

GW - 028

**INSPECTIONS &
DATA**

2006 - Present

Chavez, Carl J, EMNRD

To: Chavez, Carl J, EMNRD
Subject: Artesia Refinery (GW-028) Note to File "Inspections"

Director announced that travel was being restricted for inspections with no overnights allowed until further notice.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
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Website: <http://www.emnrd.state.nm.us/ocd/index.htm>
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, September 08, 2009 5:04 PM
To: 'Moore, Darrell'; Lackey, Johnny
Cc: VonGonten, Glenn, EMNRD; Monzeglio, Hope, NMENV; Cobrain, Dave, NMENV
Subject: Navajo Refining Company- Artesia Refinery (GW-028) OCD Refinery Inspection March 13, 2008
Attachments: REFINERY INSPECTION 3-13-08.pdf

Darrell & Johnny:

Good afternoon. Please find attached the OCD's inspection items from the above subject inspection date. I apologize for the tardiness in getting these to the Navajo Refining Company (NRC) based on my workload and orders. Regardless, this e-mail with attached inspection items serves to notify of the NRC of OCD concerns at the facility during the inspection and after the February 19-20, 2007 OCD Inspection of the facility. You may have notes from the close-out meeting on March 13, 2008 with the OCD concerns, but there may be new concerns based on a review of all of the photos, field notes, and a review of the February 19-20, 2007 OCD Inspection items.

The OCD does want to put NRC on notice that the automated free-product recovery system at KWB-8 was never placed on-line from the February 20, 2007 OCD Inspection close out meeting. To allow a point source of contamination to expand and continue to migrate eastward into the pecan orchard with an increasing volume of dissolved phase contaminants impacting fresh ground water and potentially impacting agricultural resources, nearby pumping agricultural wells and nearby pumping water wells is a serious violation of the WQCC Regulations. The OCD recommends that NRC install the free-product recovery system soon for the protection of the drinking water supply and downgradient water users (general public and agricultural water users) that stand to be impacted by the dissolved phase portion of the plume from the emanating point source of contamination- phase separated hydrocarbons (PSH) on the water table. NRC may also want to explore installing these systems along the axis of the PSH plumes to speed up the removal of free-product and cleanup of the ground water contamination. In addition, any spill locations identified for cleanup should be promptly cleaned up and investigated for the upcoming facility inspection.

I recommend that you review the inspection notes and respond to the OCD within 30 days with a status or update on any noted items and what the NRC has done to address them. The OCD will be going over your C-141 reporting forms to ensure that you have properly reported any releases that were brought to your attention during the OCD inspections and from past reported releases as the facility. You may also comment on any photos with imprecise information for the record.

Thank you and I look forward to our upcoming facility inspection where we will follow-up with NRC from its inspections.

Please contact me if you have questions.

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REFINERY TANK CONSTRUCTION INSPECTION



New Rose Unit installed at the former Tank 437 area to treat heavier Canadian Crude (~18K bbl/day)



Rose Unit



Rose Unit



Pitch Tank 814 Built 3 yrs old (10K bbl)



Pitch Tank 814 w/ temperature gauge

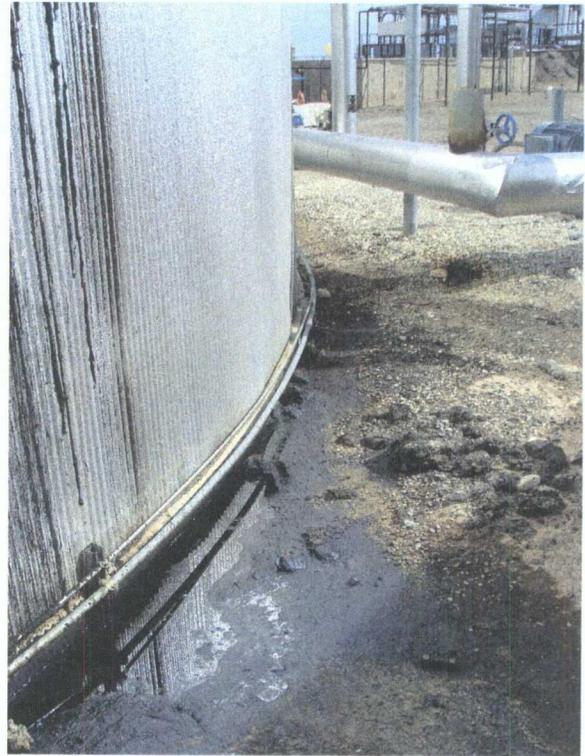


Pitch Tank 814 concrete base ring w/ pig tail design and high temp liner

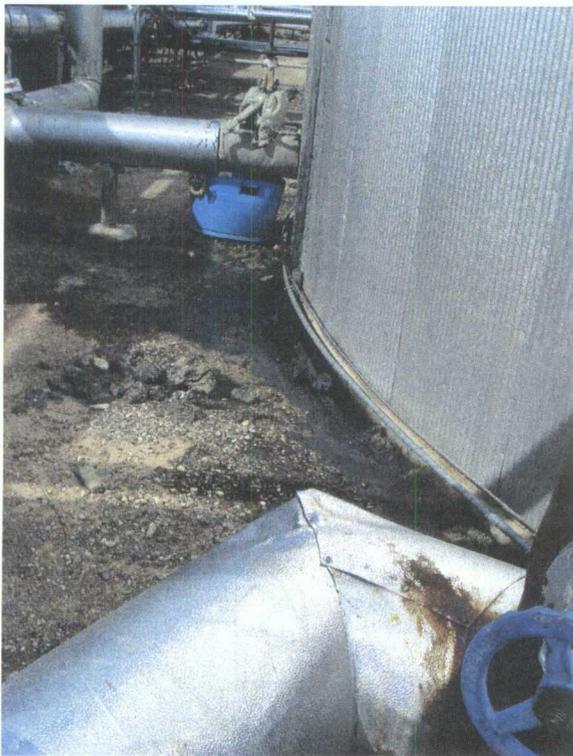
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Sunny ~ 65°F OCD Inspector: Carl Chavez



Pitch tar piping leak evident



Pitch Tank 814 Overflow pitch tar spill needs cleanup here



Pitch Tank 814 Investigate leaking bottom?



Pitch Tank 814 close up of tar contained on ground in berm area

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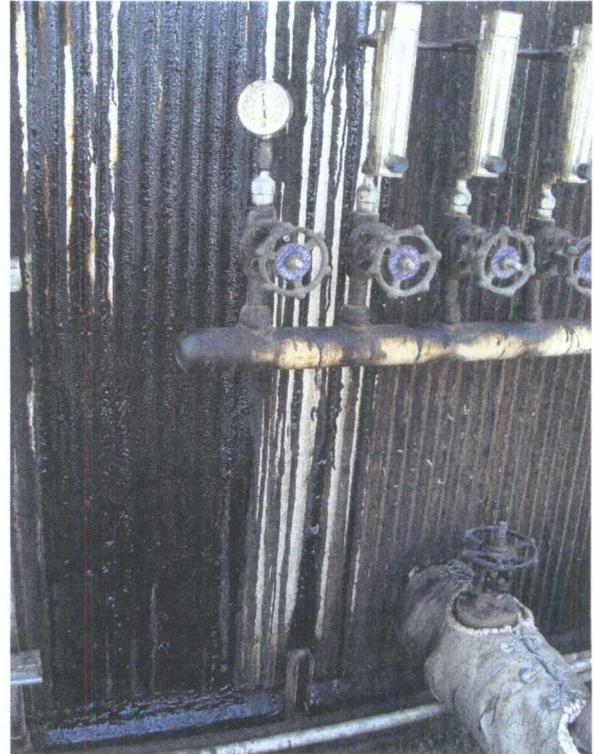
Pitch Tank 814



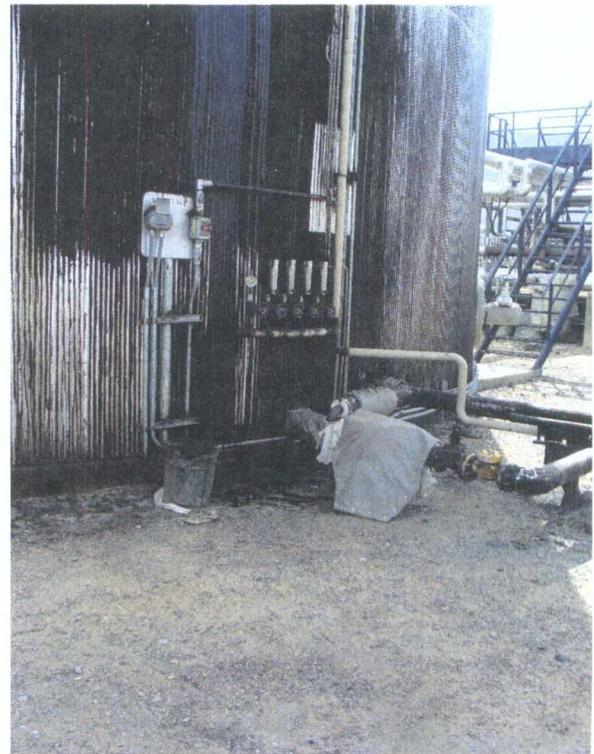
Pitch Tank 814



Pitch Tank 814 Tank gauging station at tank

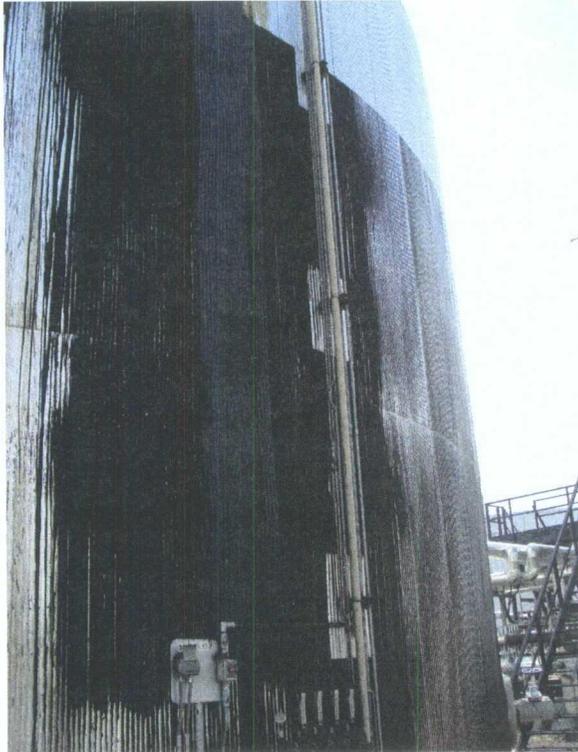


Pitch Tank 814 Close up on tank gauging station



Pitch Tank 814 Overflow spill evident on walls where tank gauging station is located

