

**REPORT  
ENVIRONMENTAL SITE ASSESSMENT  
PHASE I**

**3DH AGGREGATES SURFACE MINE  
SKAGIT COUNTY PARCELS P44865 AND P126694  
ROCKPORT, WASHINGTON**

*For:*  
Skagit Aggregates LLC  
PO Box 395  
Clearlake, Washington 98235

*By:*



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October 7, 2013

## Stratum Group

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October 7, 2013

Mike Crawford  
Skagit Aggregates LLC  
PO Box 395  
Clearlake, Washington 98235

**Re: Report**  
**Environmental Site Assessment: Phase I**  
3DH Aggregates Surface Mine  
Skagit County Parcels P44865 and P126694  
Rockport, Washington

Dear Mr. Crawford:

Stratum Group is pleased to present the results of our Phase I Environmental Site Assessment for the above referenced surface gravel mine property in Rockport, Washington. This Phase I Assessment was conducted in conformance with the Federal Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) and in general conformance with the methodology of ASTM Standard Practice E 1527-05.

Our environmental review identified one recognized environmental condition in association with the subject property:

- Site is adjacent to the Sauk Landfill property

The Sauk Landfill is located east of the northern portion of the subject property. Our review of available groundwater data indicates that the groundwater flows to the south, laterally gradient with the subject property, and the water quality indicates only low level impacts from the landfill. Based upon our review, the landfill does not pose a significant risk of contamination to the subject property. However, the close proximity of the landfill will have an impact on water usage on the site including the number and location of wells allowed on the site and limit the amount of water allowed to be withdrawn.

Department of Ecology has granted one well variance to the subject property to allow a drinking water well 400-foot to the west of the landfill boundary. The variance describes some requirements associated with the well including ground water monitoring for four consecutive quarters following installation of the well and limited water withdraw and pump rate.

No other environmental concerns were identified in association with the site.

Should you have any questions concerning this Environmental Site Assessment, please do not hesitate to contact us at (360) 714-9409.

Sincerely,  
**Stratum Group**

*Kim Ninnemann*  
Kim Ninnemann, B.S.  
Licensed Geologist



**Kim N Ninnemann**

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Stratum Group Indemnity



## **SECTION 1: EXECUTIVE SUMMARY**

Stratum Group conducted a Phase I Environmental Site Assessment for the 3DH Aggregates gravel mine property in Rockport, Washington on September 16, 2013.

The subject property consists of two parcels that total 40 acres. Sand and gravel mining have taken place on approximately 12 acres in the northern portion of the site. Along with gravel mining, equipment fueling from a 1,000-gallon diesel above ground tank and minor equipment repair takes place on the site. Some staining was observed; however no significant spills were observed that would require cleanup at this time. The remainder of the site is forested and undeveloped. No recognized environmental conditions were identified during our site visit that requires further investigation. A few best management practices for handling and management of petroleum products are discussed in the conclusions portion of this report.

Our review of potential off-site sources identified the adjacent property as the Sauk Landfill. The former gravel pit area was operated as a certified sanitary landfill between 1970 and 1989. Groundwater monitoring has taken place on the site through four groundwater monitoring points since 1990. The site's groundwater is mapped to flow in a southerly direction based upon quarterly monitoring in 2012. Based upon this information, the landfill is located laterally gradient with the subject property. No contamination is suspected on the subject property based upon the groundwater quality and flow direction from the landfill.

Groundwater wells are typically not granted within 1,000-feet of landfill boundaries, based upon public health regulations. The close proximity of the landfill will limit the location, number, and volume of water allowed to be removed from the subject property. This limitation may have implications for the future development of the site, following reclamation of the sand and gravel mine.

A well variance has been granted to the subject property by the Department of Ecology. One drinking water well is permitted 400-feet to the west of the landfill boundary. The variance describes some requirements associated with the well including ground water monitoring for four consecutive quarters following installation of the well and a limited water withdraw and pump rate.

No other environmental concerns were identified in association with the site.

## **SECTION 2: INTRODUCTION**

### **2.1 Purpose and Scope**

The purpose of this Phase I Environmental Site Assessment is to identify, to the extent feasible pursuant to the processes prescribed within the Federal Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) and ASTM Standard Practice E 1527, recognized environmental

conditions in connection with the subject properties. A recognized environmental condition is defined as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property, even under conditions in compliance with existing laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The scope of our services included:

- Inspection of the property for indication of hazardous substances, petroleum products, stained soil, stressed vegetation, or careless manufacturing or industrial practices.
- Document the storage and waste management practices and the condition of the materials, if present.
- Review of Federal, State, and local records as to locations of nearby hazardous waste sites, leaking underground storage tanks, and landfills
- Review of historic aerial photographs, historic Sanborn Fire Insurance maps, assessor's notes and other available public records to determine past usage of the property and surrounding areas
- Interviews with the local health department
- Interviews with the current property owner representative, Johnny Rock
- Review of 2012 Annual Environmental Monitoring Report Sauk Landfill (Skagit County Public Works, August 2013)
- Review of well variance letter (Department of Ecology, June 2005)
- Review of 3DH Aggregates Surface Mine Revised Reclamation Plan (Ecological Land Services, 2002)
- Review of the physical setting, geology, and geohydrology of the site
- Preparation of this report describing the conditions encountered and recommendations for further study, if necessary.

## **2.2 Special Terms and Conditions**

Stratum Group has prepared this report using reasonable efforts in each phase of its work to estimate the liabilities associated with recognized environmental conditions on the subject properties and in the vicinity of the subject properties. No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. This report is intended to reduce, but not eliminate, uncertainty regarding the existence of recognized environmental conditions in connection with the subject property, in recognition of reasonable limits of time and cost. Stratum Group makes no warranty, expressed or implied, as to the accuracy of information contained in public records.

This report is not definitive and should not be assumed to be a complete or specific definition of all conditions above or below grade. Recognized environmental conditions in the subsurface, if present, can only be identified by a subsurface investigation.

Should the conditions on the subject property differ from the descriptions provided in this report please contact Stratum Group for an additional evaluation.

### **2.3 Qualifications and Methodology Used**

The methodology used during the production of this report is as prescribed Federal Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) and as generally prescribed in the ASTM E 1527 standard.

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of this part [Federal All Appropriate Inquiries]. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

### **2.4 Data Gaps and Limiting Conditions**

No data gaps or limiting conditions were encountered during the conduct of this Phase I Environmental Site Assessment, except that former owners were not interviewed. It is our opinion that this data gap does not inhibit our ability to evaluate the environmental conditions on the site.

## **SECTION 3: SITE CHARACTERIZATION**

### **3.1 Location**

The subject property is located along the west side of State Route 20, approximately 5.5 miles southeast of Concrete and 2 miles northwest of Rockport in Skagit County, Washington. The property is accessed via a shared access road that serves the subject property and the Sauk Transfer Station. The site does not utilize an address. The property is located within the southwest quarter of the northeast quarter and the northwest quarter of the southeast quarter of Section 28 Township 35 North, Range 9 East of the Willamette Meridian. The location of the subject property is presented in Figure 1 in Appendix I.

### **3.2 Site and Vicinity Physical Characteristics**

The property occupies 40-acres. Approximately 12-acres of land in the northern portion of the site

has been disturbed for sand and gravel mining and is developed with a barn building for equipment and tool storage and repair. Forested property covers the central and southern portion of the site. Land use in the vicinity is a mix of forested property, rural residential homes, gravel pits, and a landfill and transfer station. The site is located on land that slopes to the south-southwest. Very steep west sloping topography bounds the site to the west. The site is located within the Skagit River watershed. The Skagit River is located 1,000 feet west from the southern portion of the property and 1,700 feet west of the northern portion of the site. Elevation of the site is approximately 540 feet above mean sea level.

