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0013

WESTERN DISTRICT

U.S. Steel Mining Co., Inc.
a Subsidiary of United States Steel Corporation

P.O. BOX AE
PAONIA, COLORADO 81428
303/527-4816

September 14, 1984

State of Utah
Department of Natural Resources
4241 State Office Building
Salt Lake City, Utah 84114

RECEIVED
SEP 19 1984
DIVISION OF OIL
GAS & MINING

Attn: D. Wayne Hedberg
Permit Supervisor/Reclamation
Hydrologist

Re: Abatement Plans
NOV N84-2-13-1

Dear Mr. Hedberg:

As requested in your letter dated August 14, 1984, the following information is enclosed:

(1) Drawing E9-3450 which proposes modifications to the existing structure to adequately meet the requirements of 817.46(e)-(u).

(2) Map A9-1449 which shows the hydrologic curve numbers and a proposed permit area extension.

(3) Design storm runoff calculation sheets.

The present containment basin is located very close to the permit area boundary. U. S. Steel Mining Co., Inc. proposes to extend the permit area as shown on map A9-1449. This extension will provide additional room to properly install the proposed structure. This change will also allow additional area should future modifications prove necessary.

The following presents a discussion of 817.46(e)-(u):

(e) The structure is designed to the extent possible to prevent short circuiting.

(f) Any discharge will meet the requirements of an NPDES permit (filed June 22, 1984).

(g) The structure is designed to contain runoff from a 10 year-24 hour precipitation event, refer to the attached calculations.

(h) Sediment will be removed as required. Soil loss carried by run-off is not expected to be a significant contributer of sediment.

(i) The structure will contain a runoff from a 25 year - 24 hour precipitation event, refer to the attached calculations.

(j) Refer to drawing E9-3450.

(k) The structure is large enough that if it settles 5 percent no significant impact will result.

(l) The impoundment height is approximately 15 feet. This results in a minimum crest width of 10 feet. The design crest width is 12 feet, refer to drawing E9-3450.

(m) Refer to drawing E9-3450.

(n) The structure will be built on a clear surface with a slope of less than 1:1.

(o) & (p) The structure will be constructed to comply.

(q) Does not apply.

(r) The impoundment has been designed and will be inspected during construction under the supervision of a registered professional engineer.

(s) The embankment will be seeded to control erosion as specified in the permit.

(t) The impoundment will be inspected as specified in the permit.

(u) The primary purpose of this structure is not sedimentation control but process water control.

The proposed modifications will be conducted in an area which was previously disturbed as was noted in the original submittal. Therefore, it will not be necessary to salvage and store topsoil. Spoil from the pond excavation will be stored as shown on map A9-1449.

Potential discharges from the structure were included in the NPDES permit application filed with the Environmental Protection Agency on June 22, 1984. A copy of transmittal letter describing the proposed outfalls was forwarded to the Division at that time.

Sincerely,

Glenn H. Sides
General Superintendent

md
Attachments
cc: V. R. Watts
L. King
B. L. Kirkwood
B. A. Filas
EC File

CALCULATION NOTES

Subject Storm Runoff into Catch Basin

By B.A.F.

Checked

Acc't

8-27 1984

Sheet No. 1 of 2 Sheets

All drawing and page references in this section refer to either drawings submitted in this section, or drawings and pages included in the Operation and Reclamation Plan - Wellington Coal Cleaning Plant - ACT/007/012.

* The entire drainage area is located within the Sn soil group (DWG. E9-3339).

* Due to the proximity to the PCE2 series, the Sn series is assumed to be soil group D (PP. B-18,19).

* Undisturbed areas have a 15% sage-grass cover. (Cover density is estimated at approx. 60% of actual cover noted in field reconnaissance, August 1984, to account for seasonal changes.) This corresponds to a hydrologic curve number of 84 (P. B-3).

* Disturbed areas have no appreciable cover, which corresponds to a hydrologic curve number of 89 (P. B-21,22). The Containment area within the basin also has a curve number of 89 because the pond is generally dry.

* A 10 year-24 hour storm is 1.82 inches. A 25 year-24 hour storm is 2.18 inches (P. B-17).

Subject Storm Runoff into Catch Basin

CALCULATION NOTES
By B.A.F.
Checked
Acc't
8-27 1984
Sheet No. 2 of 2 Sheets

Method referenced on Page B-2 of ORP.

Acres	Curve No.	Weighted CN
3.10	84	45.9
2.57	89	40.3
5.67		86.2

CN = 86

$S = 1000/_{86} - 10 = 1.63$

$$Q_{10-24} = \frac{(1.82 - 0.2(1.63))^2}{1.82 + 0.8(1.63)} = 0.714 \text{ In.}$$

$$\text{Volume} = 0.714 \text{ in } \left(\frac{1 \text{ Ft.}}{12 \text{ In.}}\right) \quad 5.67 \text{ Acres}$$

