

# HAPPY VALLEY SEEPAGE OOZES

## Melting Tundra Releases Oil Leak from Past Spill

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**HAPPY VALLEY CAMP** — Whether the amount of oil that entered a tributary stream of the Sagavanirktok River by the Alyeska Happy Valley construction camp during a period from December, 1970 to July 1972 was of a magnitude to damage the delicate Arctic tundra and the stocks of Arctic Char and grayling fish that abound in those waters was still not solved after a visit to the site of the spill on July 12.

Flying north over the Brooks Range to investigate the reported leak on the North Slope, BLM engineer Ed Waszkiewicz pointed out the vastness of the space over which the plane was flying, relating it to the relative smallness of the area set aside for the pipeline route.

"Putting the pipeline in proportion," he said, "is like taking a shoestring in the Chena Building (a modest three story building in Fairbanks) and laying it from end to end."

Tim Wallis, vice-president of the Tanana Chiefs, agreed that "It's a good analogy. But it doesn't go far enough. If the shoestring was made out of some kind of acid and it began to eat into the material around it, the floor and so on, until eventually it spread out into the structure and the Chena Building collapsed, that's more like what you're talking about."

No one was able to give a figure as to the exact amount of the leakages or for that matter, as to the number of actual leaks. The original accident seems to have occurred within a utility building housing the camp's generator in December of 1970. A report from Alyeska's engineer on the site described the accident.

"In December 1970, a 2" fuel line cracked inside the utility building. Oil escaped both inside and outside the building. How much was not known but conservative estimate is 200 gallons. The oil soaked gravel fill was excavated and wasted 100' uphill from the creek."

"This waste area," says the August, 1971 report, "and the original oil soaked leak area is the apparent source of fuel oil showing up in the creek (in 1971). New fuel line installed after the break. No present leaks in evidence."

The problem was persistent.

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**LIMITED SUCCESS IN CLEAN-UP ATTEMPT—** A fuel oil leak inside a utility building at the Happy Valley pipeline construction camp and a new leak this June continue to cause problems. "The cut-off trench below the waste area had only limited success in stopping the sub-surface

flow of oil to the creek," said a 1971 BLM report. The trench continues to collect drainage with residue of oil as the ground warmed up this spring, and new leakage appeared.

— Photo by JACQUELINE GLASGOW

# Melting Tundra Releases Oil Seepage from Past Spill ...

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As the ground warmed up with the summer thaw in 1971, oil continued to drain out of the surrounding soil. To Alyeska's embarrassment, a film on the nearby creek was first noticed by some visiting Congressmen.

A corrective measure was designed: "A floating boom, consisting of three 4" X 4" X 6"

long timbers connected by 4" wide metal strips, attached along the upstream edge, was strung across the creek about 200 feet downstream from where the oil was entering.

"Several collection cans were attached to the floating boom. Each can had a wick installed to absorb the oil. Oil was also skimmed off the top of the

water as it piled up behind the floating boom."

The amount was apparently decreased or stopped. Later in the month, a film was again noticed, and a ditch was dug parallel to the creek to collect oil draining out of the gravel pad.

Harvey Yoshihara, fisheries biologist for the Fish and Game Dept., Division of Sport Fish, said his department made a rough estimate of the amount of oil flowing into the stream based on visual calculation.

They estimated that from one to two gallons per day flowed into the creek last year in August. Whether or not this rate of flow was continual, he could not say. When the temperatures dropped to sub-zero, the ground froze and retained the oil.

When it warmed up again in 1972, the same old problem was there. The log boom used in 1971 was utilized again for a short time and new measures were taken to get rid of it.

Two small catch ponds were excavated right at the creek edge, pipes inserted to drain water from the bottom, and the oil burned off the top. Fires were burned two and sometimes three times a day during June.

Some time early in June, it was suspected that the amount of oil must be coming from a new leak rather than the old problem. The leak was located in a fuel line leading from the bladder field to an upper storage tank, in a buried section of the line.

The line was sealed off immediately and a new one installed above ground, with a portion remaining buried.

Neither BLM nor the federal Environmental Protection Agency had any records of this June 1972 leak being reported as a new leak. BLM considered that the problem was covered as existing before.

Alyeska has a responsibility to report to EPA and the Coast Guard any oil spills wherever navigable waters are involved. Earlier reports were made to both agencies in 1971, but neither sent a representative to review the amount of damage.

The corrective means were approved by BLM's Duane Ferdinand.