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Pitch Tank 814 Overflow evident on tank where gauging station is located



Pitch Tank 814 pig tail



Pitch Tank 814



Pitch Tank 814 insulated lines into tank



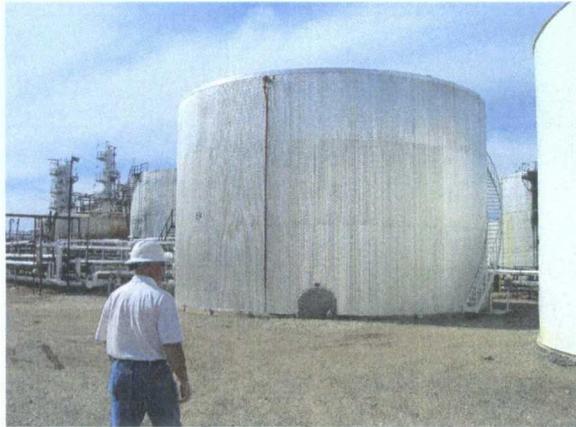
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Tank 814 Built in 2005 w/ high-temp liner within concrete base ring w/ tattle tail drains at 180° orientation



Central chemical storage pad w/ drainage sump location to control spills



Pitch Tank 814 Insulated



Close-up of recently constructed central chemical storage area



Central chemical storage sump w/ leak detection system



Close-up of sump w/ leak detection system location on pad in central chemical storage area

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Chemical totes stored in centralized chemical storage area



Area set aside for construction



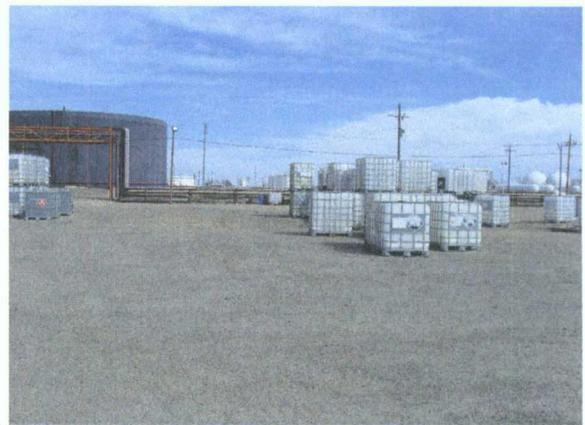
Centralized chemical storage area



Empty totes stored outside of centralized pad area



Area set aside for construction



Empty totes stored outside of centralized storage area

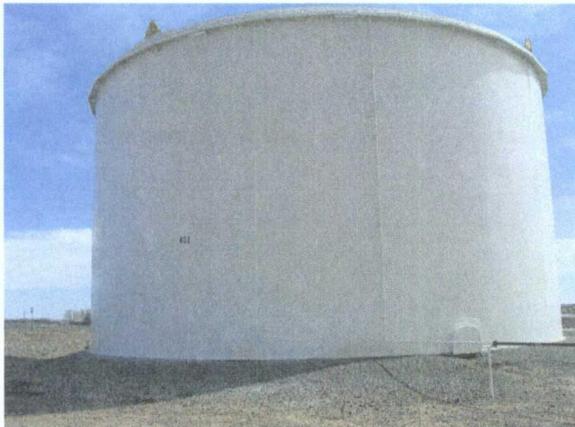
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Older tanks constructed on top of ground
w/o liner or concrete base ring design



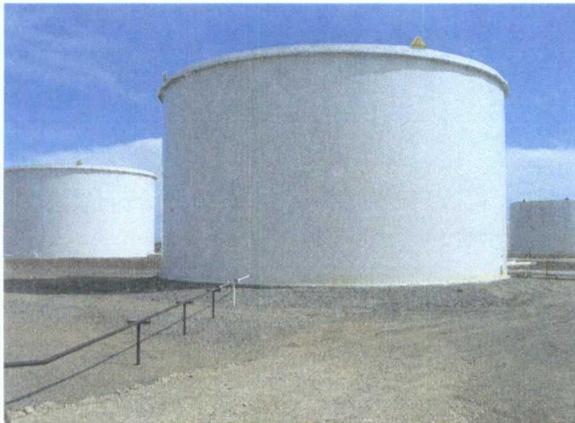
Older tank constructed on ground



Tank 402 constructed on ground w/o
concrete base ring construction, liner & pig
tail drainage system



Mild hydro cracking & hydrogen unit
(3M/ft³/day) construction in progress to
process Canadian crude (heavy oil at Rose
Unit)



Older (> 4 yrs) tank construction



Close-up mild hydro cracking & hydrogen
unit

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Close-up mild hydro cracking & hydrogen unit (~ 3M/ft3/day)



Tank 815 Fluid Level Indicator reading 17.4 ft. of fluid in tank



Tank 815 (80K bbl) Built ~ 2 yrs. ago. Ultra-low sulfur diesel leak needs cleanup and investigation to determine if fractured ring base has caused a leak in the tank?



Tank 815 Concrete ring break (tank installed off-center) & w/o liner underneath, but w/ pigtail drains



Tank 815 Fluid level at 17.4 ft.



Tank 815 Water draw

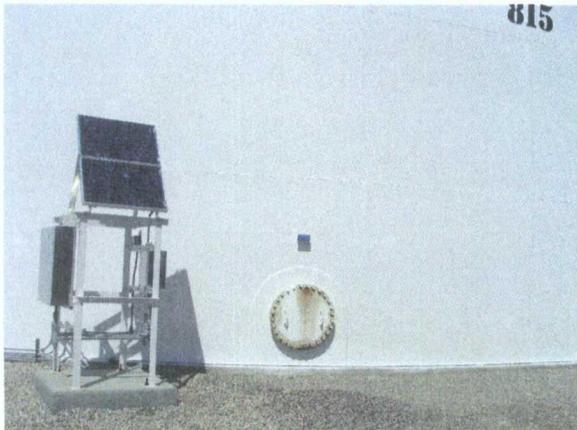
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Tank 815 Perimeter concrete ring



Tank 815 Perimeter concrete ring fracture w/ pigtail drain @ 90° angles



Tank 815



Tank 815 Fractured concrete ring base



Tank 815 Fractured concrete ring base



Tank 815 Fractured concrete ring base

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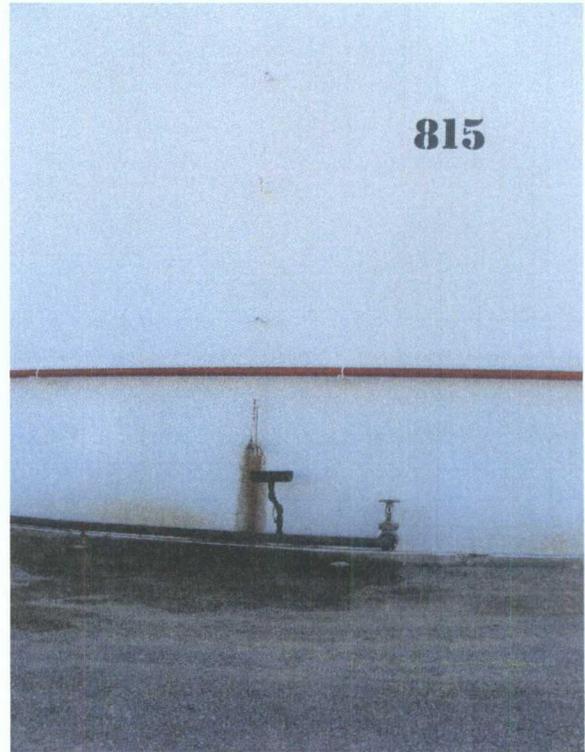
Tank 815 Concrete base ring fracture



Tank 815 low-sulfur diesel leak from water withdrawal location



Tank 815 Concrete base ring damage



Tank 815 leak need cleanup and investigation



Tank 815 water draw leak location close-up

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New Tank 1225 Crude tank (100K bbls)
construction of concrete base ring w/ sub-
liner (~120 ft. Dia.)



Tank 1225 Concrete ring 1.5 dia. w/ 5 min.
pressure test on double welded seam at 30
psi on 60-mil HDPE liner system



Tank 1225 Double heat seamed liner 60-mil
HDPE



Tank 1225 Thermal welded liner to inner
perimeter of concrete base ring

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New Tank 437 location w/ 60-mil HDPE liner N of Tank 450



Tank 437 One inch tattle tale leak detection system pipe oriented at 90° angles



Tank 437 double weld seams w/ pressure test results in white chalk



Tank 437 pressure test results near perimeter



Tank 437 pressure test results in white chalk

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Tank 437 Sump area ~ 5ft x 7 ft some pressure loss noted on E side thought to be heat related (Matrix Services, Inc. John Dyring 282-458-8781)



Tank 437 pressure up 30 psi for 5 min. between double thermal seams.



Cut dirt from construction areas stockpiled on site near new tanks



Tank 437 perimeter close-up



New Tank 437 Matrix Services, Inc. overseeing construction of liner w/ testing

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Tank 437 Thermal seaming machine tool



Tank 437 Pressure test in progress w/
pressure gauge between liner seams holding
pressure



Tank 437 Pressure test in progress between
seams w/ test results recorded on liner w/
white chalk

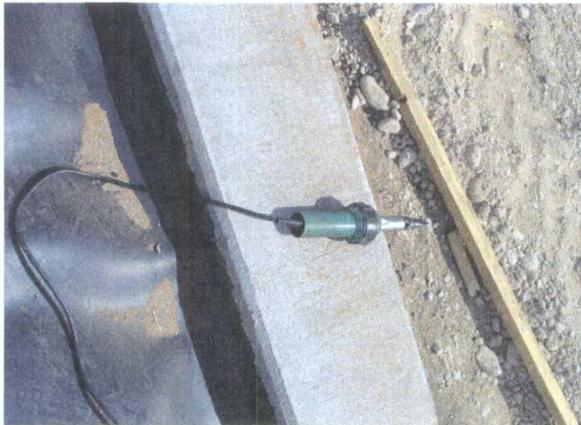


Tank 437 between seam pressure test record
in progress: on 3/13/08 @ 13:38 at 37 psi
awaiting 5 min. pressure reading

