



PERIODIC REVIEW

**Superior Asphalt
F/SID #: 488**

**2000 East Beech Street
Yakima, Washington 98901**

**TOXICS CLEANUP PROGRAM
Central Regional Office**

July 21, 2008

1.0	INTRODUCTION.....	1
2.0	SUMMARY OF SITE CONDITIONS.....	2
2.1	Site History	2
2.2	Cleanup Levels.....	2
2.3	Points of Compliance	3
2.4	Summary of Cleanup Actions.....	3
2.5	Restrictive Covenant.....	4
2.6	Monitoring	5
3.0	PERIODIC REVIEW	6
3.1	Effectiveness of completed cleanup actions	6
3.2	New scientific information for individual hazardous substances for mixtures present at the Site.	6
3.3	New applicable state and federal laws for hazardous substances present at the Site	7
3.4	Current and projected Site use	7
3.5	Availability and practicability of higher preference technologies	7
3.6	Availability of improved analytical techniques to evaluate compliance with cleanup levels.	7
4.0	CONCLUSIONS	8
5.0	NEXT REVIEW	8
6.0	REFERENCES.....	9
7.0	APPENDICIES	10
7.1	Vicinity Map	11
7.2	Site Plan	12
7.3	Environmental Covenant	13
7.4	Photo log	18

1.0 INTRODUCTION

This document is a review by the Washington State Department of Ecology (Ecology) of post-cleanup site conditions and monitoring data to assure that human health and the environment are being protected at the Superior Asphalt and Concrete facility (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA), Chapter 173-340 WAC.

Cleanup activities at this Site were completed under Enforcement Order DE 91TC-C444 that was issued in October 1991 and amended in October 1997 and June 2000. The cleanup actions resulted in residual concentrations of total petroleum hydrocarbons (TPH) exceeding MTCA Method A cleanup levels for soil established under Washington Administrative Code (WAC) 173-340-740(2). WAC 173-340-420 (1) requires that “if the department selects or approves a cleanup action that results in hazardous substances remaining at a site at concentrations which exceed Method A or Method B cleanup levels established under WAC 173-340-700 through 173-340-760 or if conditional points of compliance have been established, the department shall review the cleanup action no less frequently than every five years after the initiation of such cleanup action to ensure that human health and the environment are being protected”.

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [WAC 173-340-420(2)]:

- (a) The effectiveness of ongoing or completed cleanup actions;
- (b) New scientific information for individual hazardous substances of mixtures present at the site;
- (c) New applicable state and federal laws for hazardous substances present at the Site;
- (d) Current and projected site use;
- (e) Availability and practicability of higher preference technologies; and
- (f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The department shall publish a notice of all periodic reviews in the site register and provide an opportunity for public comment.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Site History

The Superior Asphalt and Concrete facility is located in the City of Yakima in Yakima County, Washington (Vicinity Map - Appendix 6.1). Site cleanup is currently being conducted under an amended Enforcement Order originally issued in October 1991. The Order was amended in October 1997 and again in June 2000. All remedial activities have been completed at the Site.

The Site occupies approximately 4 acres within the 100-year floodplain of the Yakima River. Asphalt was produced at the Site from approximately March to November for approximately 30 years, until 1997, when Superior Asphalt operations were moved to Selah. The majority of the petroleum hydrocarbon impacted soils are located under the site operations area (Site Plan – Appendix 6.2). The facility is located adjacent to Interstate-82 in a commercial/industrial area.

During the 1950s, the property served as a low-income housing residential area and municipal garbage dump. No industrial activities were present at that time. The housing consisted of a series of shacks and temporary housing. A City of Yakima garbage dump occupied the area where Sarge Hubbard Park is now located. Several active faces and lifts on the dump were visible in a 1955 aerial photo. At some point prior to 1968, Superior Asphalt built their first asphalt plant at the Site. This plant used diesel as a heat source in asphalt production. Around this time, Central Premix became active on its current property with mining and stockpiling of aggregate at several locations. The garbage dump ceased operation sometime prior to 1973.