### ***3.2.1 Geologic Summary***

The following descriptions of the surficial deposits in the vicinity of the subject property were interpreted from groundwater monitoring wells installed on the adjacent property to the east and summarized in the *3DH Aggregates Surface Mine Revised Reclamation Plan* (Ecological Land Services, Inc, Dec 20002). The site is underlain by glacio-fluvial deposits. The deposits consist of well graded sand and gravel, poorly graded sand, silty gravel, silt and clay strata, and deep gravel deposits with some boulders and cobbles within the materials. The reclamation plan indicates that the subject property is underlain by 140-feet of poorly graded sand along the western property boundary that narrows to 65-feet depth in the eastern margin. The report indicates that the sand grades to be more gravelly with depth.

### ***3.2.2 Geohydrologic Summary***

Two aquifers are located beneath the subject property, based upon information collected in association with the Sauk Landfill characterizations (Ecological Land Services, 2002). The shallow landfill is considered a semi-confined aquifer with the elevations of the water table at 372 to 390 feet above mean sea level, or approximately 160 feet below the ground surface. The four groundwater monitoring wells at the Sauk Landfill are screened within the shallow groundwater table. Groundwater flow within the shallow aquifer is to the south, based upon potentiometric measurements at the landfill's monitoring wells.

The deep aquifer is located approximately 200-feet above mean sea level. Local groundwater wells are drilled into the deeper aquifer for drinking water supplies.

## **3.3 Site Description**

A representative of Stratum Group, Kim Ninnemann, visited the subject property on September 12, 2013. The subject property is partially used as a sand and gravel mine with one equipment storage building. An aerial photograph of the site and vicinity is provided in Figure 2. Site photographs are provided in Figures 3 through 7. Figures 1 through 7 are provided in Appendix I.

**3.3.1 Utilities**

The property is served by electric utilities.

**3.3.2 Building Conditions**

One equipment storage and repair building is located in the northeastern portion of the site. The building is constructed of wood over a gravel floor. The building is utilized for storage of tools and parts for equipment repair. Some hydrocarbon staining was observed on the floor of the building.

A fluid storage shed is attached to the north side of the building. Three 55-gallon drums of new and used motor oil and hydraulic oil, and multiple 2.5 gallon containers of motor oil are stored within the shed. Some spills were noted on the floor of the shed; but only a small stained area was observed on the gravel around the entrance to the storage.

A small scale house structure and a mobile office are located adjacent to the truck scale, southwest of the equipment storage building. The scale house has electricity.

Our September 12, 2013 interior observations as required by ASTM Standard Practice E 1527 are presented in Table 2.

**TABLE 1**  
Interior Observations Checklist

ASTM Observation	Yes/No	Comments
Heating	No	The buildings do not have heat.
Stains/Corrosion	No	
Drains/Sumps	No	No drains observed.
PCBs	No	
Hazardous Containers	Yes	Three 55-gal drums of waste oil and hydraulic oil & 2.5-gal containers of motor oil are stored within a shed along the north side of the building
Odors	No	

**3.3.3 Surface Conditions**

Vegetation has been removed from the northern ¼ of the subject property as part of the sand and gravel mining operations. Stockpiles of topsoil for reclamation are located along the northwestern property boundary.

Three metal above ground storage tanks (AST) are located along the northern property boundary. The tanks are used to store water, according to Mr. Johnny Rock, a long time employee of the pit. An empty 55-gallon AST is located adjacent to the two large metal water tanks. No staining was observed around the AST.

Two full, unlabeled 55-gallon drums are located north of the equipment shed. One 1,000-gallon diesel fuel AST is located along the south side of the equipment shed. No indications of staining or releases were observed around the fuel tank area.

A truck trailer, axle, tires, metal beams, conveyors and parts are stored east of the shed building and along the eastern property boundary, just south of the shed building. No hazardous materials were stored within the metal storage areas.

A few large piles of asphalt and concrete are located throughout the northern portion of the site. No other debris was noted in the piles.

The remainder of the site is covered by young forest. One former roadway extends south through the central portion of the site. No indications of debris or dumping were observed within the forested portions of the site.

Our September 12, 2013 exterior observations as required by ASTM Standard Practice E 1527 are presented in Table 2.

**TABLE 2**  
 Exterior Observations Checklist

ASTM OBSERVATION	YES/NO	COMMENTS
Hazardous Containers	Yes	Two 55-gallon drums are stored north of the shed building. Drums are unlabeled.
Storage Tanks	Yes	One 1,000-gal diesel AST is located south of the shed building. One 55-gal diesel AST is located along northern property boundary. Three metal ASTs for water are located along northern property boundary.
Solid Waste Disposal	No	
Odors	No	
PCBs	No	
Pits, Ponds, Lagoons	No	
Stained Soil	No	
Stressed Vegetation	No	
Waste Water	No	
Septic Systems	No	

### 3.3.4 Adjoining Properties

A former Washington State Department of Transportation gravel mine bounds the site to the north. The Sauk Transfer Station, used for recycling and garbage collection, the Sauk Landfill, and forested property bounds the site to the east. Forest bounds the site to the south and west.

### 3.4 Site Documents

A report titled *3DH Aggregates, Surface Mine, Revised Reclamation Plan* completed by Ecological Land Services, Inc on December 18, 2002 was reviewed for this report. The reclamation plan includes information that describes the pre-mining site conditions, site geology, the site's mining plan for product removal, mine setbacks and buffers, and how the site will reclaim the land following removal of the sand and gravel. The document indicates that the property was originally granted a sand and gravel mining permit in 1978. The document indicates that 2.5-3 million cubic yards of material is estimated from the property over the life of the mine. The mining is permitted to extend to 450 feet above mean sea level, with a maximum mining

depth of 70-feet. Groundwater is located more than 70 feet below the proposed mine floor. The site's reclamation includes keeping final slopes to no steeper than 2:1, which will be achieved during mining operations. No backfilling is anticipated for reclamation. The final slopes will be covered with topsoil and planted with alder and Douglas fir trees and/or grass mix.

A letter from Department of Ecology to Mr. Dave Harvin, property owner, on June 10, 2005 grants the site a variance for a drinking water well on the subject property. The letter indicates that the well can be placed 400-feet west of the landfill property boundary and northwest of the landfill footprint. The letter details conditions for installation of the well including specific installation constructions, depths of the well, notifications to Ecology, requirements to sample the water quality quarterly for one year for specific contaminants, and a limited pump rate and daily water extraction volume. A copy of the variance is provided in Appendix II.

A report titled *2012 Annual Environmental Monitoring Report, Sauk Landfill, 50796 State Route 20, Concrete, Washington*, completed by the Skagit County Public Works Department on August 14, 2013 was reviewed. The report describes the results of quarterly monitoring of four groundwater wells at the Sauk Landfill during 2012. MW-3 is located up gradient, MW-1 is located along the west side of the landfill nearest to the subject property, MW-4 is located along the east side of the landfill and MW-2 is located at the southern end of the landfill. Each of the four wells was analyzed for a suite of contaminants including conventional contaminants such as pH, dissolved and total metals, and volatile organic compounds. The report concluded that the most significant differences in water quality is between the up gradient well (MW-3) and MW-2. Two volatile organic compounds were detected in MW-2 at low concentrations. Based upon the 2012 sampling data, all four wells were below the state groundwater quality standard of 6.5 for pH. The remainder of the analytes were within state standards. The report concludes that groundwater quality at the landfill has improved over the last 22 years of monitoring. No landfill gases were evaluated during 2012; however the report indicates that a 2005 study indicated that landfill gas, primarily methane, had not extended beyond the landfill boundaries.

### **3.5 Interviews**

We contacted the Skagit County Public Health Department regarding any potential environmental concerns on the subject property. The Health Department did not have any records of complaints regarding the subject property, but provided information regarding the Sauk Landfill and well variance granted to the subject property.

