C}{BW * AP}$$

Parameter	Value	Units
RfD	OHM specific	mg/kg-day
ADD	OHM specific	mg/kg-day
$[OHM]_{soil}$	OHM specific	mg/kg
IR	50	mg/day
$RAF_{nc\text{-}ing}$	OHM specific	dimensionless
$RAF_{nc\text{-}derm}$	OHM specific	dimensionless
$EF_{ing,derm}$	0.164	event/day
$EF_{cyanide}$	1.00	event/day
ED	1	day/event
EP	7	years
$EP_{cyanide}$	1	day
C	0.000001	kg/mg
BW	50.7	kg
AP	7	year
$AP_{cyanide}$	1	day
SA	2940	cm^2 / day
SAF	0.14	mg/cm^2

Trespasser - Soil: Table TS-4
Equations For Subchronic Non-Cancer Risk for a Trespassers/Visitors

Subchronic Noncancer Risk from Ingestion

$$HQ_{ing} = \frac{ADD_{ing}}{RfD_{subchronic}}$$

$$ADD_{ing} = \frac{[OHM]_{soil} * IR * RAF_{nc\text{-}ing} * EF_{ing} * ED * EP * C}{BW * AP}$$

Subchronic Noncancer Risk from Dermal Absorption

$$HQ_{derm} = \frac{ADD_{derm}}{RfD_{subchronic}}$$

$$ADD_{derm} = \frac{[OHM]_{soil} * SA * RAF_{nc\text{-}derm} * SAF * EF_{derm} * ED * EP * C}{BW * AP}$$

Parameter	Value	Units
RfD	OHM specific	mg/kg-day
ADD	OHM specific	mg/kg-day
$[OHM]_{soil}$	OHM specific	mg/kg
IR	50	mg/day
$RAF_{nc\text{-}ing}$	OHM specific	dimensionless
$RAF_{nc\text{-}derm}$	OHM specific	dimensionless
$EF_{ing,derm}$	0.286	event/day
$EF_{cyanide}$	1.00	event/day
ED	1	day/event
$EP_{cyanide}$	1	day
EP	0.577	years
C	0.000001	kg/mg
BW	40.3	kg
AP	0.577	year
$AP_{cyanide}$	1	day
SA	2477	cm^2 / day
SAF	0.14	mg/cm^2

Trespasser - Soil: Table TS-5
Definitions and Exposure Factors

Parameter	Value	Units	Notes
ELCR - Excess Lifetime Cancer Risk	chemical specific	dimensionless	Pathway specific (ing =ingestion, derm=dermal, inh=inhalation)
CSF - Cancer Slope Factor	chemical specific	$(mg/kg\text{-}day)^{-1}$	see Table RS-7, EPA IRIS, 2004
LADD - Lifetime Average Daily Dose	chemical specific	mg/kg-day	Pathway specific
HQ - Hazard Quotient	chemical specific	dimensionless	Pathway specific (ing =ingestion, derm=dermal, inh=inhalation)
RfD - Reference Dose	chemical specific	mg/kg-day	see Table RS-7, EPA IRIS, 2004
ADD - Average Daily Dose	chemical specific	mg/kg-day	Pathway specific
EPC - Exposure Point Concentration	chemical specific	mg/kg	
IR - Soil Ingestion Rate	50	mg/day	US EPA Risk for Superfund, 2001 (http://www.mass.gov/dep/ors/orspubs.htm)
RAF_c - Relative Absorption Factor for Cancer Effects	chemical specific	dimensionless	
$EF_{subchronic}$ - Exposure Frequency for subchronic ingestion or dermal exposure	0.286	event/day	2 days/week
$EF_{chronic}$ - Exposure Frequency for chronic ingestion or dermal exposure	0.164	event/day	2 days/week, 30 weeks/year
EF_{cancer} - Exposure Frequency for cancer, ingestion or dermal exposure	0.164	event/day	2 days/week, 30 weeks/year
$EF_{cyanide}$ - Exposure Frequency for cyanide exposure	1.00	event/day	
ED - Exposure Duration	1	day/event	
$EP_{(11\text{-}12)}$ - Exposure Period for age group 11-12	0.577	years	30 weeks
$EP_{(11\text{-}18)}$ - Exposure Period for age group 11-18	7	years	
$EP_{cyanide}$ - Exposure period for cyanide exposure	1	day	US EPA Risk for Superfund, 2001
$BW_{(11\text{-}12)}$ - Body Weight for age group 11-12	40.3	kg	U.S. EPA. 1997. Exposure Factors Handbook. Table 7-7
$BW_{(11\text{-}18)}$ - Body Weight for age group 11-18	50.7	kg	Ibid
$AP_{subchronic}$ - Averaging Period for subchronic noncancer	0.577	years	30 weeks
$AP_{chronic}$ - Averaging Period for chronic noncancer	7	years	
AP_{cancer} - Averaging Period for lifetime	70	years	
$AP_{cyanide}$ - Averaging period for assessing cyanide exposure	1	day	US EPA Risk for Superfund, 2001
$SA_{(11\text{-}12)}$ - Surface Area for age group 11-12	2477	cm^2 / day	50th percentile of forearms, hands, and feet for females.
$SA_{(11\text{-}18)}$ - Surface Area for age group 11-18	2940	cm^2 / day	US EPA Risk for Superfund, 2001 Ibid
SAF - Surface Adherence Factor, Trespasser	0.14	mg/cm^2	Weighted Skin-Soil Adherence Factors, April 2002.