Over the next two decades, the Site continued to be developed by Superior Asphalt and Central Premix. By 1989, the Site looked much as it does today. A new asphalt plant was built by Superior Asphalt, now heated by natural gas instead of diesel. Ponds A, B and C had been developed as they are today.

During 1991, a petroleum seep was noticed along the bank of Pond A, near the asphalt production area. Following the discovery of the seep, an Enforcement Order was issued by Ecology requiring immediate cleanup efforts.

2.2 Cleanup Levels

The Enforcement Order states that all remedial actions are to be conducted in accordance with Washington Administrative Code 173-340. Based on that requirement, the following levels are used at the site:

- Soil - Method A cleanup levels are appropriate for the Site soils. Method A established soil cleanup levels of 2000 milligrams per kilogram (mg/kg) for TPH-diesel (TPH-D) and 2000 mg/kg for heavy oil (TPH-O).

- Groundwater - Method A cleanup levels are appropriate for Site groundwater. The Method A cleanup level of 500 micrograms per liter (ug/L) was used for TPH-D and TPH-O.

2.3 Points of Compliance

The Enforcement Order defines the Site as 'Superior Asphalt' located at '2000 East Beech Street'. The point of compliance for soil shall be defined as the area affected by petroleum hydrocarbons in soil above MTCA Method A cleanup levels, regardless of depth, to protect groundwater.

The groundwater point of compliance is throughout the Site from the uppermost level of the saturated zone to the lowest depth that could possibly be affected by the Site.

2.4 Summary of Cleanup Actions

In 1994, an interim action was conducted to address petroleum hydrocarbon contamination seeping into Pond A. An interception trench, liner, and product recovery system were installed to control potential migration of floating petroleum product from the Site. A total of 958 feet of trench was excavated from the office building to the north shore of Pond A. A 30-mil arctic petroleum-resistant Polyvinyl Chloride (PVC) liner was placed along the downgradient race of the excavation, extending from at least 2 feet below the water table up to the ground surface. Six product recovery wells were installed along the excavation, inside the liner, at approximate 150-foot intervals. Belt skimmers were installed in the two wells where free product was detected. The belt skimmers were operated for a few hours, but no additional product accumulated in the wells. The liner remains in place at the Site.

The remedial investigation/feasibility study (RI/FS) began in 1992 and was completed in 1997. In 1996, Superior Asphalt decided that plant operations would be moved to a new location within the next two years. The decision to move the plant altered the practical remedial options to be considered during the feasibility study, making soil removal a viable option. The final remediation design plan and cleanup plan were completed in 1999.

Remedial construction was started in 1998. As part of the cleanup plan, all soil was stockpiled as feedstock for off-site asphalt production. Soil was excavated, screened, crushed, and stockpiled for processing at an off-site asphalt plant. Soil was excavated to just above the seasonal high groundwater elevation and then test pits were dug across the bottom of the excavation to define the general area affected by remaining petroleum contaminated soils (PCS). Soil was then excavated from 2 to 3 feet below the seasonal low groundwater elevation. The majority of soil contamination was removed from below the water table, but some remains at concentrations exceeding MTCA Method A cleanup levels.

Following Site excavation, soil samples were collected from the pit sidewalls to confirm that the lateral extent of removal was adequate. Samples were collected on 50-foot intervals along the sidewalls. No samples contained petroleum hydrocarbon concentrations greater than MTCA Method A cleanup levels for diesel and heavy oil-range petroleum hydrocarbons.

The excavation area was backfilled to two feet above the water table with high-rock-content pit run. The remainder of the excavation was backfilled to the surrounding grade with soil over the next two years.

A total of 21 groundwater monitoring wells were installed at the site during the remedial investigation. Eleven of these were removed from within the limits of the excavation. Two of the remaining wells are located downgradient of the interception trench and were used for post construction monitoring. The eight wells located upgradient of the excavation, were used for compliance monitoring.

In January 2008, Ecology approved the installation of an asphalt walking path around Pond A that was proposed by the Yakima Greenway Foundation. It was determined that the construction of this asphalt path did not violate the terms of the restrictive covenant. The construction of the pathway was approved based on the condition that 'construction and use of the path shall not result in exposure to hazardous materials remaining at the Site'. Construction of the pathway has not begun as of June 2008.