Johnny Rock, manager of the site for 11 years, provided our site tour and answered questions regarding the site operations. Mr. Rock stated that some reclamation needed to occur in the northwest corner of the site due to the excavation extending too far. This came to his attention through a recent review by Department of Natural Resources. Mr. Rock did not know of any significant spills of waste oil or fuel on the site. He stated that Nielson Brothers previously owned the site and had the southern and central portion of the site logged. He stated that the piles of



concrete and asphalt are being collected to be crushed and recycled, but none had been crushed yet. Mr. Rock did not know of any buried garbage, metal, or debris on the site.

### **3.6 Past Use of Site and Adjoining Properties**

Historic aerial photographs, assessor records, and interviews were used for gathering information regarding the past use of the subject property and adjoining properties. Sanborn Fire Insurance Maps were reviewed, but did not cover the subject property.

Copies of the historic aerial photographs of the subject property and vicinity from 1937, 1969, 1978, 1993, and 2003 were reviewed. A list of the references for the historic research is provided in Appendix II.

#### ***3.6.1 Summary of Past Site Use***

Forest covered the property from at least 1937 through the mid 1990s. The forest on the site in 1937 was thin over the central and southern portions of the site and may indicate an early forest harvest from the site. Forest was cleared from the site again in the mid-late 1990s. The site was permitted as a sand and gravel mine in 1978; however removal of sand and gravel did not began on the site until the late 1990s or early 2000s. Since mining began, approximately 12 acres of land in the northern portion of the site have been disturbed.

#### ***3.6.2 Summary of Past Site Use of Adjoining Properties***

*North:* Forest bound the site to the north in 1937. The land was cleared of trees and a gravel mine was operating on the site by 1969. The site was less active by 1978 with some vegetation in the former mining areas. Vegetation has continued to cover more of the site since 1978.

*East:* Forest bound the site to the east from at least 1937 through the 1960s. A gravel pit was operating on the adjacent property to the east by the mid 1970s, east of the northern portion of the subject property. The gravel pit was then re-filled with local household waste as a sanitary landfill between 1979 and 1989. The landfill was then closed and capped with a silt cap. Groundwater around the landfill has been monitored since 1990. Forest has continued to bound the central and southern portions of the site to the east.

*South:* Forest has bound the site to the south since at least 1937. Some tree clearing took place on the adjacent property to the south in the early 1990s.

*West:* Forest has bound the site to the west since at least 1937. Forest was cleared from the northern portion of the adjacent property by the early 1990s. The land has been allowed to revegetate with forest. A few rural residential homes were developed west of the southern portion

of the subject property by the mid to late 2000s.

## **SECTION 4: POTENTIAL CONTAMINANT SOURCES**

### **4.1 Standard ASTM Environmental Record Sources**

The public documents, listed in Table 3, have been reviewed to identify off-site contamination sources in the vicinity of the subject property that have a potential to negatively impact the subject property's soil, ground water, or surface water. Based upon the location of the site, the databases were searched for the cities of Rockport, Concrete and/or Skagit County, Washington. The sites found within the ASTM search radius were then evaluated to determine their potential effect on the subject property.

One potential off-site contamination source was identified in the public databases within the ASTM search radius. The location of the site and the subject property are indicated on the Figure 1 – Site Vicinity Map.

The Federal, state, and local public records including landfills, underground storage tank records, hazardous waste handler and generator permits, federal and state government listings of sites identified as priority cleanup sites, leaking tank sites, and sites with restrictive covenants were reviewed by Kim Ninnemann of Stratum Group on October 4, 2013. A list of the references used to determine the potential off-site contamination sites is presented in Appendix II.

**TABLE 3**  
 Environmental Records Review

AGENCY	DOCUMENT	SEARCH RADIUS	IDENTIFIED SITES
Federal Environmental Protection Agency	National Priorities List (NPL or SUPERFUND)	1 Mile	0
	De-listed NPL Site	½ Mile	0
	Resource Conservation and Recovery Act Transfer, Storage, and/or Disposal Facility with no corrective action (RCRA TSD, non-CORRACTS)	½ Mile	0
	RCRA CORRACTS TSD (corrective action underway)	1 Mile	0
	RCRA Hazardous Waste Handler or Generator records and permits (HWG)	Adjacent	0
	CERCLIS (Active) and De-listed CERCLIS Sites (NFRAP)	½ Mile	0
	National Response Center Database (NRC), formerly ERNS	Subject Property	0
	Institutional or Engineering Control Registry	Subject Property	0
Washington State Department of Ecology	Confirmed and Suspected Contaminated Sites (CSCS)	1 Mile	0
	Leaking Underground Storage Tank List (LUST)	½ Mile	0
	Underground Storage Tank List (UST)	Adjacent	0
	State Brownfield Site	½ Mile	0
	Institutional or Engineering Control Registry	Subject Property	0
Skagit County	Solid Waste Landfill Sites (SW)	½ Mile	1

**4.2 Potential Off-Site Source Information**

One potential off-site contamination site was identified in the public databases within the ASTM search radius of the subject property as potential off-site contamination sources. The identified potential off-site contamination source addresses, lists the sites appear on, and the contaminant information available through the public databases are presented in Table 4.

**TABLE 4.**  
 List of Potential Off-Site Contamination Sources

Site Name	Site Address	Site Types	Contamination Information		Status of Site
			Media Affected	Contaminants	
Sauk Landfill (Sauk-Faber Landfill)	50796 State Route 20	SW	Soil Groundwater	pH	Monitored

\*the full names of the databases are provided in Table 1 of the report; CS = cleanup started; Ranked = site has been evaluated for its risk to human health and the environment where 1 is the greatest assessed risk and 5 is the lowest assessed risk

**4.2.1 Risk Evaluation of Potential Off-Site Sources**

The sites within the ASTM search radius were evaluated to determine the potential effect on the subject property. Factors such as location, topography, groundwater flow direction, hydrologic barriers, type of contamination, and the actions taken to remove the contamination are all considered to determine the potential off-site contamination source's potential impacts on the subject property.

The Sauk Landfill, located on the adjacent property to the east, operated as a landfill between 1979 and 1989. The site was a certified sanitary landfill and accepted household waste and waste produced in the local rural area. Four monitoring wells are located along the north, east, south, and western boundaries of the landfill. Monitoring has taken place from the well sites since 1990. The monitoring well closest to the subject property, MW-1, exceeded the state groundwater standard for pH during one quarter of 2012. The pH in MW-1 was measured at 6.17 during March 2012, which is below the groundwater quality standard of 6.5-8.5. No other potential contaminants exceeded the groundwater quality standards and no volatile organic compounds were detected in the well's groundwater. Groundwater flow mapping during all four quarters indicate a flow direction to the south. In addition, groundwater flow mapping from 1990 indicates a southerly flow direction. Based upon the available information, the groundwater flow from the landfill is parallel to the subject property. In addition, based upon the water quality evaluations at the western edge of the landfill, contamination of the subject property by the landfill is low.

#### **4.3 Potential On-Site Sources**

Representatives of Stratum Group visited the subject property on September 12, 2013. The purpose of the site visit was to identify, to the extent feasible pursuant to the processes prescribed within the Federal All Appropriate Inquiries and the ASTM Standard Practice E 1527, recognized environmental conditions in connection with the subject property.

The site is currently developed with a sand and gravel mine. Above ground storage tanks on the site are used to store water or diesel fuel. One 55-gallon and one 1,000-gallon diesel tank are located on the site. In addition, some petroleum products are stored within shed attached to the north side of the building. Some hydrocarbon staining was observed on the gravel floor of the equipment storage/repair building and near the waste oil storage area. The stains indicate some poor handling and/or management of petroleum products, but do not require cleanup. Two unlabeled 55-gallon drums are stored north of the equipment/repair building. We recommend that these drums be removed from the site and the contents be properly disposed. No indications of dumping or deleterious materials were observed around the site. It is our opinion that the risk of contamination associated with the current operations is minimal.