Trespasser - Soil: Table TS-6
Chemical-Specific Data

Oil or Hazardous Material	CSF $(mg/kg\text{-}day)^{-1}$	$RAF_{c\text{-}ing}$	$RAF_{c\text{-}derm}$	Chronic RfD mg/kg-day	Subchronic RfD mg/kg-day	Chronic $RAF_{nc\text{-}ing}$	Chronic $RAF_{nc\text{-}derm}$	Subchronic $RAF_{nc\text{-}ing}$	Subchronic $RAF_{nc\text{-}derm}$
Polychlorinated biphenyls (1	2.0E+00	0.85	0.16	2.0E-05	5.0E-05	0.85	0.16	0.85	0.16
Lead				7.5E-04	7.5E-04	0.5	0.006	0.5	0.006

APPENDIX B

DEED RESTRICTIONS

60 2011 00073071

Washington County
Dona J. Crandall County Clerk
383 Broadway Building A
Fort Edward, New York 12828

Doc#: 00073071
Bk: 3038 Pg: 55

Volm-3038 Pg-55

Instrument Number: 2011- 00073071

As

Recorded On: November 14, 2011 **Deed Agreement**

Parties: IRVING TISSUE

To

Billable Pages: 7

Recorded By: WHITEMAN OSTERMAN AND HANNA **Num Of Pages:** 8

Comment:

**** Examined and Charged as Follows: ****

Deed Agreement	75 00	Cover Page	5 00
Recording Charge:	80.00		

Received
County Clerks Office
Nov 14,2011 12:47P
Washington County
Dona J. Crandall

**** THIS PAGE IS PART OF THE INSTRUMENT ****

I hereby certify that the within and foregoing was recorded in the Clerk's Office For: Washington County, NY

File Information:

Document Number: 2011- 00073071
Receipt Number: 247552
Recorded Date/Time: November 14, 2011 12:47:40P
Book-Vol/Pg: Bk-R Vl-3038 Pg-55
Cashier / Station: V Willey / Cashier Station 3

Record and Return To:

WHITEMAN OSTERMAN AND HANNA
ONE COMMERCE PLAZA
ALBANY NY 12260

WASHINGTON COUNTY

Dona J. Crandall
Washington County Clerk

DECLARATION of COVENANTS and RESTRICTIONS

THIS COVENANT is made the 9th day of November, 2011, by Irving Tissue, Inc., a corporation organized and existing under the laws of the State of Delaware and having an office for the transaction of business at 1 Eddy Street, Fort Edward, New York 12828

WHEREAS, Irving Tissue, Inc. is the subject of an Order on Consent executed by Irving Tissue, Inc as part of the New York State Department of Environmental Conservation's (the "Department's) State Superfund Program, namely a portion of that parcel of real property located on 1 Eddy Street, in the Village of Fort Edward, County of Washington, State of New York, which is part of lands conveyed by Kimberly Clark Tissue Company (formerly known as Scott Paper Company) to Irving Tissue, Inc by deed dated July 26, 1996 and recorded in the Washington County Clerk's Office on August 1, 1996, in Book 759 of Deeds at page 297, and being more particularly described in Appendix "A," attached to this declaration and made a part hereof, and hereinafter referred to as 'the Property"; and

WHEREAS, the Department approved a remedy to eliminate or mitigate all significant threats to the environment presented by the contamination disposed at the Property and such remedy requires that the Property be subject to restrictive covenants

NOW, THEREFORE, Irving Tissue, Inc., for itself and its successors and/or assigns, covenants that:

First, the Property subject to this Declaration of Covenants and Restrictions is as shown on a map attached to this declaration as Appendix "B" and made a part hereof

Second, unless prior written approval by the Department or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, where contamination remains at the Property subject to the provisions of the Site Management Plan ("SMP"), there shall be no use or occupancy of the Property that results in unacceptable human exposure to contaminated soils

Third, the owner of the Property shall prohibit the Property from ever being used for purposes other than for its current use as industrial property without the express written waiver of such prohibition by the Department or Relevant Agency.