2.5 Restrictive Covenant

Following cleanup activities, a Restrictive Covenant (Appendix 6.3) was recorded for the Site in 2007. The restrictive covenant notifies prospective purchasers of the location of contained petroleum contamination and places the following requirements on the property owner:

1. Disturbance of the interception trench, liner, soil cover and existing, functional test wells on the Property which would allow migration of contamination is prohibited without prior notification to and approval by DOE or its successor agency.
2. The petroleum contaminated soil, if any, East of the lined interception trench on the Property shall be physically isolated by a barrier such as a fence which will be constructed by Superior and maintained by the City, the property owner and Greenway, and not removed without prior notification to and approval by DOE or its successor agency.
3. The Property may not be used for any residential purpose.
4. No title or interest in the Property may be conveyed without completed provision for continued compliance with the above restrictive covenants.

2.6 Monitoring

As part of the Enforcement Order, a long-term groundwater compliance monitoring plan was prepared for the Site. The plan included collection of ground water samples from interceptor wells IW-2 and IW-5 and monitoring well MW-19 on a quarterly basis for one year to assess ground water quality and identify seasonal impacts. If concentrations remained the same, diminished, or fluctuated below MTCA method A cleanup levels, sampling was to continue on a semi-annual basis for at least two years, with sampling to occur during the month of the two highest recorded quarterly results for diesel-range hydrocarbons.

Results from April 2003 indicated the presence of diesel range petroleum hydrocarbons at 0.37 mg/L in IW-2, which is below MTCA Method A cleanup levels. Contamination was not detected in any of the other wells. Following the April 2003 sampling event, groundwater contamination was not detected in any of the wells during the following seven sampling events. The requirements of the groundwater compliance monitoring plan were met following the January 2006 sampling event.

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

Cleanup actions at the site were intended to eliminate human exposure to contaminated soils and groundwater at the Site. The exposure pathway to contaminated soils and free product (ingestion, direct contact) has been removed by the presence of clean fill in the remedial excavation area, as well as the interception trench located along Pond A. The potential exposure pathway to contaminated groundwater has been removed by excavation of the contamination source material and the interception trench, which prevents any additional migration of floating free product. Groundwater monitoring was conducted for three years from 2003 until 2006. Groundwater monitoring has not detected TPH-D above MTCA Method A cleanup levels.

The site visit conducted on July 10, 2008 showed no indications of the integrity of the site cover being compromised, no signs of undocumented site excavation or disturbance activities, and no visual signs of possible disturbance of the clean fill material.

The Restrictive Covenant for the Site was recorded and is in place. This Restrictive Covenant prohibits activities that will result in the release of contaminants contained as part of the cleanup without Ecology's approval, and prohibits other uses. This Restrictive Covenant will maintain the integrity of the Site surface and the free product interception system installed during the cleanup.

Conclusions:

Soils with TPH concentrations higher than MTCA Method A cleanup levels are still present at the Site. Free product may still be present at the Site in small quantities. However, the clean fill surface prevents human exposure to this contamination by ingestion and direct contact with soils. The Restrictive Covenant will ensure that contaminated soil and groundwater from the Site will not spread or be extracted for use and the integrity of the protective surfaces will be maintained through continuing the current use of the Site. The interception trench will ensure that contaminated groundwater from the Site will not spread and cause additional downgradient impacts.

3.2 New scientific information for individual hazardous substances for mixtures present at the Site

There is no new scientific information for the petroleum contaminants related to the Site.

3.3 New applicable state and federal laws for hazardous substances present at the Site

This cleanup is governed by Chapter 173-340 WAC. Since the completion of remedial activities, no changes have been made to the WAC affecting cleanup decisions made at the Site. Site cleanup levels determined in the CAP will not change. WAC 173-340-702(12) (c) [2001 ed.] provides that,

“A release cleaned up under the cleanup levels determined in (a) or (b) of this subsection shall not be subject to further cleanup action due solely to subsequent amendments to the provision in this chapter on cleanup levels, unless the department determines, on a case-by-case basis, that the previous cleanup action is no longer sufficiently protective of human health and the environment.”