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Tank 437 Side seaming tool



Tank 437 Heating element for side seaming tool



Tank 437 Sump w/ water draw collection area



Tank 437 60-mil HDPE liner double seamed



Tank 437 in. pig tail drain @ 90° orientation

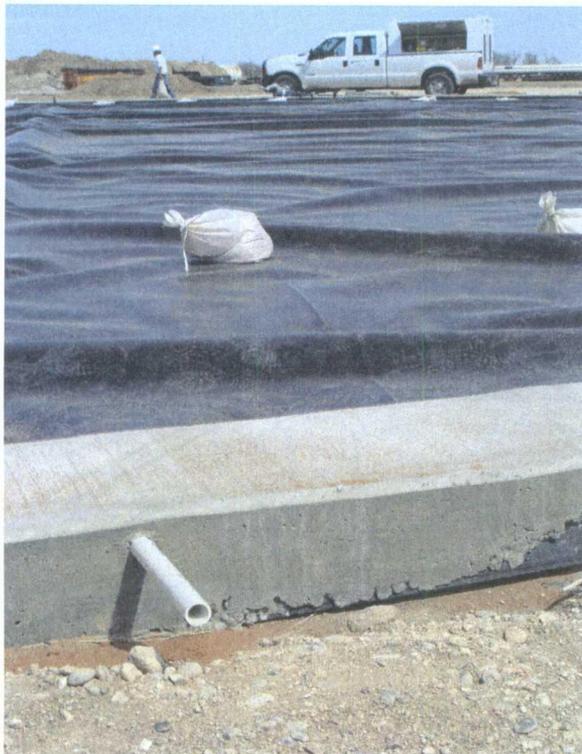
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Tank 437 Close-up of one inch pig tail drain pipe



Tank 437 liner appears to be sandwiched into the top of concrete base ring



Tank 437 Pigtail along outer perimeter



Tank 437 Pressure gauge set into double seam



Tank 437 Close-up of pressure gauge between seams from different angle

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Thermally welded seam against concrete ring



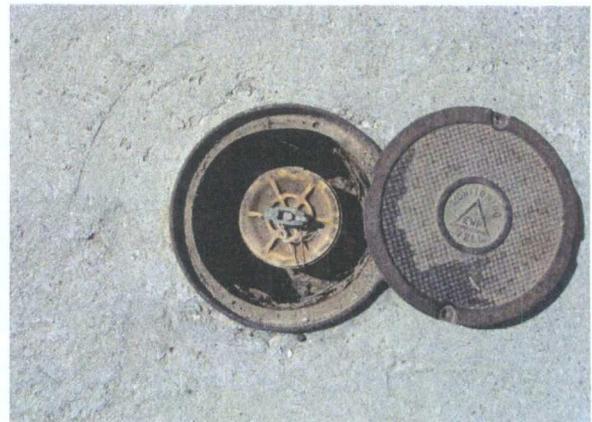
Tank construction area



Tank 437 pressure testing



Looking S along S. Bolton Rd. at flush mount MWs E of roadway- wells unlocked



S Bolton Rd. flush mount MW at recovery well area to stop migration of GW contamination from moving further SE

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Looking W-NW from N Bolton Rd at refinery in background



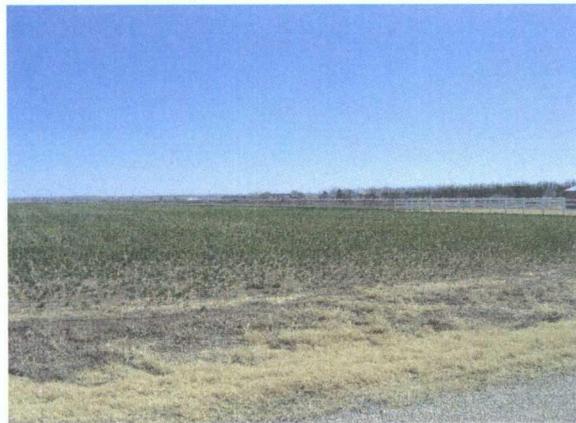
Looking SE across intersection of Main & N Bolton Rd at agricultural farm field



Looking W-NW across agricultural lands toward refinery from E Main St. or Hwy. 82



S Bolton Rd Recovery Well power grid



Looking E-SE from S Bolton Rd
Agricultural fields in distance



Looking NW from S Bolton Rd toward refinery from RW-11 area

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Looking W-NW from S Bolton Rd through agricultural farm field toward refinery (plume spur migrating SE from facility)



Construction dirt stockpiles



Looking W-SW from Adams Ave. toward refinery



Looking W-NW from Main & N. Bolton Rd



Dirt removed & stockpiled from construction activity



Looking E from N Bolton Rd. at Eagle Draw- no oily sheen visible

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Looking W at Eagle Draw looking from N Bolton Rd- good physical appearance



Looking W-SW Eagle Draw in foreground in good physical appearance & condition



Looking W-SW from N. Bolton Rd. Pecan Orchard in background



Zoom in from S. Bolton Rd. looking W



Looking due W from N Bolton Rd.



Looking due W at refinery from N Bolton Rd

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Notes (action items highlighted in yellow):

- 1) Flush mount recovery and monitor wells were not locked and were accessible to public. Locks were not installed from 2/19/2007 Close Out Inspection Meeting.
- 2) Cleanup and investigate source of leak on Tank 815.
- 3) Tank 814 needs to be cleaned up and investigated.
- 4) Certify Tank 815 w/ fractured concrete ring base is fit for continued service by PE or decommission tank due to safety and environmental hazard risk.
- 5) Gary Davis (NRC Engineer) states that tanks built within last 6 yrs. include the liner w/ pig tail drainage design. Unlike Tank 815, new tanks will be properly centered on concrete base ring to prevent tank base failure from occurring.
- 6) John Dyring of Camerino San Juan 281-458-8781 7021 Gregdale Rd., Houston TX 77049 subcontracted by Matrix Services, Inc. for liner construction & testing.
- 7) Camerino will ensure that sub liner systems pass all pressure testing before tank is constructed over concrete base ring.
- 8) Pitch tanks consist of Tanks 410, 418, and 431. New tanks consist of Tanks 450, 815, 850 (96-98) w/ Tank 858 rebuilt.
- 9) New Sulfur Recovery Units are located E of Tank 57, but OCD was not notified under a "Modification" to the permit.
- 10) Five RWs on S Bolton Rd. tied into KWB-8 recovery system with activation expected within next quarter?
- 11) Automatic 24/7 free-product recovery system to remove the source of ground water contamination required from

2/19/07 inspection has not been installed yet.

12) Former Tank 437 moved to new location and oil contamination from leaky crude oil transfer pump cleaned up from OCD 2/19/2007 Close-Out Meeting Inspection?

13) Centralized chemical storage area was constructed per 2/19/2007 OCD Close-Out Meeting to store containers with chemicals and any non-rinsed chemical containers.

14) Triple rinse process being incorporated into discharge permit renewal.

15) Secondary containment under crude oil transfer pumps status?

16) Cat fine drums in bundle cleaning area need to be stored in the newly constructed chemical storage area.

17) Hazardous waste container storage area requires similar impermeable pad storage area.

18) Inspected RCRA pond area W of Pecos River contaminated with arsenic, selenium, benzene in ground water. Background conditions exist N of ponds. Benzene plume emanating from well in pond area NW toward Pecos River.

19) Visited UIC Class I WDW-3 Disposal Well & discussed public notice procedures.

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Subject: Navajo Refining Company- Artesia Refinery (GW-028) OCD Refinery Inspection February 20-21, 2007
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Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones

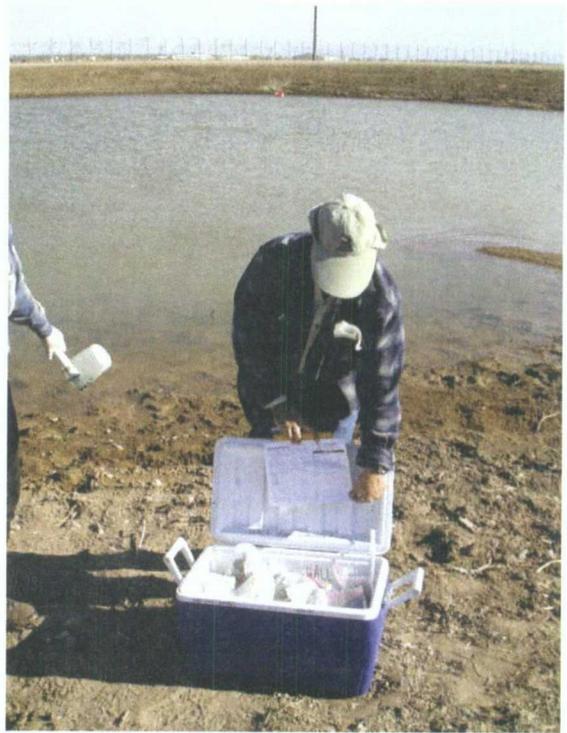
REFINERY INSPECTION



Looking south on S. Bolton Rd going to
MWs

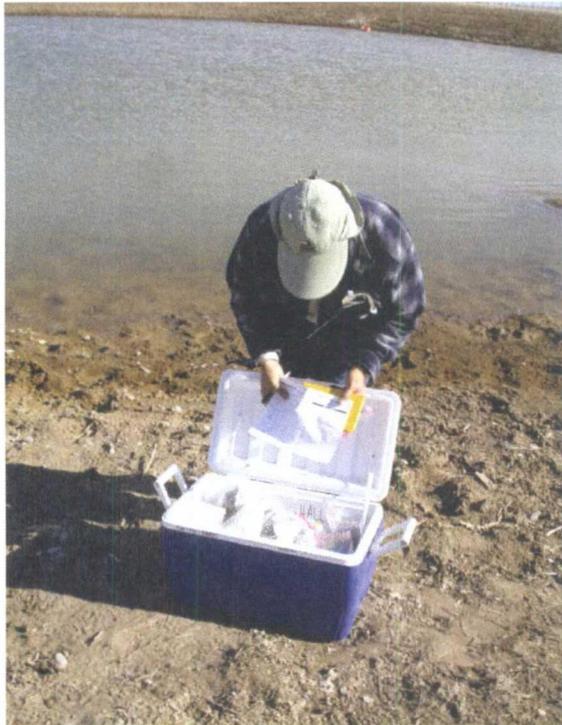


Flush mount wells along S Bolton Rd-
unlocked



Unlined West Storm Water Retention Pond
sample location

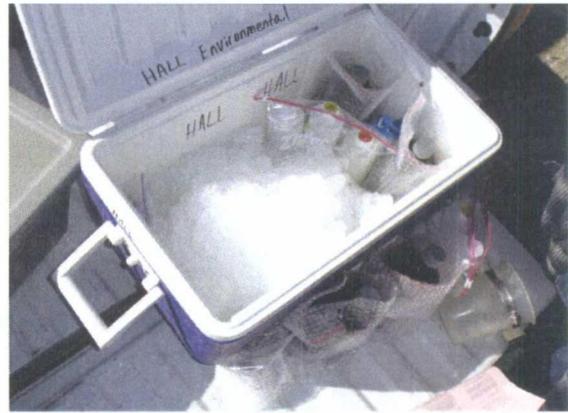
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Cooler w/ ice, sample containers, chain-of-custody forms, etc.



