

MEMO TO FILE

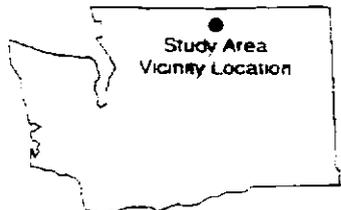
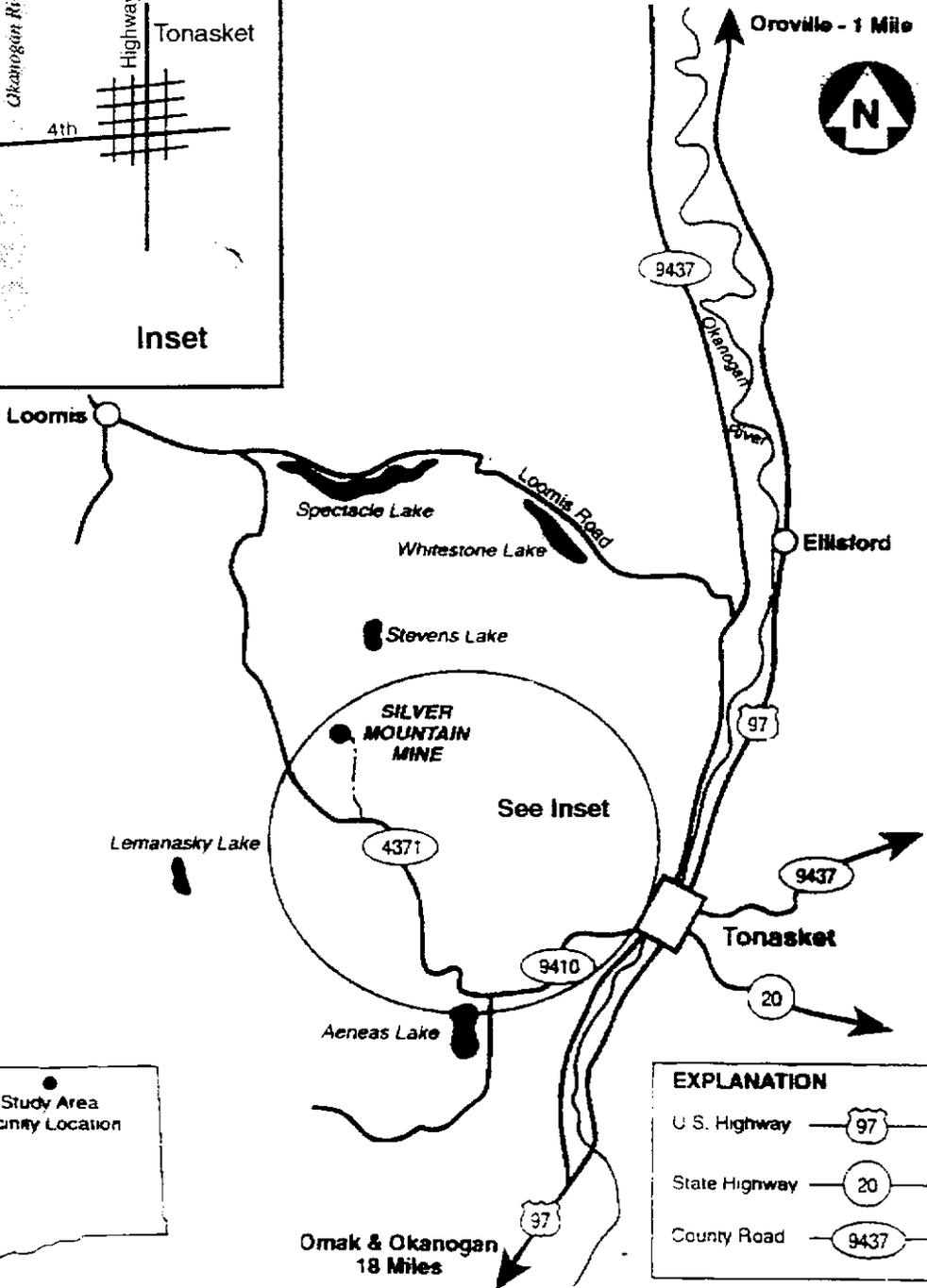
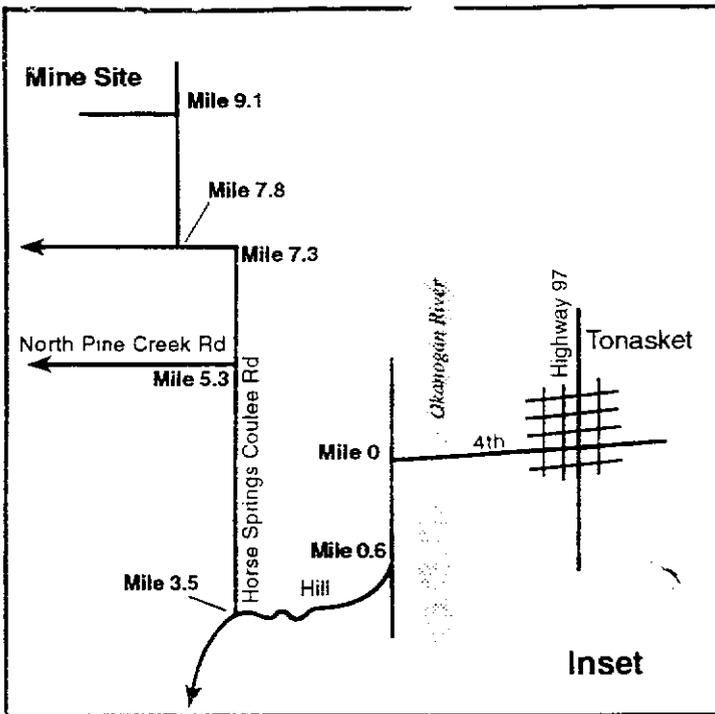
DATE: September 16, 2002