Although contamination remains at the Site above MTCA Method A cleanup levels, the cleanup action is still protective of human health and the environment.

3.4 Current and projected site use

The Site is currently used for recreational and industrial purposes. A portion of the Site is part of Sarge Hubbard Park, a portion is enclosed by fence and used for parking, and a portion is used as roadway for passage of cement trucks from the adjacent ready-mix cement plant. There have been no changes in current or projected future site or resource uses.

3.5 Availability and practicability of higher preference technologies

The remedy implemented included containment of hazardous substances and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this Site.

3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels

The analytical methods used at the time of the remedial action were capable of detection below MTCA Method A cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

4.0 CONCLUSIONS

- The cleanup actions completed at the Site appear to be protective of human health and the environment.
- Soil cleanup levels have not been met at the Site; however, under WAC 173-340-740(6) (d), the cleanup action is determined to comply with cleanup standards, since the long-term integrity of the containment system is ensured and the requirements for containment technologies in WAC 173-340-360(8) have been met.
- The Restrictive Covenant for the property is in place and will be effective in protecting public health and the environment from exposure to hazardous substances and protecting the integrity of the cleanup action.

Based on this periodic review, the Department of Ecology has determined that the requirements of the Restrictive Covenant have been satisfactorily completed. No additional actions are required by the property owner. It is the property owner's responsibility to continue to inspect the site to assure that the integrity of the cap is maintained.

4.1 NEXT REVIEW

The next review for the site will be scheduled five years from the date of this periodic review. In the event that additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years from the completion of those activities.

5.0 REFERENCES

Herrera Environmental Consultants. July 1992. Superior Asphalt Groundwater Treatment System Evaluation.

Pacific Groundwater Group. January 1996. Final Remedial Investigation/Feasibility Study Report.

Pacific Groundwater Group. January 1997. Final Remedial Investigation/Feasibility Study Report.

Herrera Environmental Consultants. March 2003. Construction Documentation Report.

Herrera Environmental Consultants. March 2004. 2003 Annual Groundwater Monitoring Report.

Herrera Environmental Consultants. January 2005. 2004 Annual Groundwater Monitoring Report.

Herrera Environmental Consultants. May 2006. 2005 Annual Groundwater Monitoring Report.

Ecology. April 2007. Restrictive Covenant.

Ecology. January 2008. Enforcement Order Completion letter.

6.0 APPENDICIES

Legend

- Approximate area of existing excavation
- ▨ Extent of follow up Stage 3 soil removal
- ▩ Total area of Stage 3 soil removal
- ⊙ Monitoring well
- Interceptor well
- ◇ Skimmer pump

Site Map Details:

- Stockpile:** Labeled "Existing Stockpile" and "Final stockpile". Includes handwritten notes: "11/16/19", "cut face of pile at ~6' (approx 30' high)", and " $\sim 25,000 \text{ yds}^3$ ".
- Excavation:** Shaded area labeled "Direction of excavation" with arrows indicating flow.
- Monitoring Wells:** IW-0, IW-1, IW-2, IW-3, IW-4, IW-5, IW-6, MW-19.
- Interceptors:** IW-1, IW-2, IW-3, IW-4, IW-5, IW-6.
- Other Features:** "Silt bench", "Waste treatment system location (see Figure 4)", "Sump", "1/4 corner 5/8" rebar", "Office", "Residences", "Wrecking yard", "Approximate location of material processing equipment", "Approximate location of temporary stockpile", "Approximate location of 20,000 gallon tank".
- Ponds:** Pond A and Pond B.
- Scale:** 0 to 100 feet.
- North Arrow:** Indicated by an arrow pointing up.

Figure 3. Follow up soil removal details.

6.3 Environmental Covenant

Return to: Flower & Andreotti
303 East "D" Street #1
Yakima, WA 98901

Document Title: Restrictive Covenants

Grantors: City of Yakima, a municipal corporation; Superior Asphalt & Concrete Co., a Washington corporation; CPM Development Corporation, a Washington corporation, successor of Central Pre-Mix Concrete Co., an inactive Washington corporation; and Yakima River Regional Greenway Foundation, a Washington non-profit corporation.