Sample location West Storm Water Pond



Cooler w/ samples in containers under ice



Chain-of-Custody form paperwork in the field during sample event- QA/QC



Samples collected in stored following DQOs & EPA QA/QC Procedures

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Looking south inlet to storm water retention pond & sample location



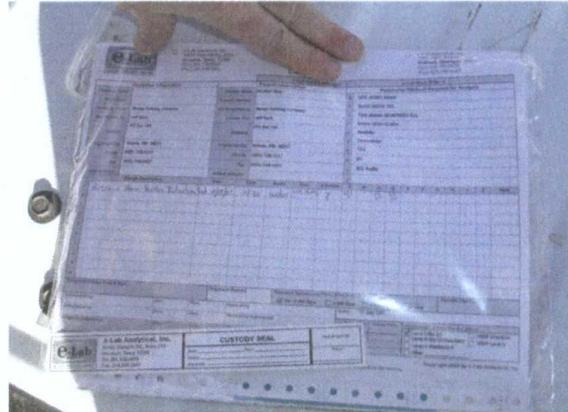
Line w/ pump to use fresh water in storm water retention pond when necessary.



Looking south at storm water retention pond inlet



Samples contained within baggies placed in ice w/ labels marked in waterproof ink



OCD Chain-of-Custody form- sample record



SE of farm field ~ KWB-13

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KWB-13 Milky turbidity appearance of GW w/ SWL ~ 22 ft.



KWB-13 Using New Disposable Bailer

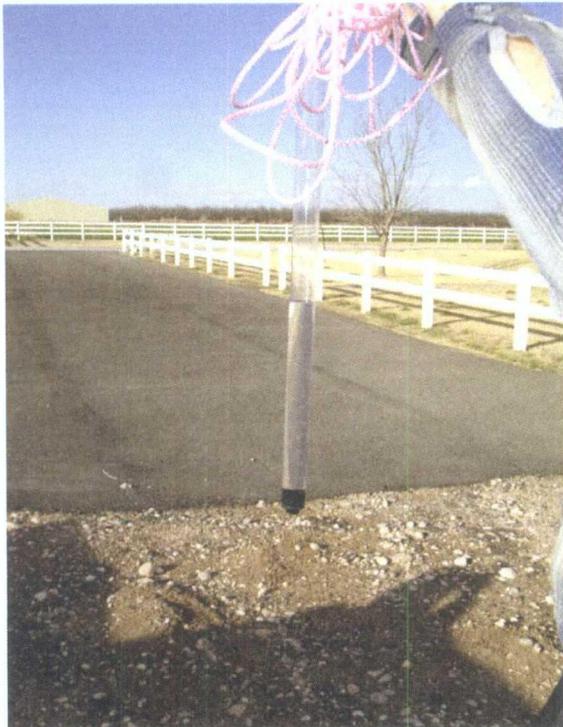


KWB-13 Disposable Bailer farm field in background



Looking north from recovery well field located SE of refinery w/ flat topography in background Agricultural area.

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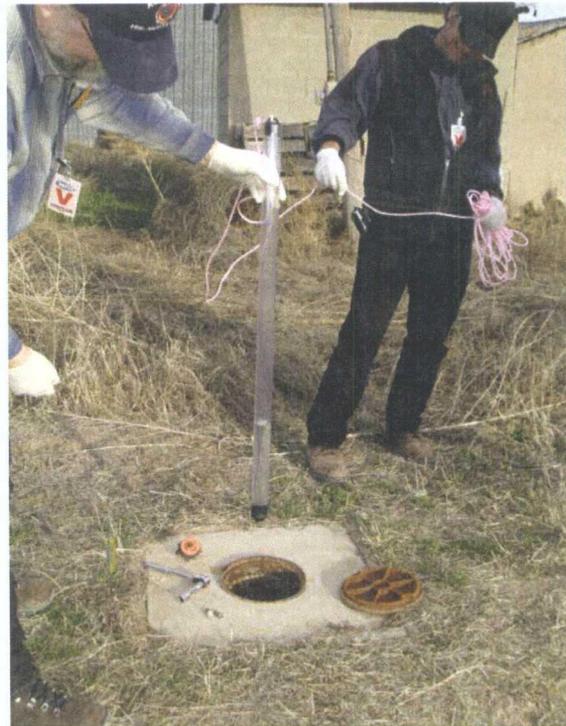
GW from KWB-9



KWB-9 no PSHs present in GW



KWBs 12A & 12B locations: no PSHs present in GW at KWB-12B & 12A was a dry well



KWB-3R location

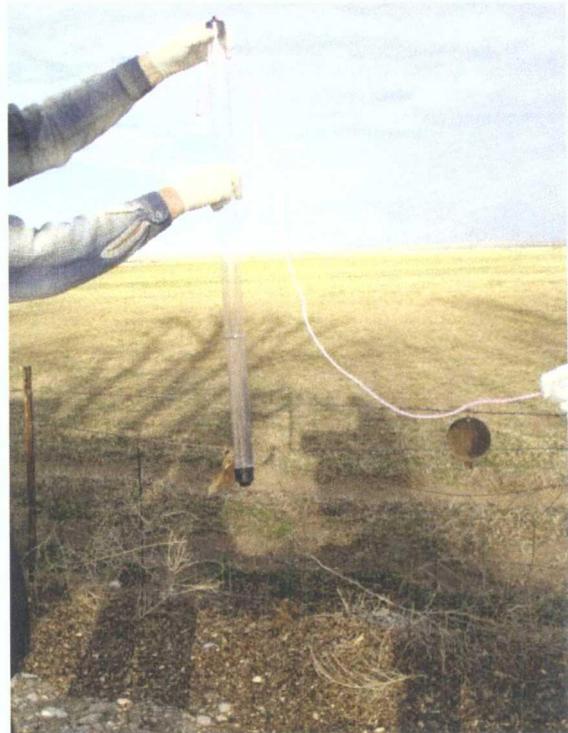
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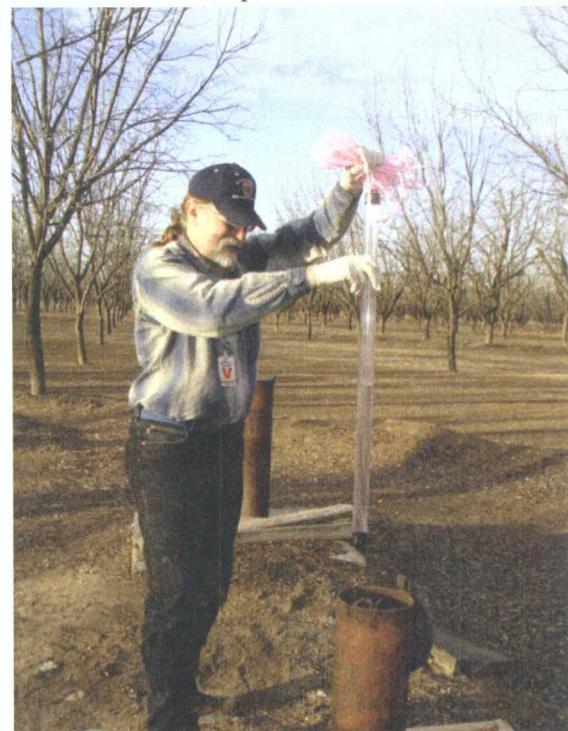
Sample cooler stored in locked vehicle



Vehicle storage area

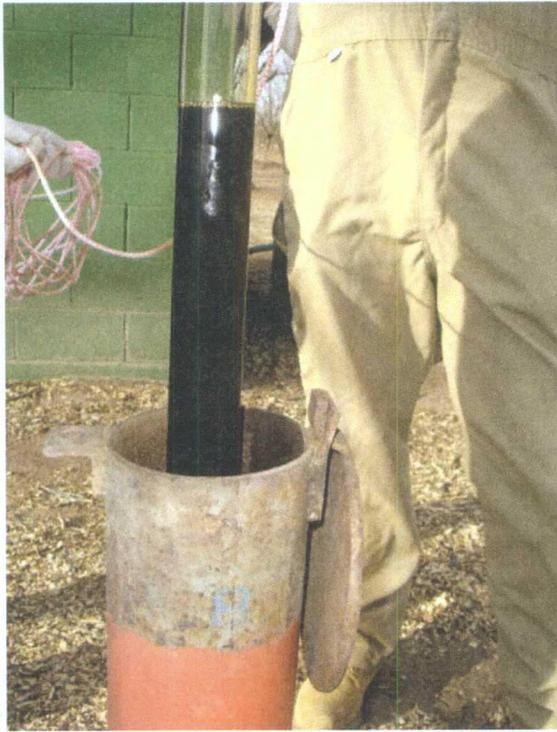


KWB-3R no PSH present in GW



KWB-8 in pecan orchard in-line w/ GW plume.

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KWB-8 Approx. 16-18 in. PSHs in GW-
operator currently bailing to remove product



KWB-8 Gas odor touch bottom of well, pure
product in well

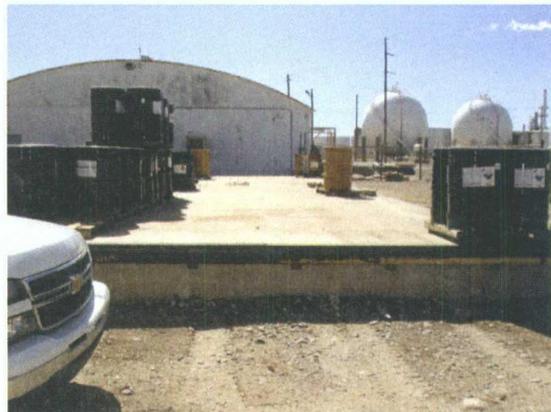


KWB-P2 no PSHs in GW

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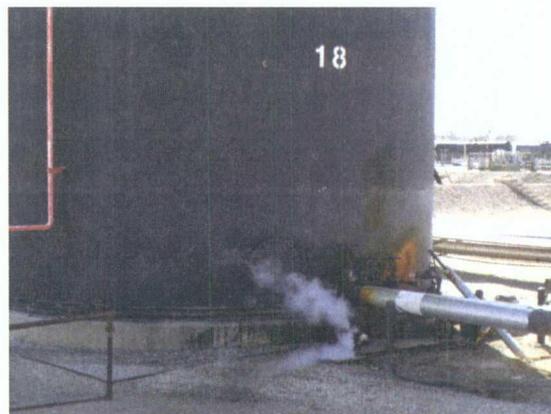
WWTP API used as settling basin for FCC fines



Warehouse 5 chemical drum storage pad-issue #1



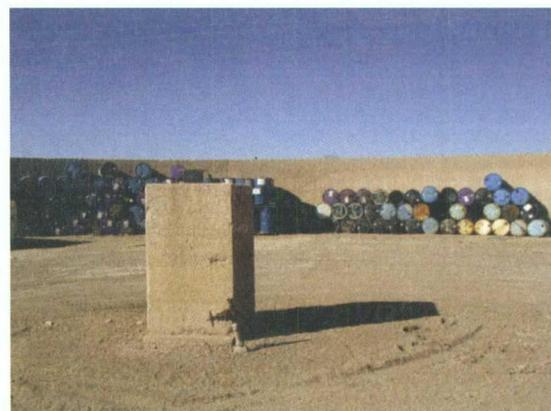
WH 5 drum storage pad catchment system full of sand w/ berm needed for containment



Tank 18 Steam leak at based of Carbon Black Oil tank.