While contamination is not suspected on the site due to the landfill, the presence of the landfill will limit the ability to install drinking water wells on the subject property. In addition, the volume of water allowed to be removed from the subject property. The volume of water extracted from the subject property is limited in order to not draw the groundwater table toward the subject property from the landfill area.

Historically, the site was forested from at least 1937 through the early 1990s. Mining has taken place on the northern end of the site since the late 1990s or early 2000s. No contamination is suspected in connection with the former uses of the site.

It is our opinion that no further investigation is warranted on the subject property based upon the former or current uses of the subject property.

#### **SECTION 5: CONCLUSIONS**

We have performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM Practice E 1527 and the Federal Standards for All Appropriate Inquiries 40 CFR Part 312 for the 3DG Aggregates property in Rockport, Washington.

The site consists of 40-acres of land that is forested and/or used as a sand and gravel mine. Approximately 12 acres of land in the northern portion of the site have been disturbed as part of the mining operations. Activities on the site include excavation of sand and gravel as well as fueling mining equipment and minor equipment repair. No indications of significant

contamination were observed or suspected in connection with the former

Some staining was observed on the ground surface in the repair area. We recommend that best management practices be instituted at the site so that all spills and drips are immediately cleaned up. In addition, a floor could be placed beneath the repair area to provide a barrier between the repair activity and the ground. Two unlabeled 55-gallon drums are currently being stored on the ground surface, north of the repair building. We recommend that all drums be stored under cover and within secondary containment. Waste materials should be removed and disposed of properly.

Our historical research on the site indicates that the property had been covered by forest from at least 1937 through the early 1990s. Mining has taken place on the site since the late 1990s or early 2000s. No environmental concerns were identified in association with the former uses of the site.

One potential off-site contamination source was identified within the ASTM search radius: Sauk Landfill. Our review of available documentation indicates that the groundwater flow from the landfill is to the south, which is laterally gradient with the subject property. In addition, the groundwater quality in the landfill does not indicate significant contamination. It is our opinion that the risk of contamination from the landfill is low; however the presence of the landfill will impact the use and placement of drinking water wells on the subject property.

## **APPENDIX I**

Figure 1 - Site Vicinity Map

Figure 2 – Aerial Photograph of Site and Vicinity

Figure 3 – Close-up Aerial Photograph of Subject Property

Figures 4 through 11 – Site Photographs





**Figure 4.** View of the property looking southeast from the top of the dike.



**Figure 5.** View of the equipment storage and repair building along northeastern property boundary. The 1,000-gallon diesel AST is located along the south side of the building (right side of photo)