FROM: Norman T. Hepner

SUBJECT: Silver Mountain Mine Annual Inspection/5 Year Review Site Visit

The following attachments make up the Silver Mountain Mine Annual Inspection/5 Year Review Site Visit:

- Site Location Map
- Silver Mountain Mine Maintenance Requirements
- Silver Mountain Mine Maintenance Checklist
- Site Pictures
- Laboratory Analysis of mine adit water sample



EXPLANATION	
U. S. Highway	97
State Highway	20
County Road	9437



Site Location Map

FIGURE

1

Table 1—Silver Mountain Mine Maintenance Requirements

Operation and Maintenance Requirements	Corrective Action	Frequency
1) Heap leach cap inspection		
a) Check for cap subsidence	Remove topsoil, fill with clay, compact, replace topsoil and revegetate.	Annually
b) Check for erosion of cap particularly on east-facing wall between mill and south side of heap leach.	Fill with topsoil and revegetate. Areas where continual erosion occurs may need to be covered with riprap.	Annually
2) Vegetative cover inspection		
a) Verify adequate grass coverage.	Reseed areas where grass is not established.	Annually
b) Check for occurrence of knapweed or other weeds.	Spray site with herbicide, such as TORDON [®] or 2-4D. ³	Annually
c) Check for holes caused by burrowing animals	Fill bottom of hole with large rock. Fill top of hole (top 8 inches) with clay from stockpile located south of cap. Add moisture to clay if needed to provide plasticity. Compact during and after placement.	Annually
d) Remove woody vegetation from cap cover ²	Not applicable.	Annually
3) Fence Inspection		
Inspect cap perimeter fence for damaged posts, broken wire and gate damage.	Repair as required to ensure the integrity of the cap.	Annually
4) Mine entrance drainage ditch inspection		
a) Inspect side slopes of ditch for sloughing into ditch.	Round edges of ditch. Remove sloughed material.	Annually
b) Verify ditch drains water beyond cap mound towards mill facility.	Remove ditch material as needed for drainage away from cap.	Annually
c) Check for high spots in ditch bottom and for vegetative growth.	Remove vegetation in ditch. Remove high spots to promote drainage.	Annually
5) Inspect closure of mine vent		
Inspect mine vent closure for subsidence or breakthrough.	Fill with surrounding soil for subsidence. Plug with large rock or concrete rubble if broken through. Backfill with soil.	Annually