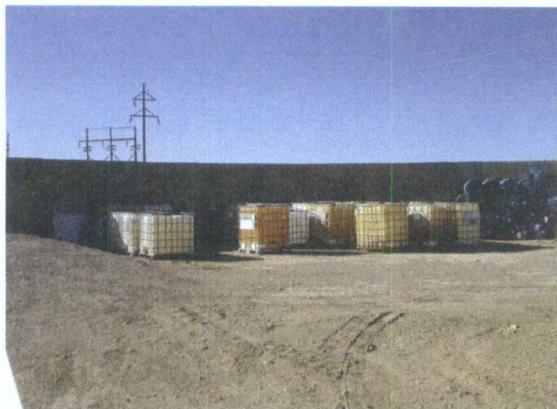


WH 5 Chemical drum storage pad-improper secondary containment

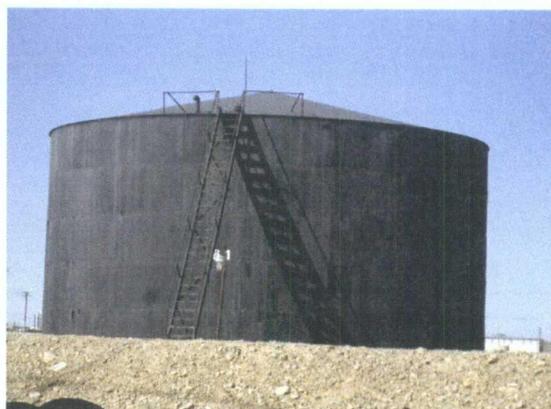


The Bullring-storage area for empty totes and drums on ground w/o secondary containment.

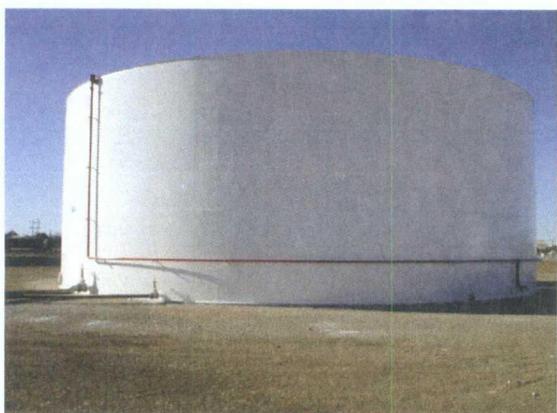
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The Bullring-storage area for empty totes and barrels



Tank# 61 signs of Carbon Blk. Oil leaks



Tank# 815-new tank built on concrete ring w/o modification request to OCD



Tank# 59 CBO leak

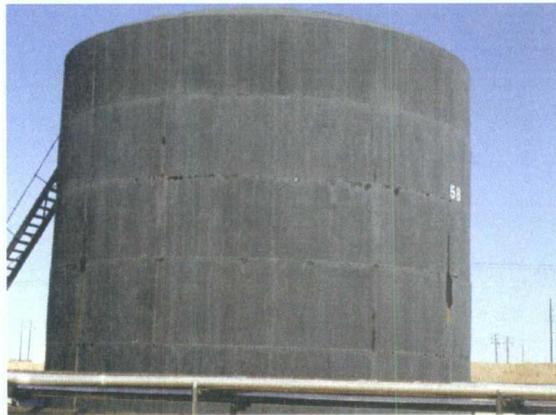


Tank# 439 release form tank due to overflow

Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
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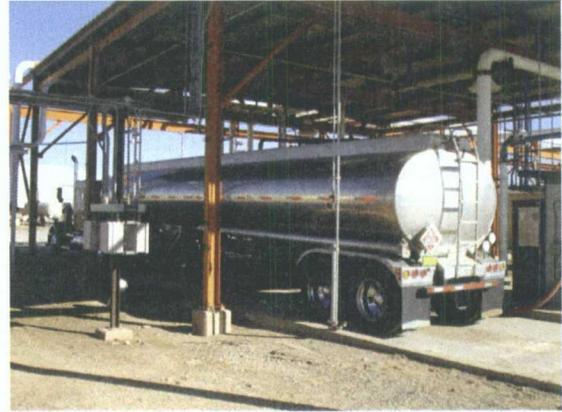
Tank# 58 signs of CBO leaks



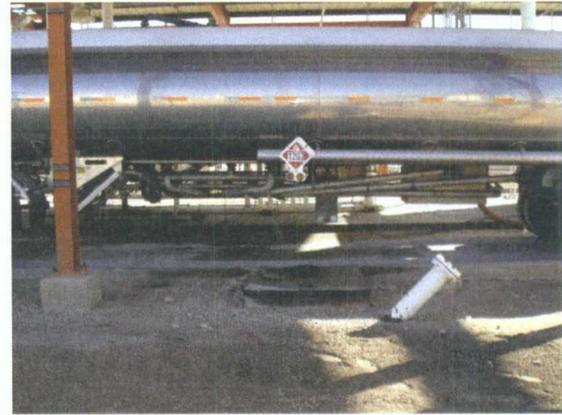
Tank# 58 CBO leaks



South Plant API



South Gasoline pump area sump

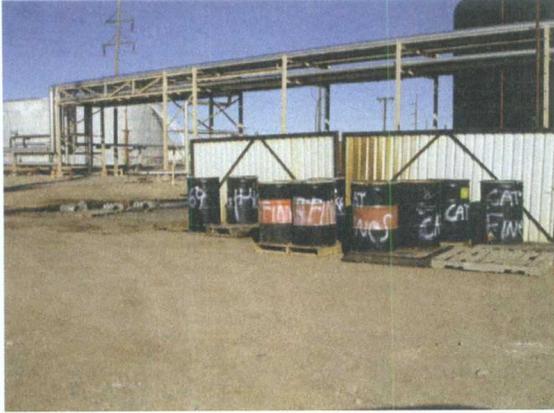


South Gasoline pump area sump



South Gasoline pump area sump

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South bundle pad-FCC fine storage



Small leak in one of the Carbon Black Oil lines beside slurry oil treatment area



Small leak in one of the Carbon Black Oil lines beside slurry oil treatment area

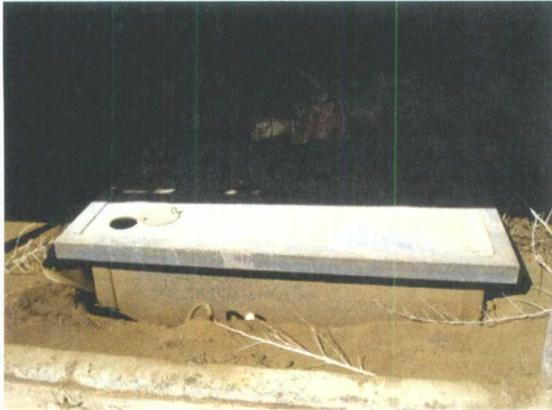


Small leak in carbon black oil line beside Tank# 58



Small leak in one of the Carbon Black Oil lines beside slurry oil treatment area

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Slurry Oil Treatment area - steel tanks placed in existing concrete containment



Pumps at WWTP



Slurry Oil Treatment area - Back of building-NMED investigation plan



Old evaporation ponds-fugitive waste barrels



Old evaporation ponds-fugitive waste barrels

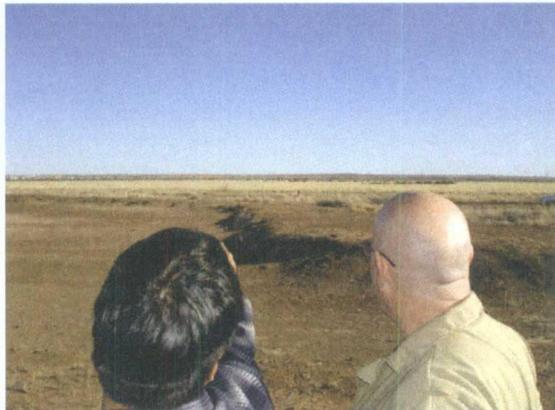
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
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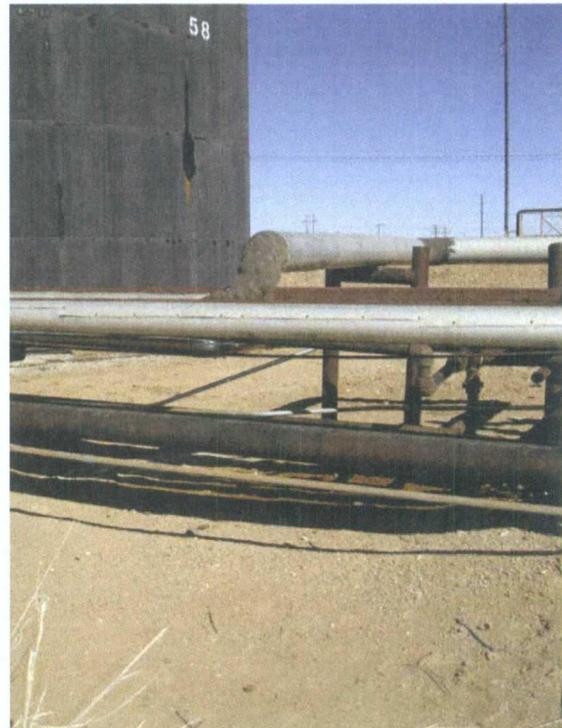
Old evaporation ponds-fugitive waste barrels