Fourth, the owner of the Property shall prohibit the use of the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Department or Relevant Agency.

Fifth, the owner of the Property shall provide a periodic certification, prepared and submitted by a qualified environmental professional acceptable to the Department or Relevant Agency, which will certify that the institutional controls put in place are unchanged from the previous certification, comply with the SMP, and have not been impaired.

Sixth, the owner of the Property shall continue in full force and effect any institutional controls required for the Remedy and maintain such controls, unless the owner first obtains permission to discontinue such controls from the Department or Relevant Agency, in compliance with the approved SMP, which is incorporated and made enforceable hereto, subject to modifications as approved by the Department or Relevant Agency.

Seventh, this Declaration is and shall be deemed a covenant that shall run with the land and shall be binding upon all future owners of the Property, and shall provide that the owner and its successors and assigns consent to enforcement by the Department or Relevant Agency of the prohibitions and restrictions that the Order on Consent requires to be recorded, and hereby covenant not to contest the authority of the Department or Relevant Agency to seek enforcement.

Eighth, any deed of conveyance of the Property, or any portion thereof, shall recite, unless the Department or Relevant Agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions.

IN WITNESS WHEREOF, the undersigned has executed this instrument the day written below

By: _____

Print Name: Robert K. Irving

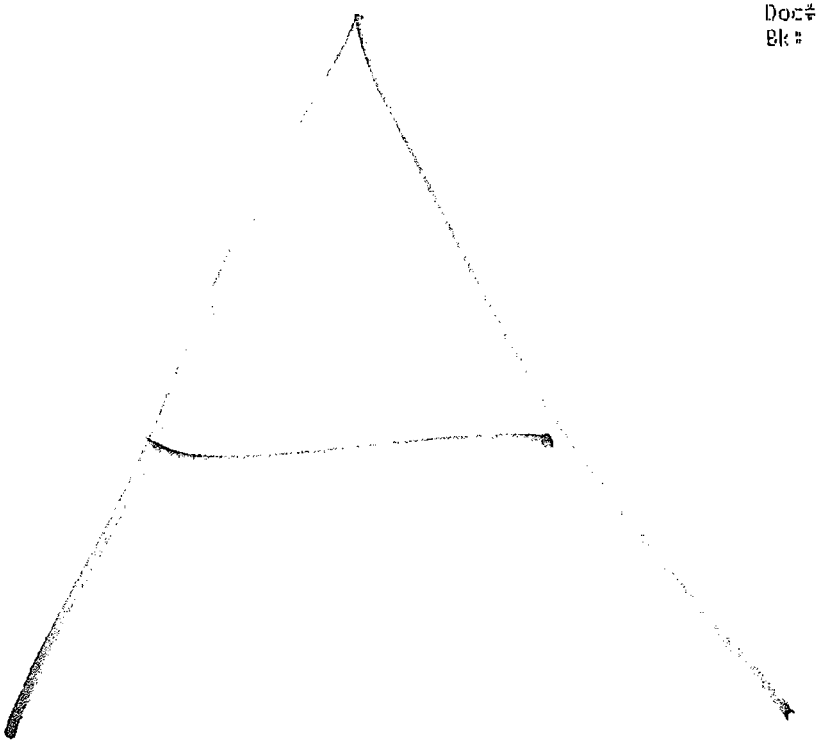
Title: President Date: November 9 , 2011

PROVINCE OF NEW BRUNSWICK)
) ss.:
COUNTY OF WESTMORLAND)

On the 9th day of November, 2011, before me, the undersigned, personally appeared Robert K. Irving, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