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Table 1—Silver Mountain Mine Maintenance Requirements (Continued)

Operation and Maintenance Requirements	Corrective Action	Frequency
6) Mine entrance closure inspection Inspect entrance of mine to verify no openings into mine shaft have developed.	Plug with large stone.	Annually
7) Sample Mine Drainage Water Collect mine drainage water samples and analyze for total arsenic.	Not applicable.	Annually

^a For additional information on herbicide application or weed control call Okanogan County Noxious Weed Control Board (509-422-7165) or the Okanogan County Cooperative Extension Office (509-422-7245).

^b Mowing may be required to kill woody vegetation such as sagebrush, bitterbrush, or rabbit brush, whose deep roots could penetrate the clay cap and increase the potential for infiltration into the heap leach.

Figure 3: Silver Mountain Mine Maintenance Checklist

ACTIVITY	COMPLETED	REPAIRS PERFORMED	COMMENTS
1) Inspect cap a) Subsidence b) Erosion	YES <i>AD</i> YES <i>AD</i>	NONE	NONE LITTLE
2) Inspect cover a) Adequate vegetation, b) weeds, c) holes, and d) minimal woody vegetation on cap ^a	YES <i>AD</i> YES <i>AD</i> YES YES	NONE	Good GRASS (A SCIA) coverage & small woody weeds on cap NONE SEE WEED NET
3) Inspect fence	YES	NONE	EPA SITE FENCE IN DISREPAIR. NEVER FENCE INSTALLED ON 3 SIDES OF 5 ACRE SITE. FENCE REMAINS down on ADIT SIDE.
4) Inspect drainage ditch to ensure water is draining away from cap	YES	NONE	SEE photo showing drainage course
5) Confirm mine vent is closed	YES	NONE	Remains closed.
6) Confirm mine entrance is closed	YES	NONE	Remains closed.

Figure 3: Silver Mountain Mine Maintenance Checklist (cont.)

ACTIVITY	COMPLETED	REPAIRS PERFORMED	COMMENTS
7) Sample seep drainage	Yes	NONE	Results 116 µg/L. Affected.
8) Other (specify)	_____	_____	_____

^a Woody vegetation such as sagebrush, bitterbrush, and rabbit brush must be removed to prevent their deep roots from penetrating the clay cap.

Inspection performed by:

ev 4/25/02

NORMAN HEPNER
PRINT NAME

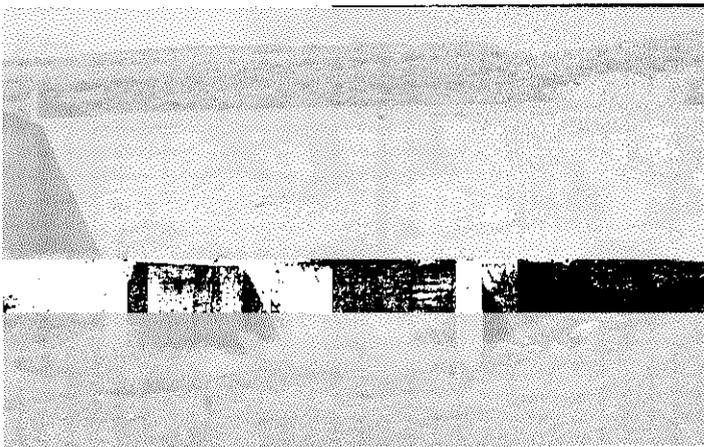
WA State Dept of Ecology
AGENCY

[Signature]
SIGNED

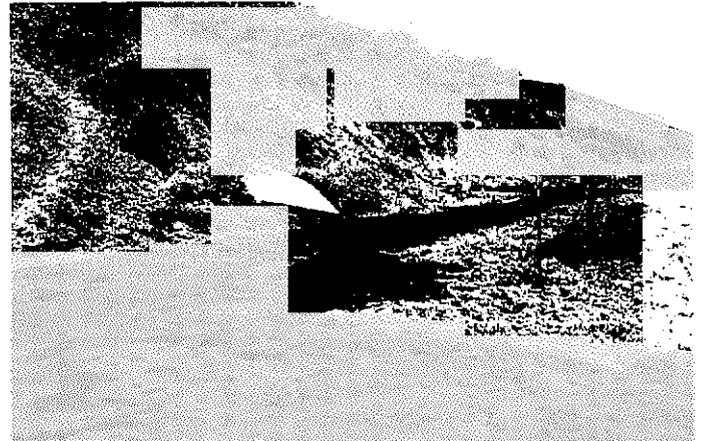
9/11/02
DATE



Picture 1: Silver Mountain Mine Cover 4/26/02



Picture 2: Structural Hazards & Old Graffiti Present



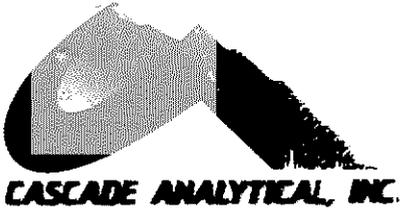
Picture 3: Water course from Mine Adit drainage



Picture 4: Water course descending adjacent to Structure shown in Picture 2.



Picture 5: Isolated location on Cap sidewall showing impact of cattle trampling the cover.



3019 G.S. Center Rd.
Wenatchee, WA 98801

(509) 662-1888

Fax: (509) 662-8183

1-800-545-4206

Batch: 201547
Client: Okanogan Co. Health District
Account: 00930
Sampler: Norm Hepner
PO Number:

MAY 08 2002

--- Water Report ---

Report Date: 5/ 8/02

Okanogan Co. Health Dist
P.O. Box 231
Okanogan, WA 98840

CENTRAL REGION OFFICE

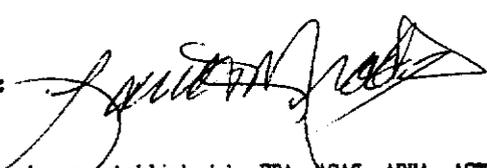
Laboratory Number: 02-E004185 Date Received: 4/26/02
Sample Identification: SMM-01 Date Sampled: 4/25/02
Sample Comment: Silver Min Mine

Test Requested	Results	Units	MDL	Method	Date Analyzed	Flags
Arsenic Total	116.	ug/L	12	SM 3113B	5/ 6/02	
Total Metals Digest Water	Metals Digest				5/ 6/02	

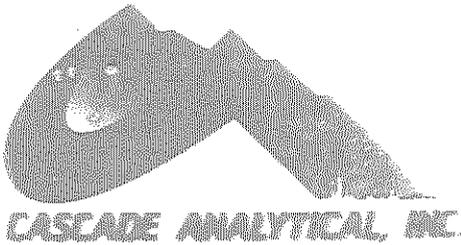
RECEIVED

MAY 08 2002

HEALTH DISTRICT
OKANOGAN COUNTY

Approved By: 

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3019 E. S. Center Rd
 Wenatchee, WA 98801
 (509) 662-1888
 Fax: (509) 662-8183
 1-800-846-4208