North Plant API



Old evaporation ponds

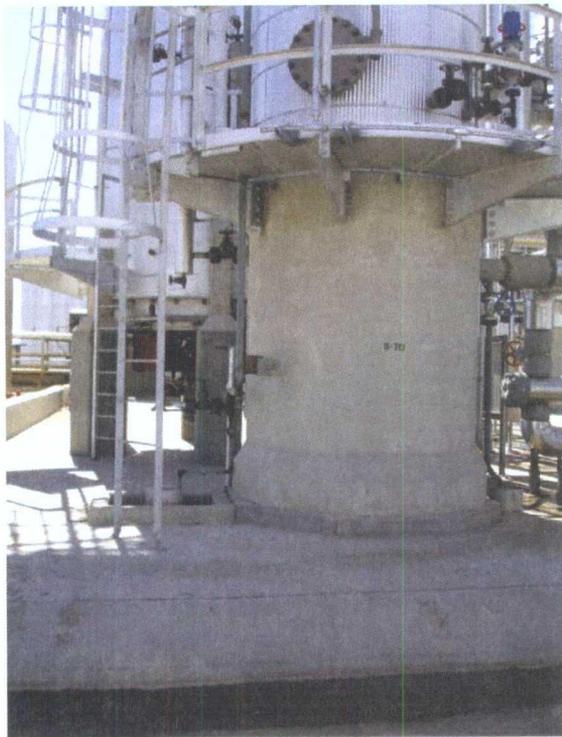


New small leak in carbon black oil line beside Tank# 58



Old evaporation ponds

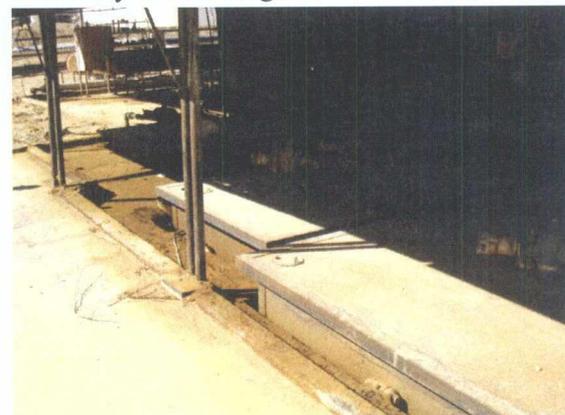
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



New ROSE Unit - installed over old API removal area



Recovery well storage tank labeled



Slurry oil treatment unit



New Dual API Unit



Issue 11 repair of small leak in carbon black oil line

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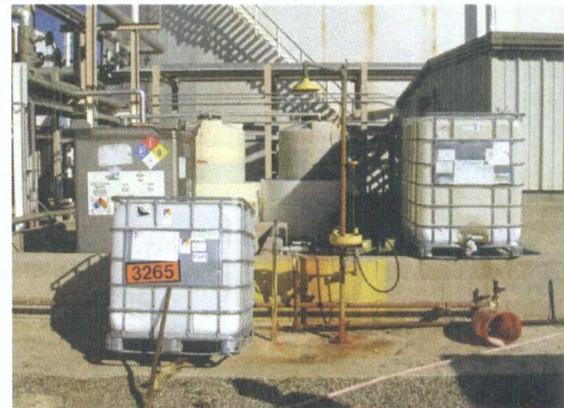
Issue 9 - South Plant tank #419 repair, leak, and cleanup



Issue 6- gas-oil pumps sump - area not in service

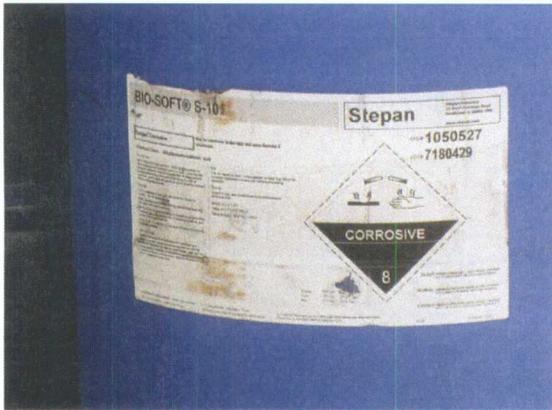


Improper storage of totes (no 2nd containment) WWTP

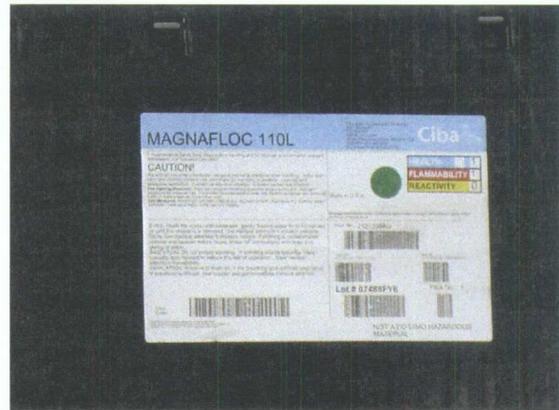


Improper storage of totes (no secondary containment) WWTP

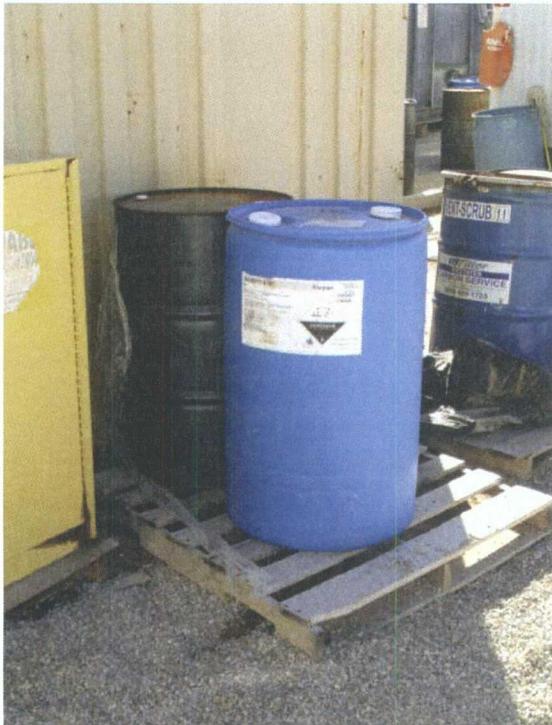
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



Improper storage of totes (no secondary containment) WWTP



Improper storage of totes (no secondary containment) WWTP



Improper storage of totes (no secondary containment) WWTP



Improper storage of totes (no secondary containment) WWTP

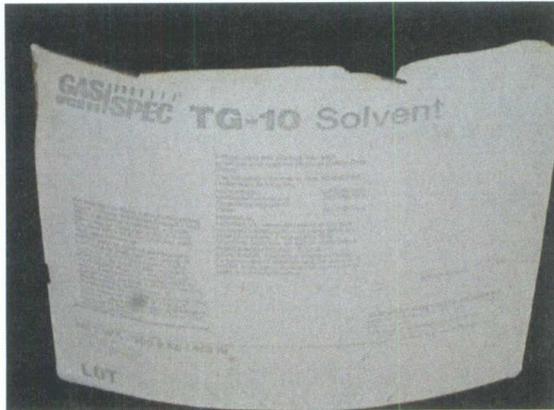


Improper storage of materials without secondary containment-rail yard loading area for CBO

Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
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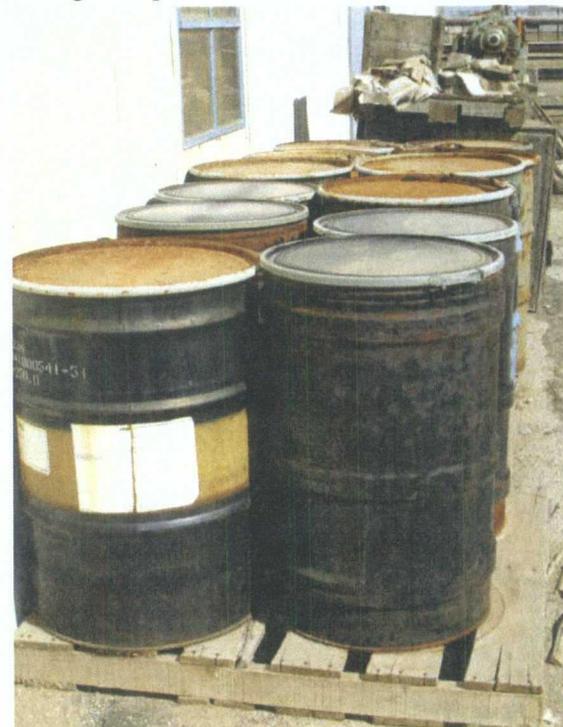
Hazardous waste containers (no secondary containment) - TEL impoundment



Gas Company of NM yard - improper storage, no secondary containment



Gas Company of NM yard - improper storage of spent material



Gas Company of NM yard - improper storage of spent material

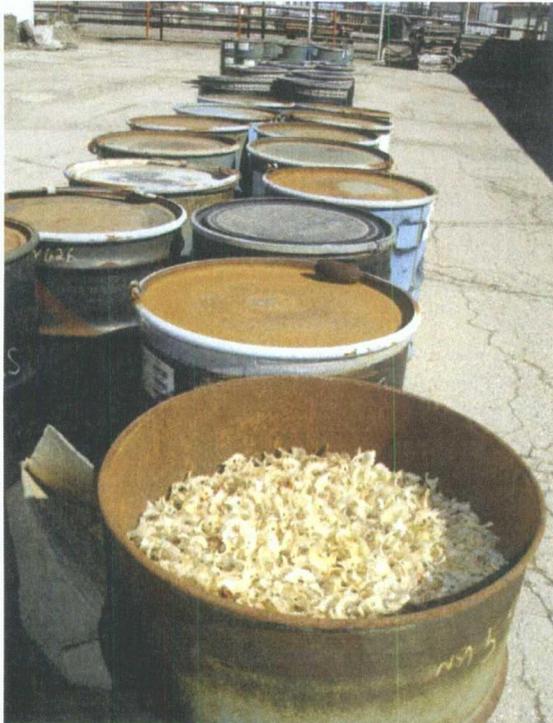
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