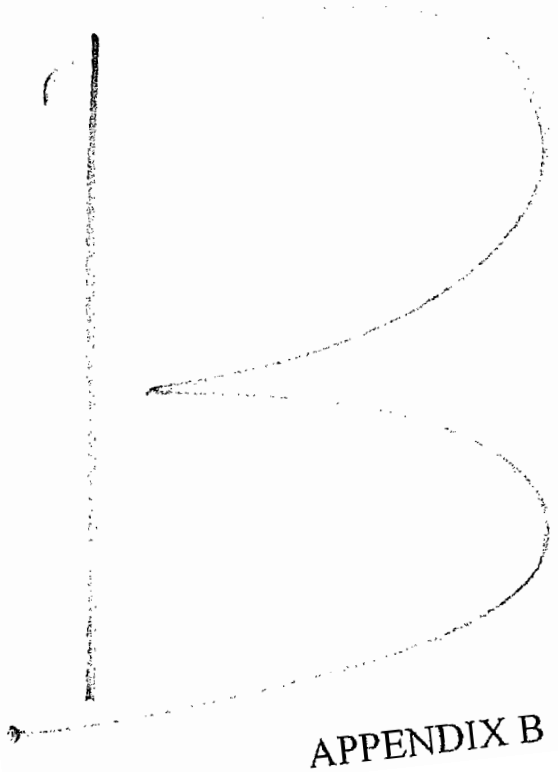
Doc#: 00073071
Bk: 3038 Pg: 58



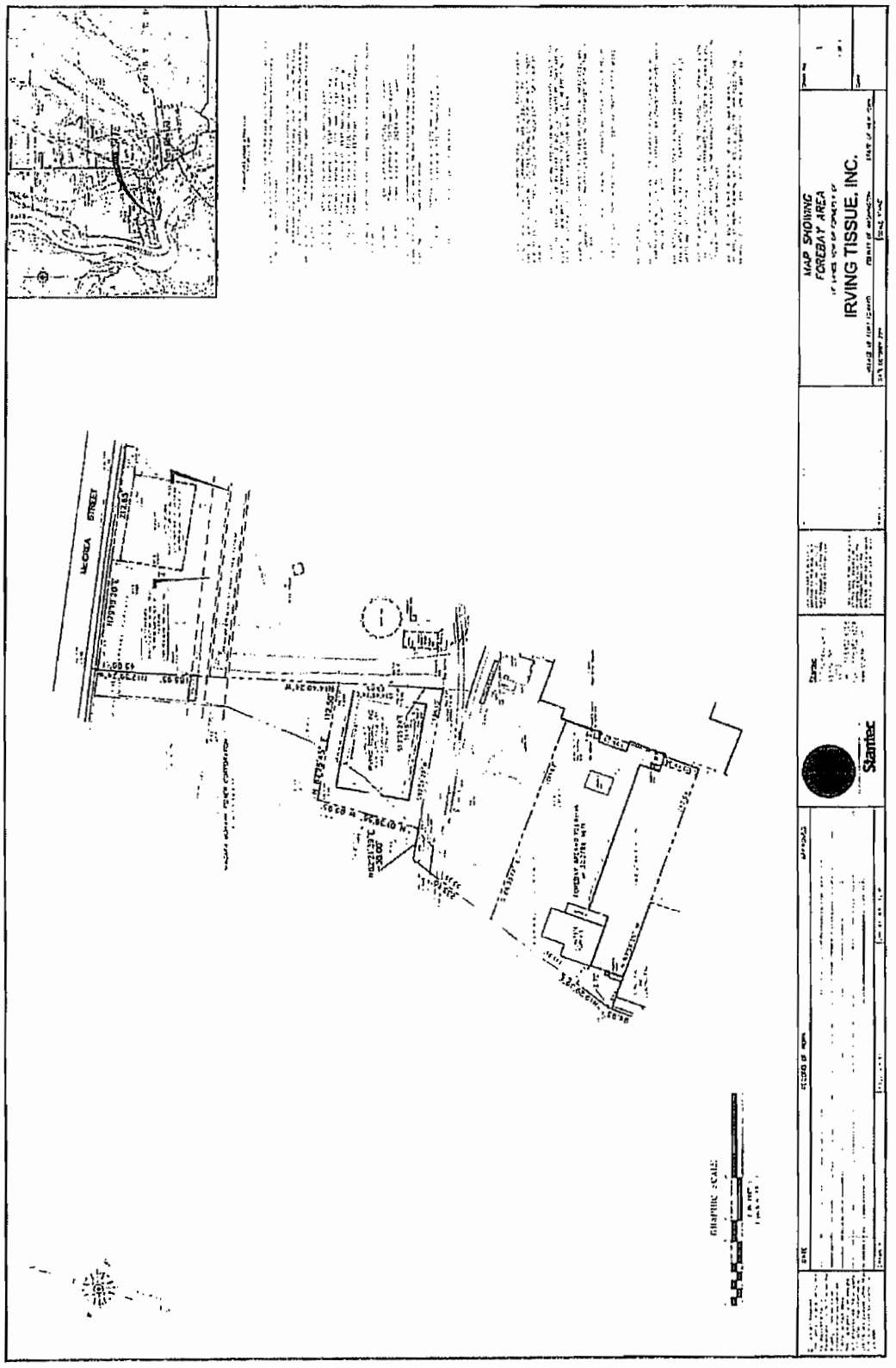
APPENDIX A

MATCHLINE
IRVING TISSUE, INC.

IRVING TISSUE
ALTA/ACSM LAND TITLE SURVEY
IRVING TISSUE, INC.
MATCHLINE



APPENDIX B


MAP SHOWING
FOREBAY AREA
IRVING TISSUE, INC.
Stantec