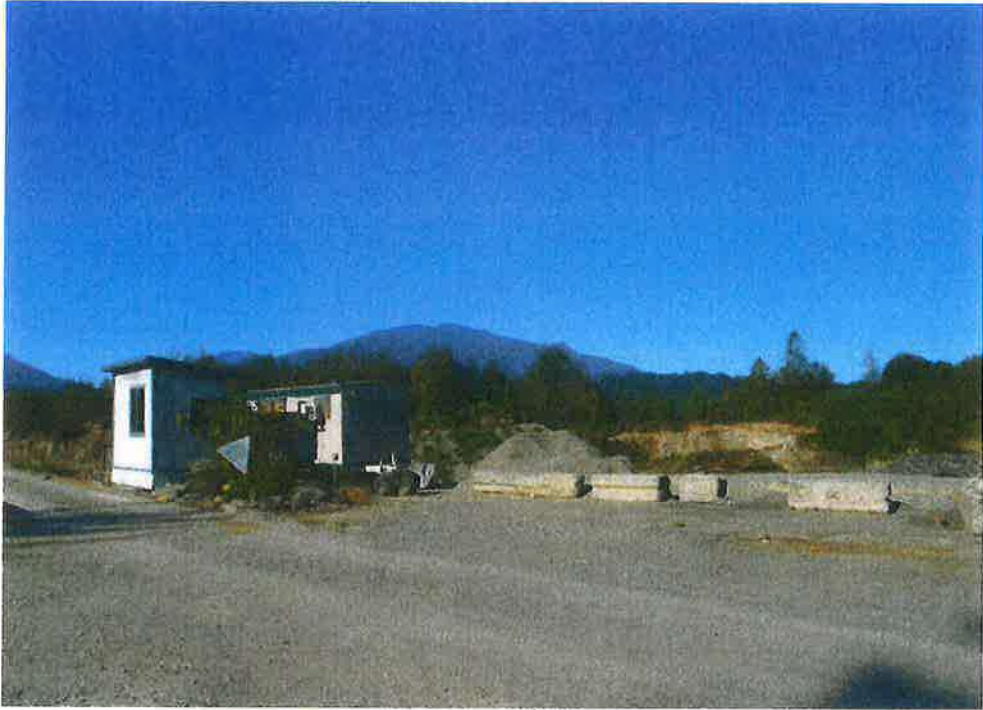




**Figure 6.** Interior of the equipment/repair building.



**Figure 7.** Two drums stored north of equipment building. We recommend the drums get removed and properly disposed.



**Figure 8.** Scale, scale house, and mobile office.



**Figure 9.** Water tanks and 55-gallon diesel AST along northern boundary.





**Figure 10.** Piles of asphalt and concrete being stored onsite for future crushing and recycling.



**Figure 11.** View of the forest in the central and southern portions of the site.

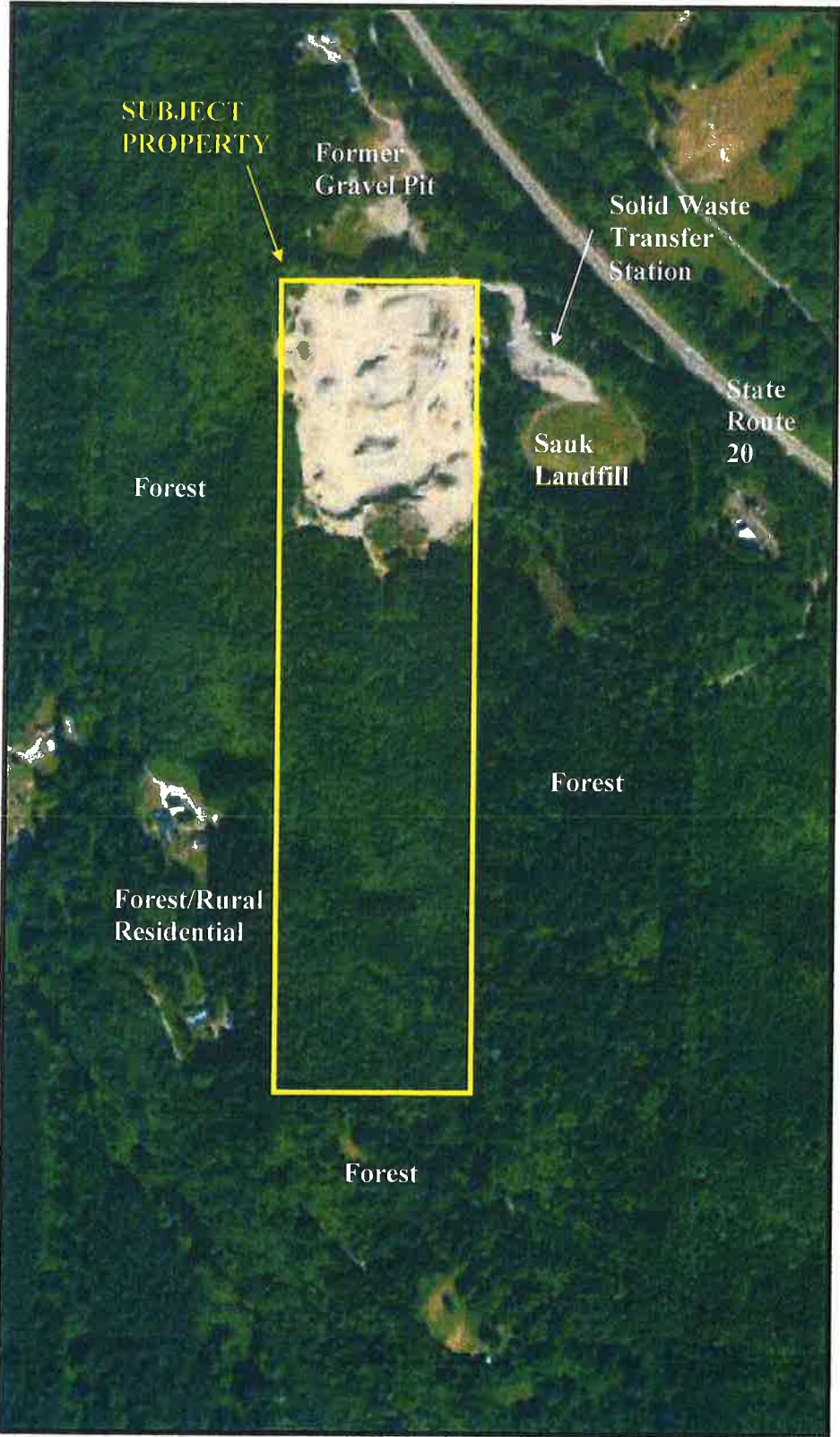
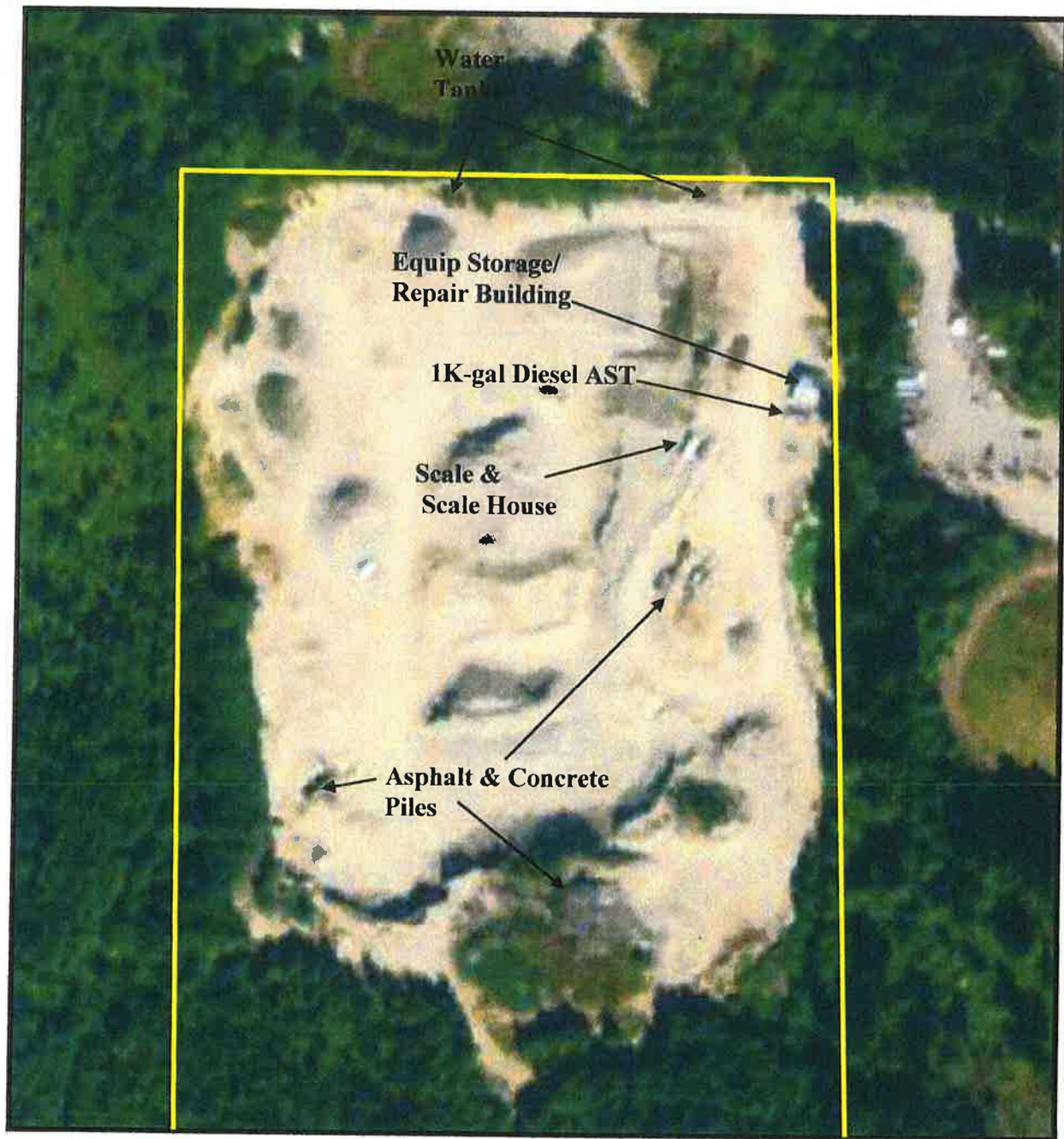


Figure 2. Aerial photograph of subject property and vicinity (GoogleEarth, 2011).





**Figure 3.** Close-up of the northern portion of the subject property (Google Earth, 2011)

## **APPENDIX II**

Well Variance Letter (Dept of Ecology, 2005)

Historic Aerial Photographs (1937, 1969, 1978, 1993, 2003)

Historical Use and Public Records Search References

Stratum Group Indemnity



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

June 10, 2005

**CERTIFIED MAIL**  
**7004 0750 0001 8363 3012**

Mr. Dave Harvin  
3DH Aggregates  
P.O. Box 607  
Stanwood, WA 98292

**RECEIVED**

**JUN 14 2005**

**SKAGIT COUNTY  
PUBLIC WORKS ADMIN**

Dear Mr. Harvin:

RE: Variance request to drill a water well less than 1000 feet from the Skagit County's Sauk Landfill property boundary at Tax Parcel P44865, in Skagit County (SW ¼, NE ¼, Sec 28, T35N, & R 9E). You are the property owner. You submitted the request and report written by Charles S. Lindsey, P.Hg. The report was used extensively in the preparation of this variance.

I am writing in response to your request for a variance to the Minimum Standards For Construction and Maintenance of Wells, Chapter 173-160 Washington Administrative Code (WAC) and specifically with WAC 173-160-171 (3) (b) (vi). The formal variance request was received by the Department of Ecology via USPS mail on May 23, 2005.

You are requesting a waiver from WAC 173-160-171 (3) (b) (vi) to construct a water well within 1000 feet of a solid waste landfill property boundary. WAC 173-160-171 (3) (b) (vi) clearly states in part that no well shall be drilled within 1000 feet of a solid waste landfill property boundary. These are minimum standards.

The proposed well site is located 400 feet to the west of the landfill property boundary and to the northwest of the landfill footprint. The landfill is located on a relatively flat terrace with a groundwater gradients sloping to the south in the upper semi-confined aquifer and to the southwest in the deep confined aquifer. It appears the proposed well may be located hydraulically cross and up-gradient from the landfill footprint. Charles S. Lindsey a Licensed Hydrogeologist and Principal Hydrogeologist of Associated Earth Sciences, Inc., performed a Hydrogeologic Analysis of the area and submitted it with the variance request.

