ENTERED

INFO RE: SWMU 10 SLUDGE PITS

VanHorn, Kristen, NMENV

From: Scott Crouch <scrouch@disorboconsult.com>
Sent: Thursday, February 19, 2015 8:11 AM
To: VanHorn, Kristen, NMENV; Riege, Ed
Subject: RE: SWMU 10 Sludge Pits
Attachments: Scott T Crouch.vcf; SWMU 10 dimensions.pdf

Good Morning Kristen:

I am attaching a couple of excerpts from early documents that I used to determine the approximate dimensions of the "pits." I also think I remember seeing something at one time that talked about a possible sludge layer up to around 20 feet in depth, but I did not find anything to corroborate that description. It appears the "pits" were probably more like what I know as "drying beds." The first document (1985 Inventory of SWMUs) was I believe the earliest description and I think probably the most reliable in regards to the dimensions of the pits. I used the largest dimensions for each pit. For example, the reports show 70' x 80' x 120' x 130' and I went with 80' x 130'. The initial description had three foot dikes with one foot of free board and an estimated total volume. I used this to calculate a depth of approx. two feet. In the 19887 RFA report, they say the depth was two feet. I do not know if they calculated the depth like I did, or were actually able to observe the pits.

I reviewed the logs from the earlier borings and noted observations of sludge like material at depths greater than two feet. Because of the uncertainty of the depth, we have proposed to drill all borings to a depth of 20 feet or to the top of bedrock, whichever occurs first. If we are encountering indications of impacts at 20 feet, then we will continue until getting to non-impacted soils or to the depth of refusal.

I hope this is helpful, but let us know if you have additional questions.

Scott T. Crouch, PG
Senior Geologist

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From: VanHorn, Kristen, NMENV [mailto:Kristen.VanHorn@state.nm.us]
Sent: Wednesday, February 18, 2015 4:32 PM
To: Riege, Ed
Cc: Scott Crouch
Subject: SWMU 10 Sludge Pits

Ed and Scott-
Question about SWMU 10, the Sludge Pits … where did you find the dimensions of the pits? Everything I've seen says that they are two (connected) pits that were in an oblong area 120 ft wide by 200 ft long but that there was no

information on the depth of the pits. And then something else I read (I think it was the supplemental information from 1994) said that there was a layer of sludge left at 20 ft below ground surface. Is there a typo somewhere?

Thanks,
Kristen

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Waste Description:
Diesel fuel is the main product which is loaded in bulk at the rail loading area.

Quantities/Volumes
No records are available on the amounts of diesel fuel which may have been discharged to the railroad rack lagoon.

Unit Description
The railroad rack lagoon is approximately 175' X 50' X 4' with a total capacity of 261,100 gallons.

3.4 SLUDGE PITS
Prior to November 19, 1980 API separator sludges and slop oils were disposed of in two unlined sludge pits just west of the API unit. The contents of the sludge pits were removed and the sludge pits closed prior to November 19, 1980. The wastes from the pits were placed in the new land treatment area.

Waste Description
Wastes consisted of API separator sludge and slop oil emulsion solids.

Quantity/Volume
Estimated volumes for API separator sludges and slop oil emulsion solids for the years 1958-1980 are 100 tons/year and 2 tons/year respectively.

Unit Description
The sludge pits had dimensions of approximately 70' X 80' X 120' X 130' and 70' X 50' X 50'. Berms were approximately three feet high and considering a free board of one foot total capacity for both units was approximately 250,000 gallons.

$(80' \times 130') + (70' \times 50') = 14{,}000\ ft^2$

$250{,}000\ gallons \times \frac{1\ ft^3}{7.4805\ gallons} \times \frac{1}{14{,}000\ ft^2} = 2.3\ ft$

ATTACHMENT B-5
INVENTORY OF SOLID WASTE MANAGEMENT UNITS

June 14, 1985

NMD000333211

Prepared for:

Giant Refinery Company
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TABLE 4-1 (Continued)

SOLID WASTE MANAGEMENT UNITS
UNIT AND WASTE CHARACTERISTICS

Unit Number	SWMU	Dimensions	Maximum Capacity	Period Of Use	Wastes Managed	Approximate Quantity Managed	Probable Waste Constituents and Characteristics
29	Railroad Rack Lagoon	175 x 50 ft., 4 ft. deep.	261,100 gal.	ND.	Product (mainly diesel fuel) spills, removed 3-4 times a year by vacuum truck and transferred to the API separator.	ND.	Diesel oil: Combustible, environmental hazard.
30-31	Sludge Pits	1) 70 x 80 x 120 x 130 ft. 2) 70 x 50 x 50 ft. Both 2 ft. deep with 1 ft. freeboard.	250,000 gal.	1958 - 1980	API separator sludge and slop oil emulsion solids. Contents removed and pits closed in 1980.	API: 100 tons/yr. Slop oil: 2 tons/yr.	See Table 4-3 (API separator sludge, slop oil emulsion solids).
32	Asphalt Pit	50 x 20 ft., 2 feet deep.	1000 - 2000 cf.	ND.	Asphalt from old spill from now inactive asphalt plant. At one time received wastewater from steam condensation runoff.	ND.	Wastes are not fully documented. Possibly low pH wastewater.
33	Land Treatment	300 x 80 ft. (wastes incorporated in upper 12 in.).	NA	1958 - 1975. Closed 1980.	API separator sludge, tank bottoms, waste oil, slop oils, etc.	10 tons/yr.	See Table 4-3.
34	Land Treatment	6 cells, each 462 x 222 ft. (wastes incorporated in upper 12 in.)	NA.	1980 - Present.	Cooling tower sludge (CTS), slop oil emulsion (SOE), heat exchanger cleaning sludge (HECS), API separator sludge, (API), leaded tank bottoms (LTB).	CTS: 12,600 lbs/yr. SOE: 800 lbs/yr. HECS: 400 lbs/yr. API: 500,000 lbs/yr. LTB: 1,600 lbs/yr.	See Table 4-3.
35	Container Storage	80 x 50 ft.	ND.	1958 - 1980.	Empty drums from various chemical products.	ND.	Unknown, since wastes are not documented.
36	Container Storage	15 x 15 ft.	ND.	1980 - Present.	Spent 1,1,1 - trichloroethane stored in 55 gallon drums.	10 drums.	EPA hazardous waste number F001.

RCRA FACILITY ASSESSMENT REPORT
GIANT CINIZA REFINERY
GALLUP, NEW MEXICO

NMD000333211
EPA CONTRACT NO. 68-01-7251
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PROJECT W68444

August 25, 1987

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