Grantees: Superior Asphalt & Concrete Co., a Washington corporation; CPM Development Corporation, a Washington corporation, successor of Central Pre-Mix Concrete Co., an inactive Washington corporation; and Yakima River Regional Greenway Foundation, a Washington non-profit corporation.

Abbreviated Legal Description: A portion of the South half of the Northeast quarter of Section 20, Township 13 North, Range 19 E.W.M. (Additional legal on pp. 1-2)

Tax Parcel Numbers: 191320-13007, 191320-13009 and 191320-13010.

RESTRICTIVE COVENANTS

RECITALS:

1. The CITY OF YAKIMA, a Washington municipal corporation, is the owner of Yakima County, Washington real property (the "Property" or "parcels") particularly described as:

ORIGINAL



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Page: 1 of 5

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Parcel A: The East 470 feet of the South 700 feet of the West half of the Southwest quarter of the Northeast quarter of Section 20, Township 13 North, Range 19 E.W.M., Yakima County, Washington. (Parcel No. 191320-13007)

Parcel B: The West half of the West half of the Southwest quarter of the Southeast quarter of the Northeast quarter of Section 20, Township 13 North, Range 19 E.W.M., EXCEPT the South 165 feet thereof; AND EXCEPT the North 25 feet for County road. (Parcel No. 191320-13009)

Parcel C: The South 165 feet of the West half of the West half of the Southwest quarter of the Southwest quarter of the Northeast quarter of Section 20, Township 13 North, Range 19, E.W.M. (Parcel No. 191320-13010)

2. SUPERIOR ASPHALT & CONCRETE CO., a Washington corporation, had a reserved legal interest in the Property which SUPERIOR has, since 1991, exercised only to perform the below-described DOE remediation. SUPERIOR agrees to unconditionally release and terminate its 1985 "Reservation" for the use of Parcels "A", "B" and "C".

CENTRAL PRE-MIX COMPANY, an inactive Washington corporation, has been acquired by its successor-in-interest, CPM DEVELOPMENT CORPORATION ("CPM Corp."), which continues to use the Property for the transit of equipment and vehicles transporting CPM Corp.'s aggregate rock, concrete, sand and other materials and agrees to limit its use of Parcels "A", "B" and "C" to a thirty (30) foot roadway along the Western boundary of the three (3) parcels required for CPM Corp.'s use as equipment and vehicle access to and from Riverside Street and CPM Corp.'s business operations adjacent to and on the South side of Parcels "A", "B" and "C".

3. The YAKIMA RIVER REGIONAL GREENWAY FOUNDATION, a Washington non-profit corporation, is a beneficiary of the above-described real estate.

4. Part of the Property has been subject to environmental remediation pursuant to Washington State Department of Ecology ("DOE") Order No. 91TC-C444, as amended (the "Order").

5. Environmental remediation on the Property has been completed but DOE requires "institutional controls" be established for the Property to limit activities which may interfere with the integrity of the remediation.

6. The parties desire, by these "Restrictive Covenants", to establish the institutional controls required by DOE pursuant to the Order.



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Page: 2 of 5

04/23/2007 11:58A

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RESTRICTIVE COVENANTS

In consideration of compliance with the Order, the above Recitals and other valuable consideration, the following restrictions are placed on the Property:

1. Disturbance of the interception trench, liner, soil cover and existing, functional test wells on the Property which would allow migration of contamination is prohibited without prior notification to and approval by DOE or its successor agency.
2. The petroleum contaminated soil, if any, East of the lined interception trench on the Property shall be physically isolated by a barrier such as a fence which will be constructed by Superior and maintained by City, the property owner and Greenway, and not removed without prior notification to and approval by DOE or its successor agency.
3. The Property may not be used for any residential purpose.
4. No title or interest in the Property may be conveyed without complete provision for continued compliance with the above restrictive covenants.

These "Restrictive Covenants" shall be covenants running with the land.

DATED: ~~March~~ ^{April} 20, 2007.