After careful consideration, the variance request is hereby **granted** in accordance with WAC 173-160-106 to allow for construction of a water well within 1000 feet of the Sauk Landfill property boundary. This variance is granted under the following conditions:

1. A "Notice of Intent to Construct a Water Well" (Start Card) with fees must be submitted for the well to the Department (Olympia address) at least seventy-two (72) hours prior to starting the well construction. Attach a copy of this variance.
2. A Well Report describing the construction methods shall be submitted to the Department (Northwest Regional Office) within thirty (30) days after completing the work.
3. The well shall be completed in the deep confined aquifer at an approximate depth of 350-400 feet below grade.
4. A seal shall extend 18 feet into the regional aquitard at approximately 170 to 190 feet below grade and be no less than 4 inches greater in diameter than the casing. For example, a 6-inch well casing will require a 10-inch boring drilled and sealed into the aquitard.
5. Due to your proposed well site's close proximity to the landfill, there is a possibility that your well may be contaminated by leachate generated from the landfill. You must have your well tested for volatile organic compounds (VOCs), inorganics (IOCs) and selected ion monitoring (SIM) for vinyl chloride on a quarterly basis for the first year. A copy of the test results must be submitted to Trevor Contreras at the Department of Ecology's Water Resources Section, Northwest Regional Office, 3190 - 160<sup>th</sup> Avenue SE, Bellevue, WA 98008-5452 within 14 days following each test. At the end of one year the tests will be evaluated and the need for future testing determined. Future testing may be required.
6. The well is not to be pumped at a rate exceeding 10 gallons a minute (excluding initial well development) and it is not to be used to withdraw more than 5,000 gallons a day.

Approval of this variance does not grant a right to use water in excess of that allowed under the groundwater exemption codified in RCW 90.44.050.

This variance may be appealed pursuant to RCW Chapter 43.21B. The person to whom this variance is issued must file an appeal with the Pollution Control Hearings Board **within thirty (30) days of receipt of this Variance**. Send the appeal to: Pollution Control Hearings Board, P.O. Box 40903, Olympia, Washington 98504-0903. At the same time, a copy of the appeal **must** be sent to: Department of Ecology, Water Resources Appeals Coordinator, P.O. Box 47600, Olympia, Washington 98504-7600. All others receiving notice of this Variance must file an appeal with the Pollution Control Hearings Board **within thirty (30) days of the date the Variance was mailed** in the same manner described above.



Mr. Dave Harvin  
Variance Request  
June 10, 2005  
Page 3

Your attention to these laws and regulations, and cooperation with the Department of Ecology in this matter, is appreciated. Please telephone Trevor Contreras at (425) 649-7044 if you have any questions concerning this variance.

DATED this 10<sup>th</sup> day of June, 2005, at Bellevue, Washington

Sincerely,

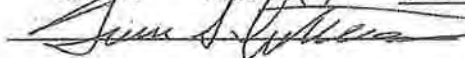


Daniel L. Swenson  
Section Supervisor  
Water Resources Program

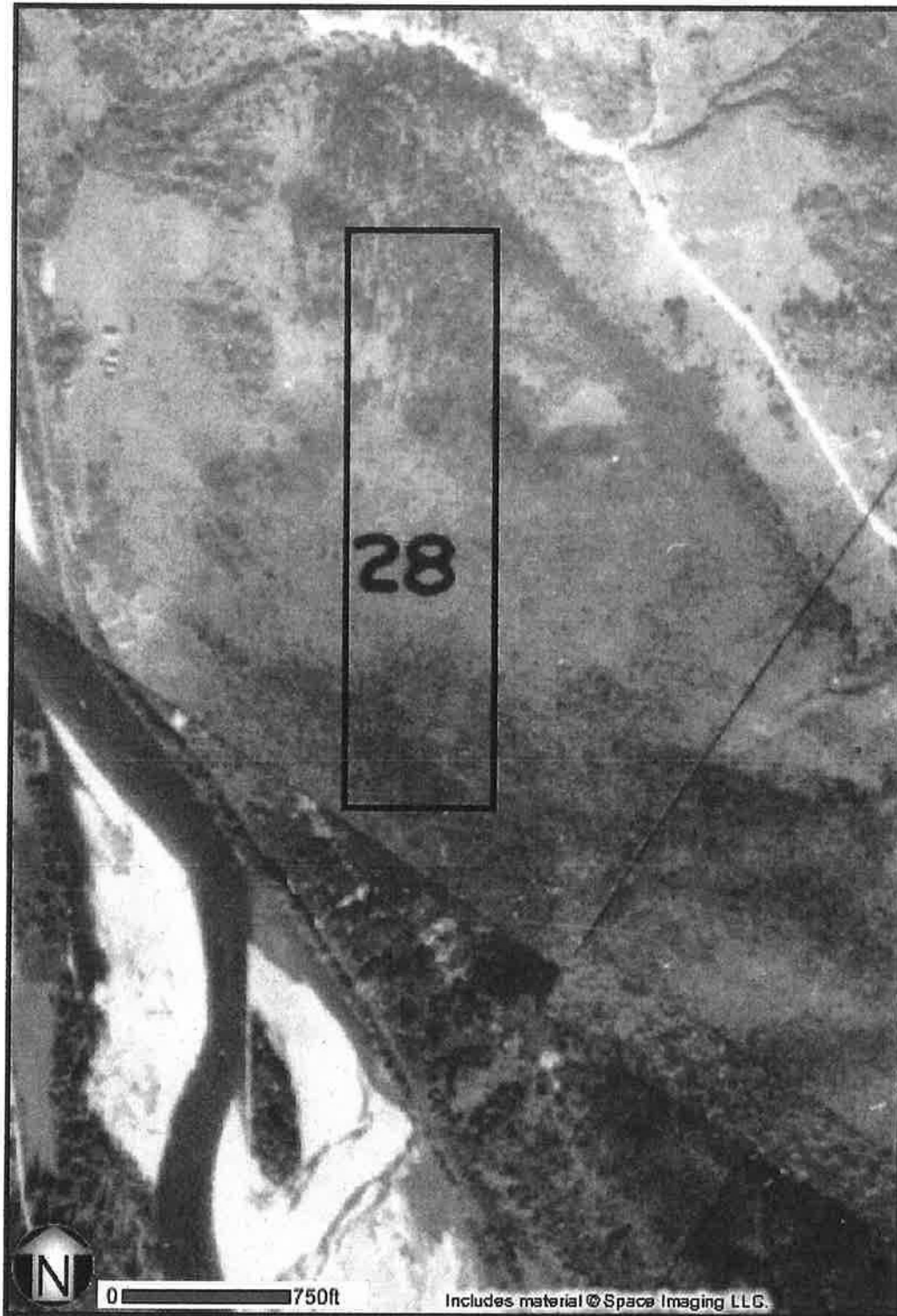
DLS:TC:dh

cc: Trevor Contreras, NWRO WR  
Lorna Parent, Skagit County Health Department  
Gary Sorenson, Skagit County Public Works