WATER ANALYSIS ORDER FORM

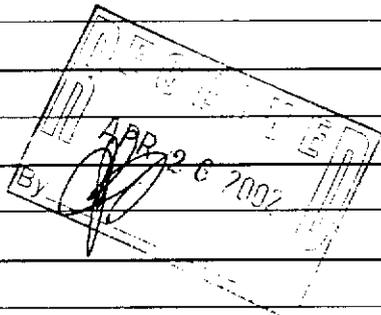
Batch:	SAMPLE #
SEND RESULTS TO:	1 2 3 4 5
SAMPLE REPRESENTATIVE:	
SAMPLE #:	

CLIENT NAME/ADDRESS <i>CARE of: Doug Hale</i>	BILLING NAME/ADDRESS <i>Central Regional Health DISTRICT</i>
SAMPLER'S NAME <i>Norm HEPNER</i>	PHONE

FORM MUST BE COMPLETED BEFORE ANALYSIS WILL BE PERFORMED.

RELINQUISHED BY: (Signature) [1] <i>[Signature]</i>	DATE <i>4/26/02</i>	RELINQUISHED BY: (Signature) [2]	DATE	RELINQUISHED BY: (Signature) [3]	DATE
(Printed) <i>Norm HEPNER</i>	TIME <i>2:50</i>	(Printed)	TIME	(Printed)	TIME
RECEIVED BY: (Signature)	DATE	RECEIVED BY: (Signature)	DATE	RECEIVED FOR LAB BY: (Signature)	DATE
(Printed)	TIME	(Printed)	TIME	(Printed) <i>[Signature]</i>	TIME <i>4/26/02</i>

4105	1	<i>SMM-01 (SILVER MTN MINE)</i>	Sample Date <i>4/25/02</i>
			Sample Time <i>11:30 AM</i>
	2		Sample Date
			Sample Time
	3		Sample Date
		Sample Time	
	4		Sample Date
			Sample Time
	5		Sample Date
			Sample Time



IRRIGATION WATER	1	2	3	4	5
Stancarc					
GENERAL CHEMISTRY					
1135	Ca				
1140	Conductivity				
1200	Solids-Diss. (TDS)				
1230	Solids-Susp. (TSS)				
1240	Tot. Phosphorus				
1250	Orthophosphate				
1260	Kjeldahl Nitrogen (TKN)				
1170	Nitrate/Nitrite				
1280	Ammonia				
1300	Biol. Ox. Demand				
1310	Chem. Ox. Demand				
1190	Sulfate (SO4)				
1180	Chloride (Cl)				
1160	Fluoride (F)				
1320	Hexane Ext. Mat.				
1340	Alkalinity				
217	Total N Pkg				
MICROBIOLOGY					
10040	Total Coliform MF				
10010	Fecal Coliform MF				
10041	Total Coliform MPN				
10011	Feca. Coliform MPN				
METALS - TOTAL OR DISSOLVED					
Priority Pollutants:					
139	Antimony (Sb)				
1011	Arsenic (As)				<input checked="" type="checkbox"/>
1025	Barium (Ba)				
1405	Beryllium (Be)				
1031	Cadmium (Cd)				
1045	Chromium (Cr)				
1215	Copper (Cu)				
1065	Iron (Fe)				
1075	Manganese (Mn)				
1081	Mercury (Hg)				
1051	Lead (Pb)				
1335	Nickel (Ni)				
1091	Selenium (Se)				
1105	Silver (Ag)				
1381	Thallium (Tl)				
1225	Zinc (Zn)				
MINERALS					
1120	Calcium (Ca)				
1130	Magnesium (Mg)				
1115	Phosphorus (P)				
1102	Sulfur (S)				

*METALS - indicate type of analysis - T=total, D=dissolved
 Total N package = TKN, NO₃, NO₂, NH₃

Sample container received by client was sealed Yes _____ No _____
 Sample container received by laboratory was sealed Yes _____ No _____

Disclaimer:

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Customer Signature *[Signature]* Date *4/26/02*

This form also serves as "Chain of Custody."