CITY CONTRACT NO: 2007-31
RESOLUTION NO: R-2007-59

CITY OF YAKIMA, a municipal corporation:

By: [Signature]
Title: R. A. Zais, Jr., City Manager

Attest: [Signature]
Title: Deputy City Clerk



SUPERIOR ASPHALT & CONCRETE CO.

By: [Signature]
J. BRIAN SIMS, President.

Attest: [Signature]
JOHN F BENSON, Secretary.

CPM DEVELOPMENT CORPORATION:

By: [Signature]
JEFF SCHAEFFER, President.

Attest: [Signature]
Paul D Salisbury, Secretary.



7558796
Page: 3 of 5
04/23/2007 11:58A

YAKIMA RIVER REGIONAL GREENWAY
FOUNDATION:

By: Pam Cleaver
PAM CLEAVER, President.

STATE OF WASHINGTON)
: ss.
County of Yakima)

On this 22nd day of March, 2007, before me, personally appeared PAM CLEAVER, to me known to be the President of YAKIMA RIVER REGIONAL GREENWAY FOUNDATION, the corporation which executed the within and foregoing instrument, and acknowledged the instrument to be the free and voluntary act and deed of the corporation, for the uses and purposes therein mentioned, and on oath stated he was authorized to execute the instrument.

In Witness Whereof, I have signed and affixed my official seal the day and year first above written.

Jan L. Larin
NOTARY PUBLIC in and for the
State of Washington.
My commission expires: 10/31/10

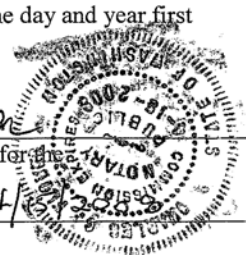


STATE OF WASHINGTON)
: ss.
County of Yakima)

On this 5th day of March, 2007, before me, personally appeared J. BRIAN SIMS and John F. Benson to me known to be the President and Secretary of SUPERIOR ASPHALT & CONCRETE CO., the corporation which executed the within and foregoing instrument, and acknowledged the instrument to be the free and voluntary act and deed of the corporation, for the uses and purposes therein mentioned, and on oath stated they were authorized to execute the instrument.

In Witness Whereof, I have signed and affixed my official seal the day and year first above written.

Charles Benson
NOTARY PUBLIC in and for the
State of Washington.
My commission expires: 4/30/2008



7558796
Page: 4 of 5
04/23/2007 11:58A
Yakima Co, WA

STATE OF WASHINGTON)
: ss.
County of Spokane)

On this 6th day of March, 2007, before me, personally appeared JEFF SCHAFER and _____, to me known to be the President and Secretary of CPM DEVELOPMENT CORPORATION, the corporation which executed the within and foregoing instrument, and acknowledged the instrument to be the free and voluntary act and deed of the corporation, for the uses and purposes therein mentioned, and on oath stated they were authorized to execute the instrument.

In Witness Whereof, I have signed and affixed my official seal the day and year first above written.



Karen R. Christy
NOTARY PUBLIC in and for the
State of Washington.
My commission expires: 2-25-08

STATE OF WASHINGTON)
: ss.
County of Yakima)

On this 20 day of APRIL March, 2007, before me, personally appeared R.A. Zais Jr and _____, to me known to be the City Manager and _____ of the CITY OF YAKIMA, WASHINGTON, a municipal corporation, the municipal corporation which executed the within and foregoing instrument, and acknowledged the instrument to be the free and voluntary act and deed of the municipal corporation, for the uses and purposes therein mentioned, and on oath stated they were authorized to execute the instrument.

In Witness Whereof, I have signed and affixed my official seal the day and year first above written.



Sonya R. Claar
NOTARY PUBLIC in and for the
State of Washington.
My commission expires: 7-15-10

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Page: 5 of 5
04/23/2007 11:58A
Yakima Co, WA

6.4 Photo log

Photo 1: Containment Area - from the northwest



Photo 2: Pond A Seep Area - from the northeast



Photo 3: Containment Area Toward Existing Pre-Mix Plant - from the North



Photo 4: Trench and Liner Area – from the south