BLM explained: "Any professional should be able to make a judgment. You may consult with others but the decision is ultimately yours. It's like a doctor. If you called in ten doctors, you might get ten different opinions, but if you respect his opinion, you go with it."

There is no fail-safe method of cleaning up an oil spill. Ray Morris, oil pollution expert for the Environmental Protection Agency, said, "If you've ever walked into a situation where there's been any sizeable spill, you take one look at it and you have a helpless feeling."

"Once they get away from you, it's a real problem. If you

can contain it at the time of spill, if you can anticipate accidents, you have a better chance at corrective measures."

On pollution in general, Morris said, "Once you've got people in an area, you get a stove, you get fuel, you've got a problem."

This was the concern of the North Slope Eskimos from the beginning of the pipeline proposal. John Lear, writing in the Saturday Review in 1970, had said: "Mistakes were bound to happen. They would have to be suffered charitably in the faith that their recurrence would be prevented or at least minimized by ongoing research."

In the Happy Valley incident, it would not seem that there has been any "research."

No scientist took definitive samples of the amount and rate of flow of the oil seepage into the creek.

No one tested the soil contamination around the bladder field. The darkened area was described as being due to natural Arctic vegetation decomposition, yet a handful of it smells strongly of fuel oil.

On Earth Day, 1970, Eben Hopson of Barrow spoke on the subject of the pipeline.

"We must remember that the route north of the Brooks Range is almost 200 miles. The Fish and Game Department of the State of Alaska has officially described that most of that route will be along the Sagavanirktok River 'for many miles.'"

"Then the Fish and Game Department says: 'Six additional rivers crossed or closely approached by the pipeline north of the Brooks Range contain important stocks of sports fish, principally Arctic Char and Grayling.'"

Harvey Yoshihara, fisheries biologist, did not feel the Happy Valley leakage was a major problem. However, he added, "There's an accumulation factor. We don't know where the oil is being collected, if it is continuing to leak."

"If it's being flushed out," he said, "no problem. If it settles in a pool, on the gravel bottom of a pool, it could cause problems. Any type of spill is going to be a problem. Everything has to be in relative terms."

"I personally feel that Alyeska had done a fairly good job, they're taking action on it."

The spill could have been much more damaging, said Yoshihara if it had occurred at a time when the fish were migrating. Fish and Game does not have abundant figures on the fish population in the stream. Alyeska also has a fish crew and Yoshihara said there was a very free exchange of data between their people and the state's.

In general, there has been very little exploration in the Sag drainage.

"If we are able to get the natural population now, when the road does come through,

we'll know what our base was."

He described the stream beside the camp as a rearing stream for Arctic Char and grayling. At times, Fish and Game may advise construction crews to postpone or forestall construction activity that might be damaging to the fish.

Fish and Game was quoted on Earth Day, 1970, as saying, "Predicting the impact of this pipeline on the sport fish resources of waters crossed by it requires much more than educated guesses."

Educated guesses by on-site engineers evaluated the oil leakage at Happy Valley as minimal, although it is a continuing problem that has persisted for well over a year.

During that time, oil has been infiltrating the creek and no one knows where the oil has gone or what the cumulative effect will be.

If there have been as many as three accidents (number three, the dropping of a helicopter fuel tank) at one campsite alone, what is the total of small accidents in all the camps along the route?

A BLM official said, "Oil seeping into the Sag River really isn't much. If you had a tanker leak in Prudhoe Bay, that would be major and the Coast Guard and the EPA people would be there."

The Alaska Native has fought every inch of the way to protect his land from damage. Is it to be protected only when the damage is major, and not when it is minor?

Waszkiewicz described the number of government agencies involved in one way or another with the pipeline activity as a "multi-headed monster like you can't believe."

It is curious and more than a little disturbing that of all those heads, only one BLM engineer investigated the magnitude of the damage at Happy Valley.

If for no other reason, it might have offered positive proof to the public and more especially, to the Alaskan Native, that it was indeed a Mini-Leak, and that reasonable and orderly procedures were followed, resulting in a total, fast, and efficient clean-up.

In August of 1971, Duane Ferdinand wrote a summary of his evaluation of the problem at Happy Valley.

"The cut-off trench below the waste area had only limited success in stopping the subsurface flow of oil to the creek. This flow would be very difficult to stop and I would not recommend that an attempt be made to do so. Containment of the oil in the creek is a feasible and practical way to minimize this problem."

This series on the Happy Valley situation began with the question: What would happen if? What would happen if there is a major oil spill?

The "limited success" of the Happy Valley clean-up is an awesome indicator of the difficulties anticipated in future major oil spills.