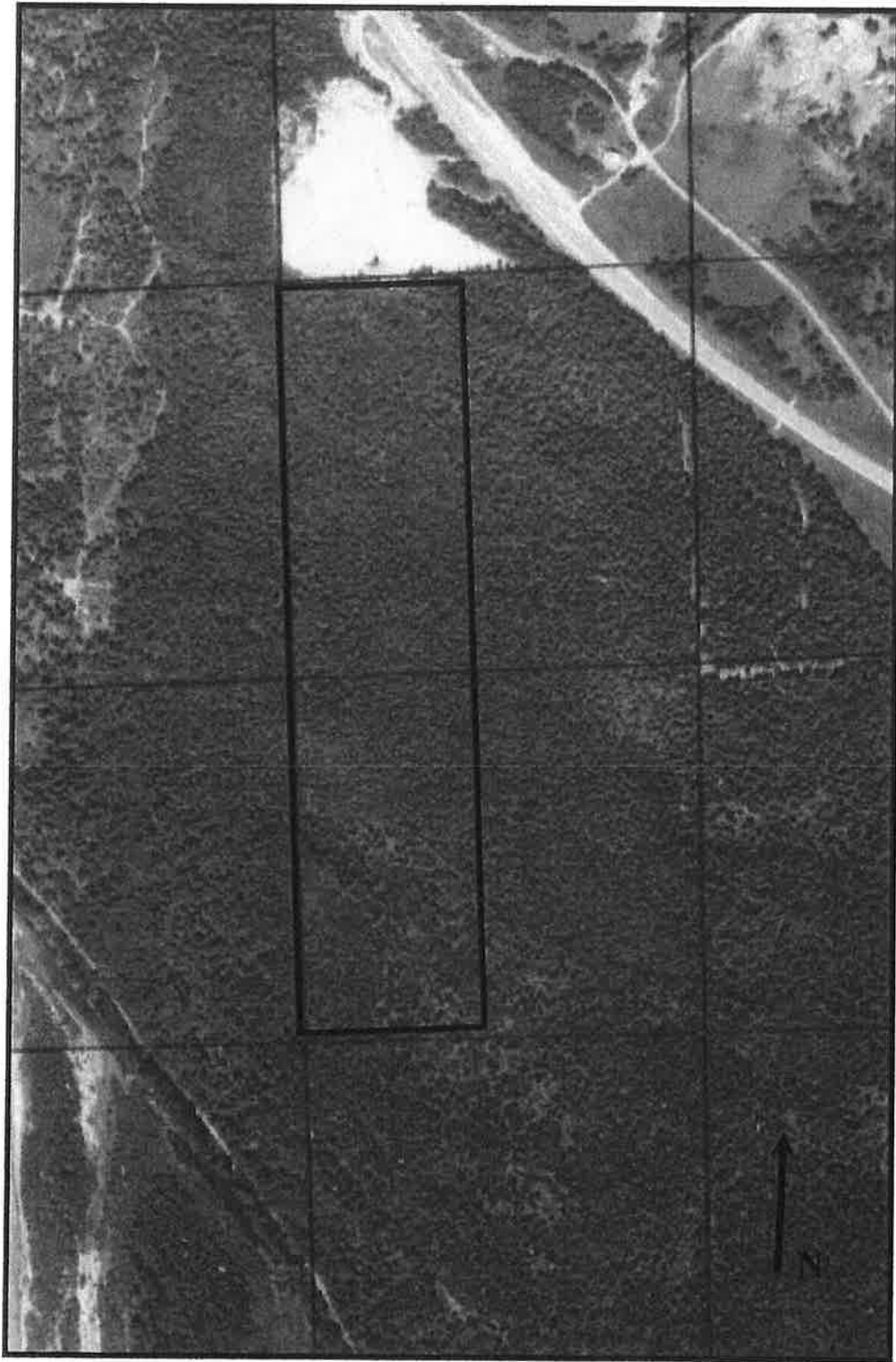
"I certify that I mailed this letter or an identical copy thereof, postage prepaid, to the above addressee(s) this 13 day of June, 2005."

 (Signature)