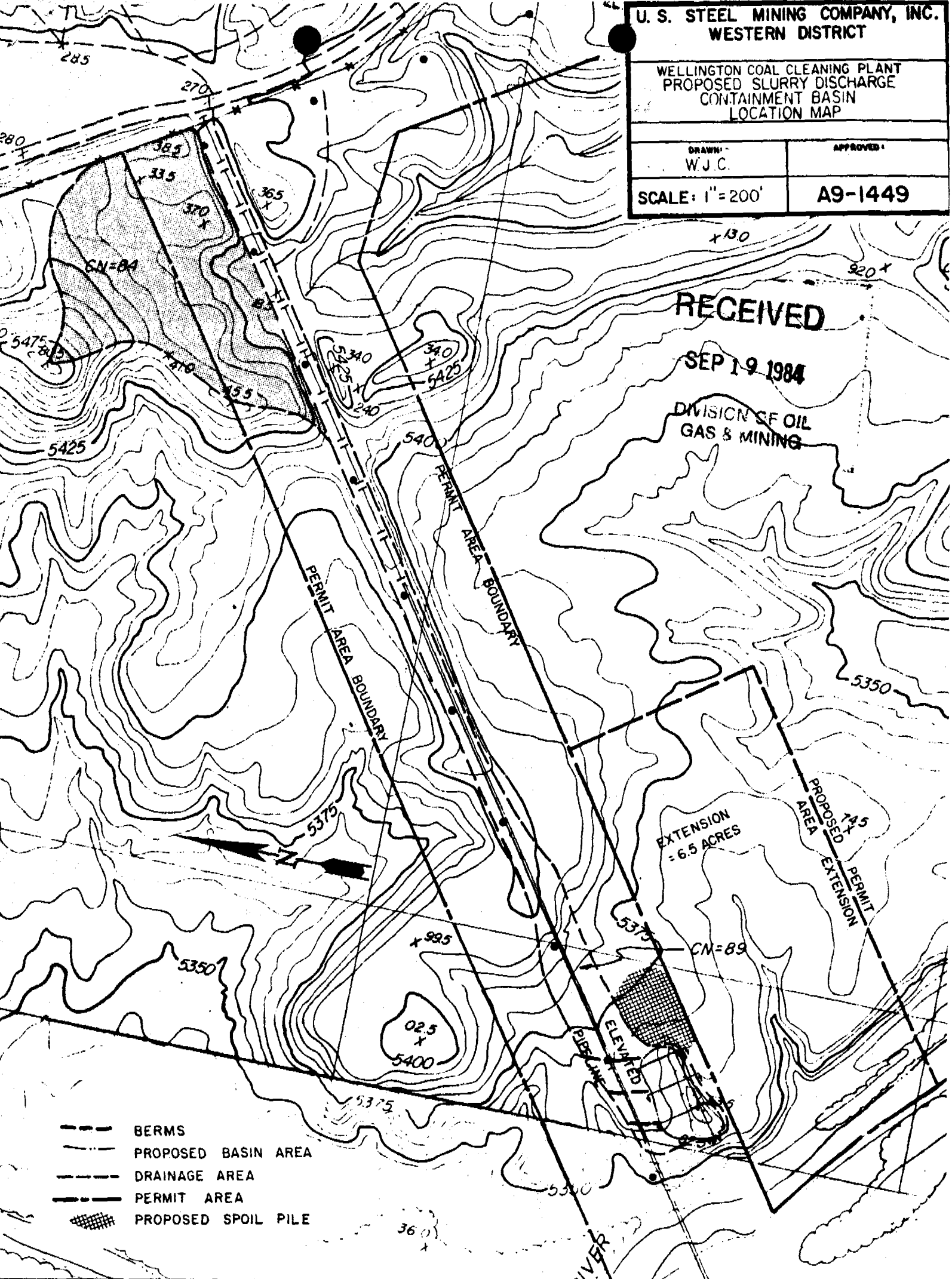
$$= \underline{\underline{0.34 \text{ Acre-Ft. for 10 Yr. - 24 Hr. Storm}}}$$

$$Q_{25-24} = \frac{(2.18-0.2(1.63))^2}{2.18 = 0.8(1.63)} = 0.987 \text{ In.}$$

$$\text{Volume} = 0.987 \text{ In } \left(\frac{1 \text{ Ft.}}{12 \text{ In.}}\right) \quad 5.67 \text{ Acres}$$

$$= \underline{\underline{0.47 \text{ Acre-Ft. for 25 Yr - 24 Hr Storm}}}$$

Both the existing and modified basins are adequate to contain a 25 year-24 hour storm.


U. S. STEEL MINING COMPANY, INC.
WESTERN DISTRICT
WELLINGTON COAL CLEANING PLANT
PROPOSED SLURRY DISCHARGE
CONTAINMENT BASIN
LOCATION MAP
DRAWN: W.J.C.
APPROVED:
SCALE: 1" = 200'
A9-1449
RECEIVED
SEP 19 1984
DIVISION OF OIL
GAS & MINING
PERMIT AREA BOUNDARY
PERMIT AREA BOUNDARY
PROPOSED PERMIT AREA EXTENSION
EXTENSION = 6.5 ACRES
CN=89
CN=84
ELEVATED PIPELINE
5425
5400
5375
5350
N
BERMS
PROPOSED BASIN AREA
DRAINAGE AREA
PERMIT AREA
PROPOSED SPOIL PILE