**Historic Aerial Photographs**



**1937 Historic Aerial Photograph**  
(location is approximate)

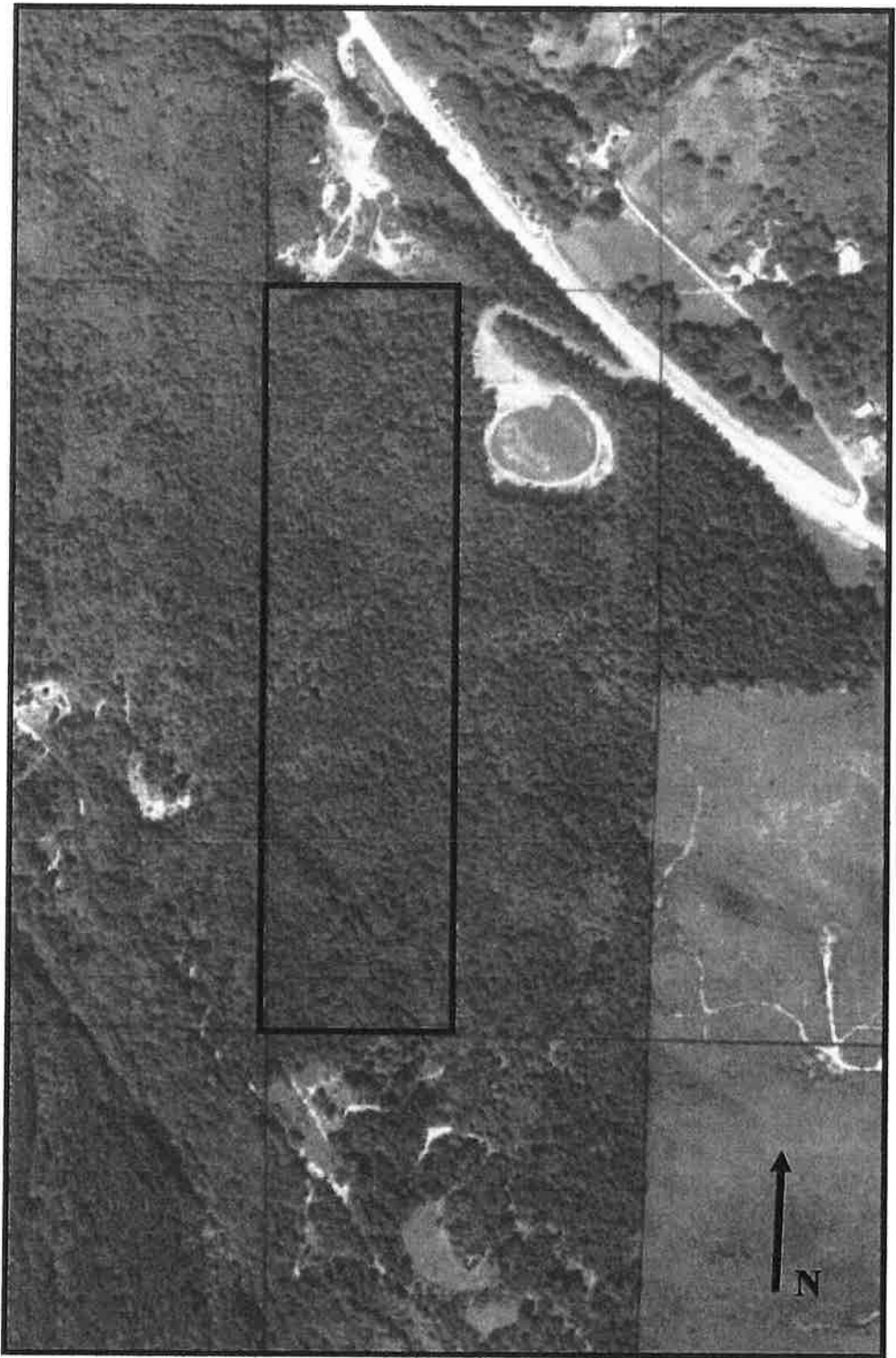


1969 Historic Aerial Photograph

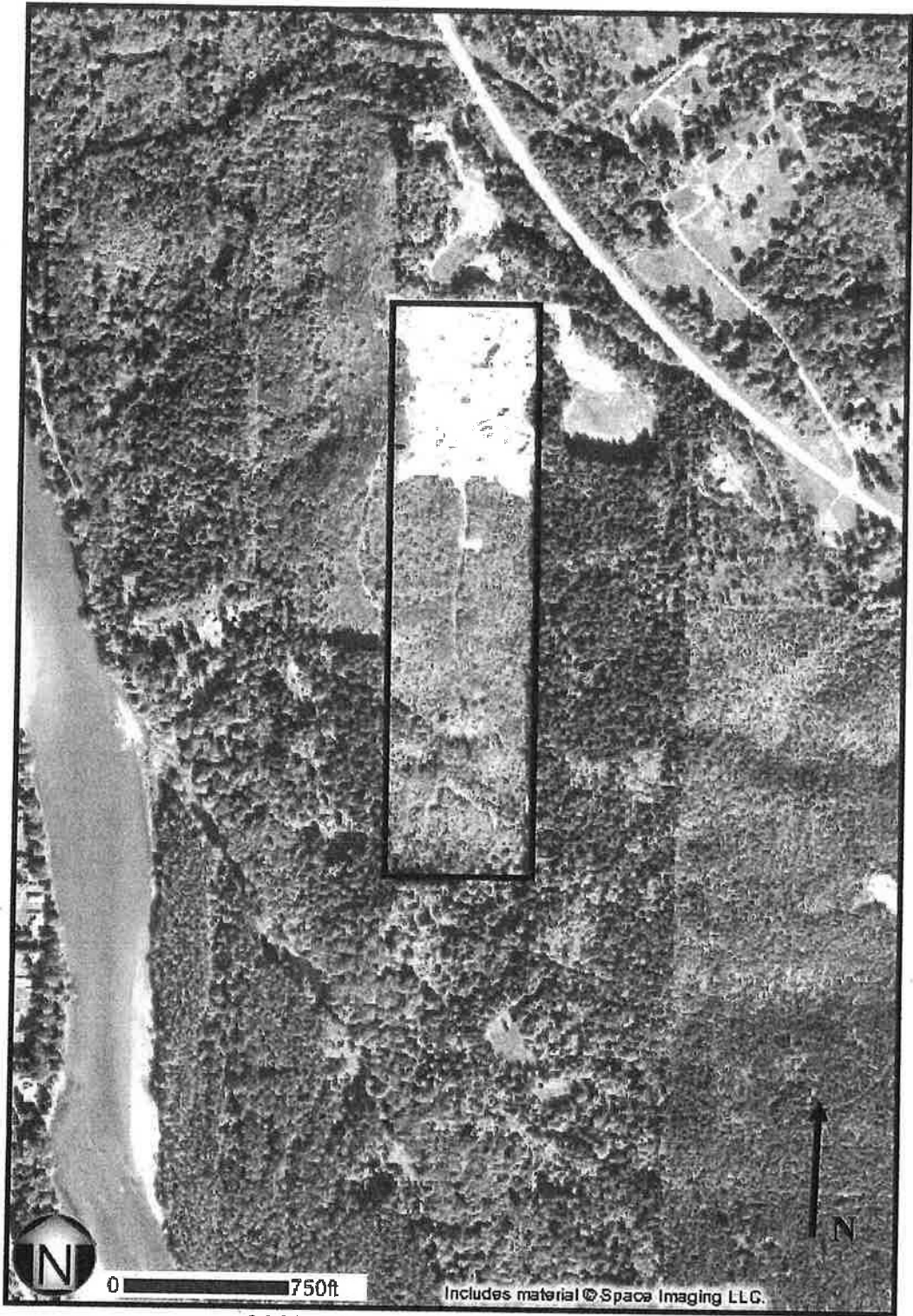


1978 Historic Aerial Photograph





1993 Historic Aerial Photograph



2003 Historic Aerial Photograph

## Public Records Search References

Our public records search was completed through internet research. Each database is searched by city, county, zip code or through mapping programs and are evaluated to determine if they are located within the ASTM search radius of the subject property. The databases include many more sites than are located within the search radius. Only sites identified within the search radius are named and mapped within this letter report. Complete copies of the databases are provided in pdf form upon request.

Database Searched	Access to Database
National Priorities List (active and delisted sites)	"Envirofacts Data Warehouse." <u>U.S. Environmental Protection Agency.</u> <a href="http://www.epa.gov/enviro">http://www.epa.gov/enviro</a> .
Resource Conservation and Recovery Act Transfer, Storage, and/or Disposal Facility with no corrective action (RCRA TSD, non-CORRACTS)	
RCRA CORRACTS (RCRA corrective action sites)	
RCRA Hazardous Waste Handler or Generator records (HWG)	
CERCLIS (Active)	
Federal Institutional and Engineering Control Sites	
De-listed CERCLIS Sites (NFRAP)	"Superfund Site Information" <u>U.S. Environmental Protection Agency.</u> <a href="http://www.epa.gov/superfund/sites/cursites/index.htm">http://www.epa.gov/superfund/sites/cursites/index.htm</a>
National Response Center Database (NRC) – formerly ERNS	"National Response Center." <u>U.S. Environmental Protection Agency.</u> <a href="http://www.nrc.uscg.mil/foia.html">http://www.nrc.uscg.mil/foia.html</a>
State Confirmed and Suspected Contaminated Sites (CSCS)	"Washington Facility/Site Atlas." <u>Washington State Department of Ecology – Geographic Information System.</u> <a href="http://apps.ecy.wa.gov/website/facsite/viewer.htm">http://apps.ecy.wa.gov/website/facsite/viewer.htm</a> And <a href="https://fortress.wa.gov/ecy/tcpwebreporting/Default.aspx">https://fortress.wa.gov/ecy/tcpwebreporting/Default.aspx</a>
State Leaking Underground Storage Tank List (LUST)	
State Underground Storage Tank List (UST)	
State Brownfield Site	
State Institutional or Engineering Control Registry	
Skagit County Solid Waste Landfill Sites (SW)	-List of Current Abandoned and Closed Landfill Sites in Skagit County" (September 2004) -"Closed and Abandoned County Landfills" – Draft Map. (December 2003) -"Closed and Abandoned Disposal Sites in Skagit County. (June 1998)

## Historical Use and Public Records Search References

### *Historic Use Source References*

1. Historical aerial photos dated 1937, 1998, 2001, 2003, 2004, 2005, 2007, 2009 as maintained by the Skagit County GIS and available through [www.skagitcounty.net/GIS/Applications/iMap/asp/iMap.asp](http://www.skagitcounty.net/GIS/Applications/iMap/asp/iMap.asp)
2. Historical aerial photos dated 1969, 1978, and 1993 as maintained by the Skagit County Public Works Department in Mount Vernon, Washington
3. Property assessor records maintained by the Skagit County Assessor's Office in Mount Vernon, Washington.
4. Sanborn Fire Insurance Maps, as available online at [www.sanborn.umi.com](http://www.sanborn.umi.com) (did not cover the subject property)



## **Stratum Group Indemnity**

Stratum Group has prepared this report using reasonable efforts in each phase of its work to estimate the liabilities associated with recognized environmental conditions on the subject property and in the vicinity of the subject property. No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. This report is intended to reduce, but not eliminate, uncertainty regarding the existence of recognized environmental conditions in connection with the subject property, in recognition of reasonable limits of time and cost.

Stratum Group makes no warranty, expressed or implied, as to the accuracy of information contained in public records.

This report is not definitive and should not be considered a complete or specific definition of all conditions above or below grade. Subsurface exploration of the site was not within the scope of this study. Recognized environmental conditions in the subsurface, if present, could only be identified by a subsurface investigation. An evaluation of area-wide atmospheric deposition of contaminants is not evaluated within this report. If buildings are present on the property, asbestos containing materials may be present. This report did not include collection of samples or analysis for lead or asbestos containing materials. Should any renovation, remodeling, or demolition of buildings occur on the property or if suspect materials are damaged, a thorough good faith asbestos sampling and/or lead inspection report should be completed.

As is now common in the industry, it is understood that, to the fullest extent permitted by law, our clients agree to defend, indemnify and hold harmless Stratum Group, its owners, employees, subcontractors and agents, from any (past, present, or future) pollution-related claims or damages at the site, including potential claims from third parties that may name Stratum Group as a claimant.