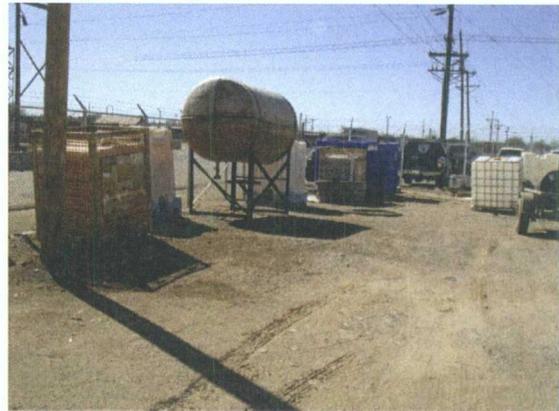
Gas Company of NM yard improper storage of spent material



Gas Company of NM Pipeline Group yard - improper storage, no 2nd containment



Gas Company of NM yard improper storage of spent material

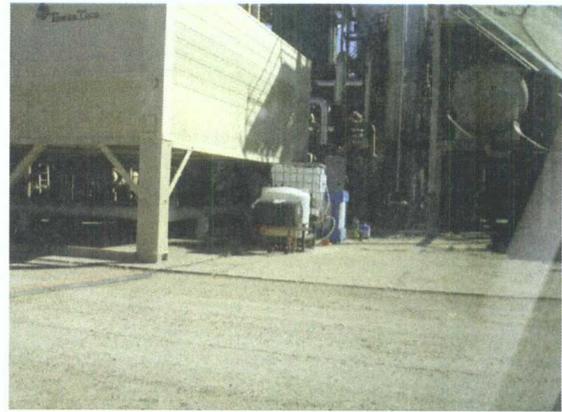


Gas Company of NM Pipeline Group yard - improper storage, no 2nd containment

Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



Gas Company of NM Pipeline Group yard - improper storage, no 2nd containment



FCC no secondary containment (concrete pad) of totes



Gas Company of NM Pipeline Group yard - improper storage, no 2nd containment



Effluent from RO system to farm (~7K bbls/day)

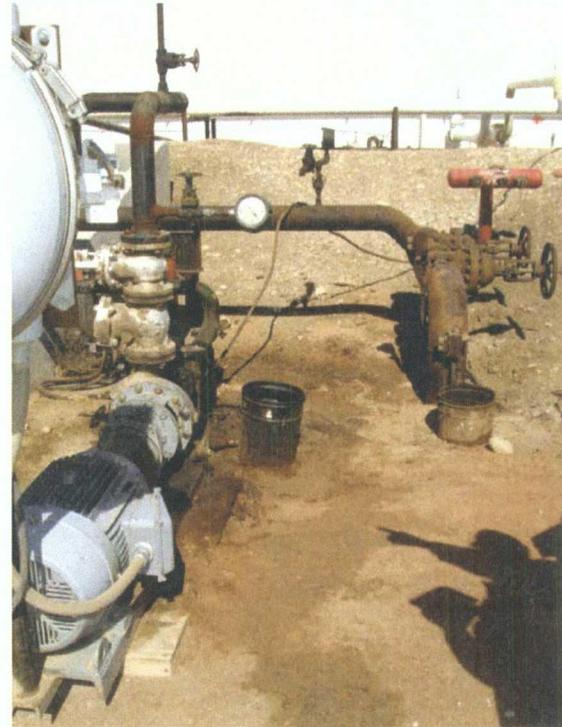


Effluent from RO system discharge for irrigation (alfalfa & chile farming)

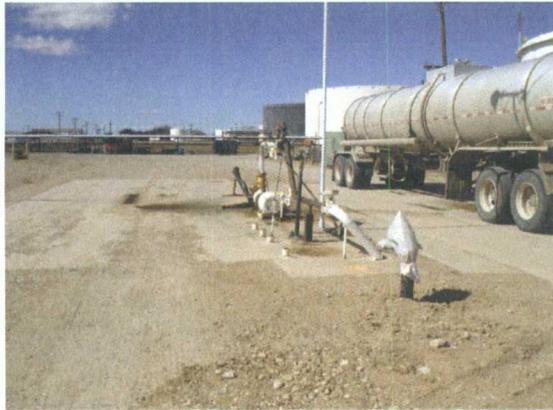
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



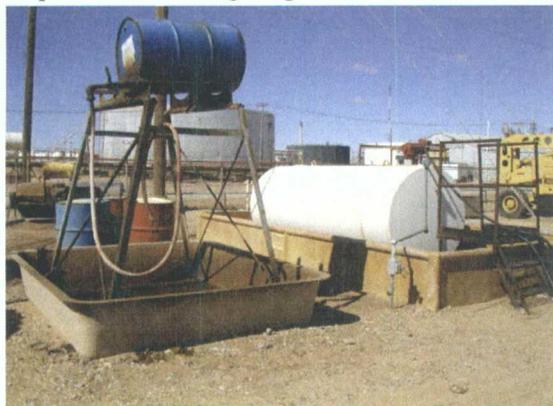
Crude oil pump area near Tank 437 and LACT area- secondary containment not provided for all pumps, but needed badly



Contamination on ground from leaky crude oil transfer pump in need of cleanup & secondary containment.

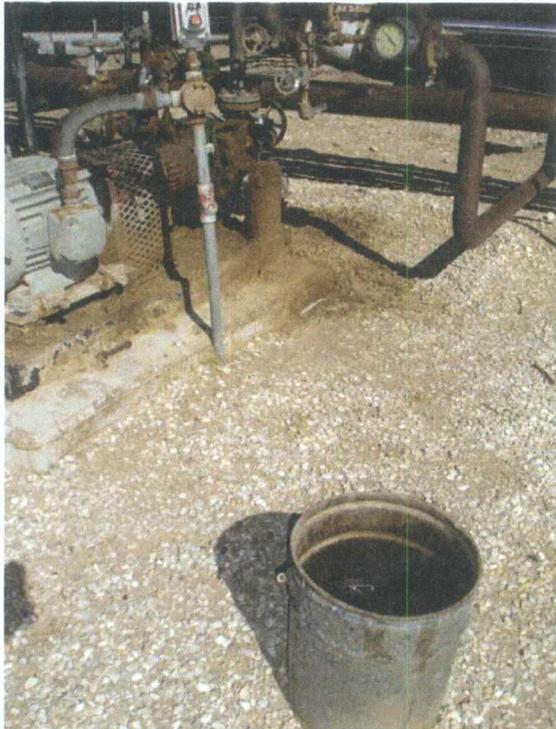


Crude LACT unloading area- concrete poured between pads per last OCD requirement during inspection.



Crane Shaft Fueling Area-saddle tanks w/ secondary containment

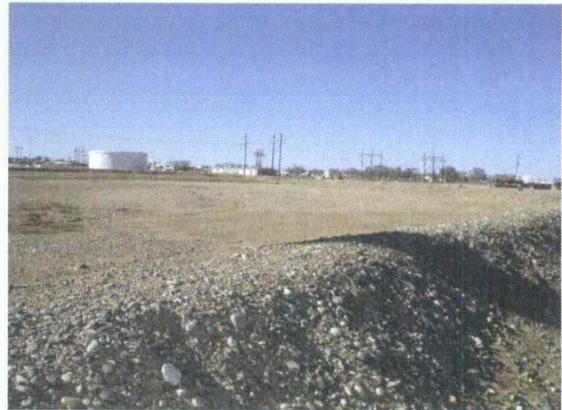
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
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Open vessel container of lube oil w/ soil staining around pump in background



Closed solid waste landfill-TEL impoundment in background



Closed solid waste landfill

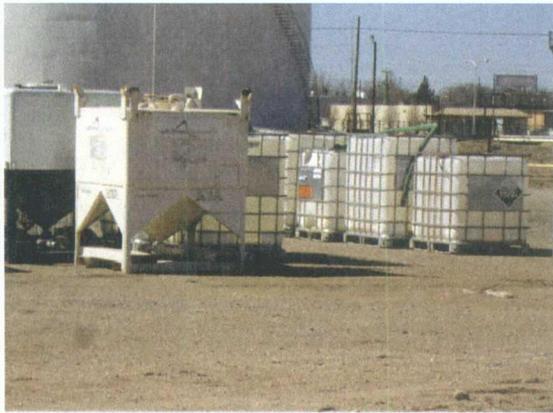


Closed solid waste landfill

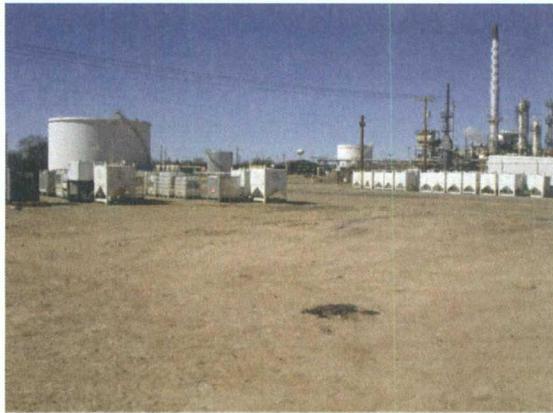


Closed solid waste landfill

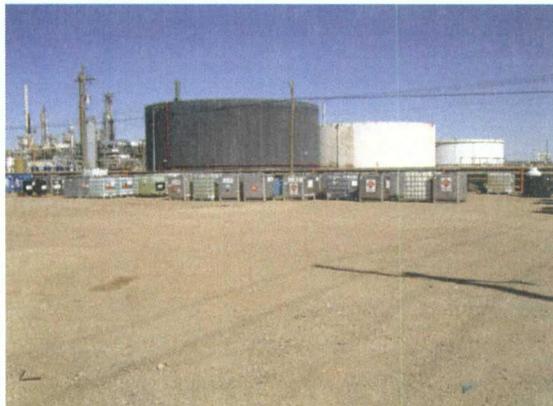
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
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Central containment area -secondary containment not present



Central containment area -secondary containment not present



Central containment area – secondary containment not present

Notes (action items highlighted in yellow):

- 1) Required automated free-product recovery system at KWB-8 location to remove point source of contamination from GW 24/7 & prevent expansion of plume into pecan orchard at 2/19/2007 Close Out Inspection Meeting.
- 2) Flush mount recovery and monitor wells were not locked and were accessible to public. Need locks to prevent access.
- 3) KWBs 7, 11A&B had no PSHs in GW
- 4) Nine recovery wells hooked up to RW-11 system for pump back to API separator and treatment, and to capture the plume spur moving SE toward MW-57 into the farm field and separate from the plume moving E toward KWB-8. Did not check free-product at these RWs, but PSHs are known to be present there.
- 5) Tank 437 oil leakage to ground on E side from crude oil transfer pump w/ cleanup & secondary containment needed under pump. Cleanup needed (see photos).
- 6) Old API Separator at S. Plant removed and replaced w/ Rose Unit (32.84402 -104.39280), which OCD was not notified of a modification for new process area. Permit modification request violation of permit.
- 7) Tank 419 Flow back repaired from last permit inspection.
- 8) Chemical totes and drums (1993; 3264; 3261; 3265, 1993; 2924; 3266 & 2693) stored on ground throughout refinery in violation of permit. Operator claims construction of impermeable centralized dual storage area in progress to address this violation.

Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
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- 9) Gas Company of NM Yard stored drums of FCC dispersant, spent catalysts, T610 Solvent; spent catalyst prop media stored > 180 days is a waste storage violation. Empty chemical totes stored on ground is a violation. Operator claimed they were triple rinsed before storage. Incorporate triple rinse into permit renewal to store rinsed empty containers in impermeable areas?
- 10) North plant API out of service during inspection.
- 11) S plant OAPI Separator removed & Rose Unit installed. Failure by operator to notify OCD of Rose Unit installation as "Modification" request under permit.
- 12) OCD inquired about diesel treatment area fire on 11/1/2006 at 13:30 that was not reported as a major release under a C-141 Form to the OCD. This is a violation to reporting under the permit.
- 13) Tank 419 flow-back not repaired per last OCD inspection requirement.
- 14) Chemical drums and totes containing chemicals were not stored in impermeable pad(s). Operator indicated centralized chemical storage area was under construction to facilitate storage & inquired about triple-rinse cleaning procedure on empty drums and totes to store on ground for new discharge permit.
- 15) Slurry slinger centrifuge shed installed steel box into cement vault to contain slurry received as carbon black oil.
- 16) There was a pipeline leak noticed SW of Tank 63 (32.85097 -104.39596) that needs to be cleaned up and fixed. It appears to be contaminated steam water. Fix source and cleanup spill.
- 17) Steam line leak at Carbon Black Oil Tank 18 in need of repair.
- 18) Leaky pump between Tanks 58 & 59 with stained soils in need of cleanup & pumps in need of repair. Noticed open vessel with oil near pump (32.85028 - 104.39606).
- 19) Leak stains noticed on Tanks 58 sidewall & 59 leaky bottom needs cleanup & investigation.
- 20) Hazardous wastes casks/dumpster noticed on ground- no secondary containment. Secondary containment needed in the hazardous waste storage area.
- 21) Secondary containment needed around all crude oil transfer pump locations without secondary containment.

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, September 08, 2009 4:46 PM
To: 'Moore, Darrell'; Lackey, Johnny
Cc: VonGonten, Glenn, EMNRD; Monzeglio, Hope, NMENV; Cobrain, Dave, NMENV
Subject: Navajo Refining Company- Artesia Refinery (GW-028) OCD Refinery Inspection February 20-21, 2007
Attachments: REFINERY INSPECTION 2-19-20-07.pdf

Darrell & Johnny:

Good afternoon. Please find attached the OCD's inspection items from the above subject inspection dates. I apologize for the tardiness in getting these to the Navajo Refining Company (NRC) based on my workload and orders. Regardless, this e-mail with attached inspection items serves to notify of the NRC of OCD concerns at the facility during the inspection. You may have notes from the close out meeting on February 20, 2007 with the OCD concerns, but there may be new concerns based on a review of all of the photos and field notes.

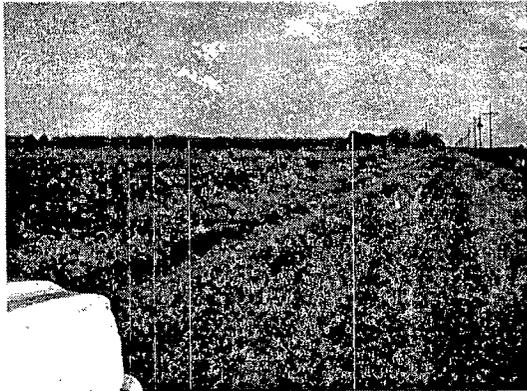
I recommend that you review the inspection notes and respond to the OCD within 30 days with a status or update on any noted items and what the NRC has done to address them. You may also comment on any photos with imprecise information for the record.

Thank you.

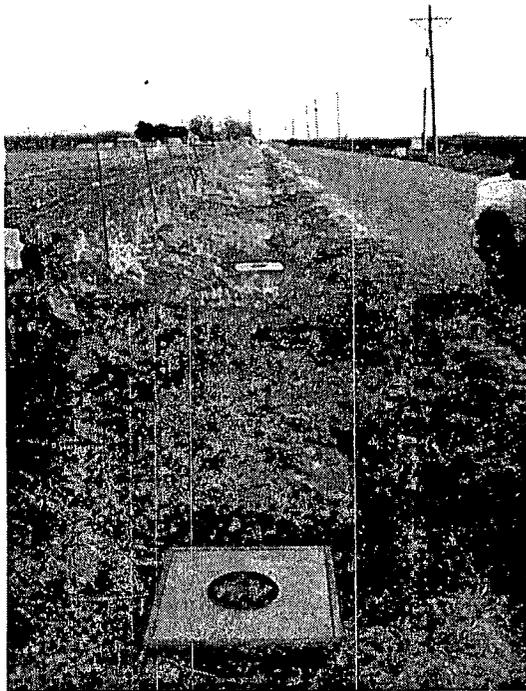
Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oed/index.htm>
(Pollution Prevention Guidance is under "Publications")

Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones

REFINERY INSPECTION



Looking south on S. Bolton Rd going to
MWs



Flush mount wells along S Bolton Rd-
unlocked

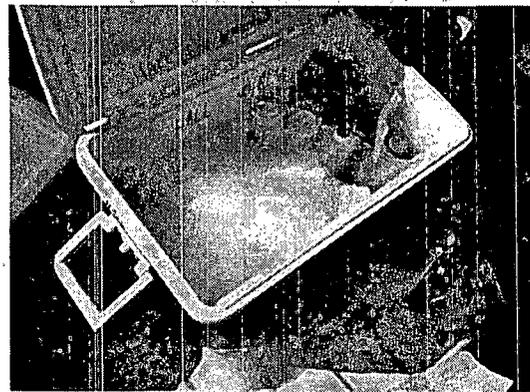


Unlined West Storm Water Retention Pond
sample location

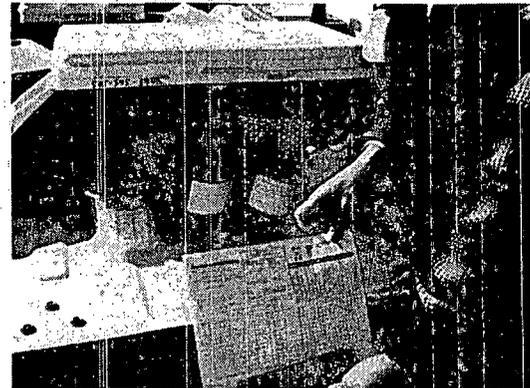
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Cooler w/ ice, sample containers, chain-of-custody forms, etc.



Cooler w/ samples in containers under ice



Chain-of-Custody form paperwork in the field during sample event- QA/QC

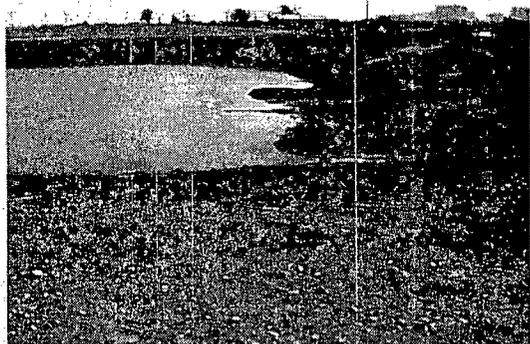


Sample location West Storm Water Pond

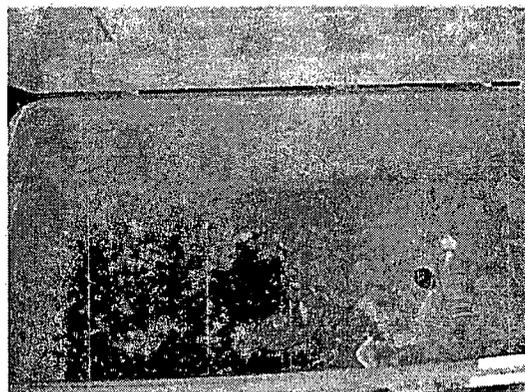


Samples collected in stored following DQOs & EPA QA/QC Procedures

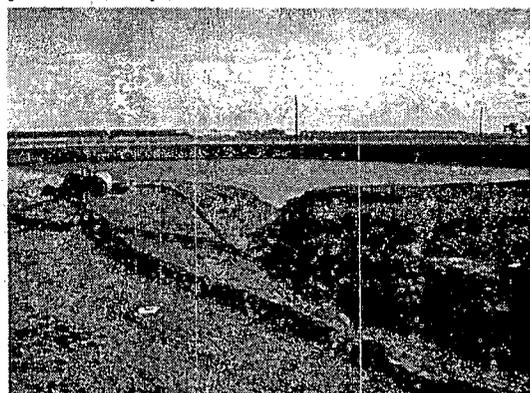
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Looking south inlet to storm water retention pond & sample location



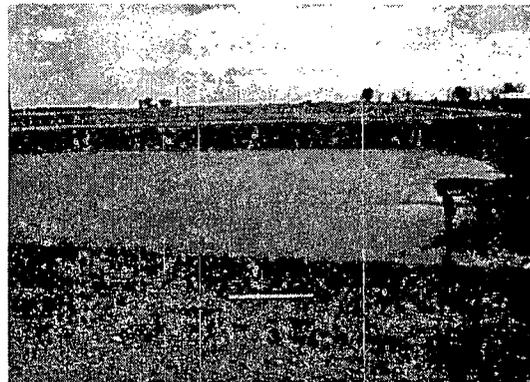
Samples contained within baggies placed in ice w/ labels marked in waterproof ink



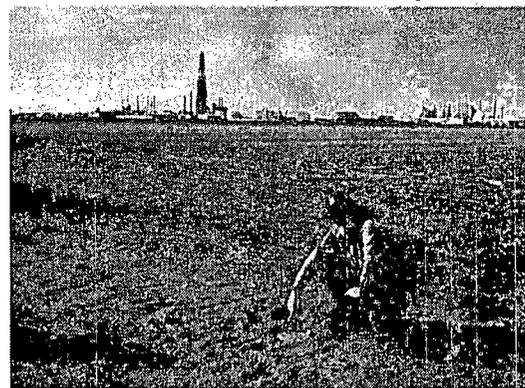
Line w/ pump to use fresh water in storm water retention pond when necessary.



OCD Chain-of-Custody form- sample record

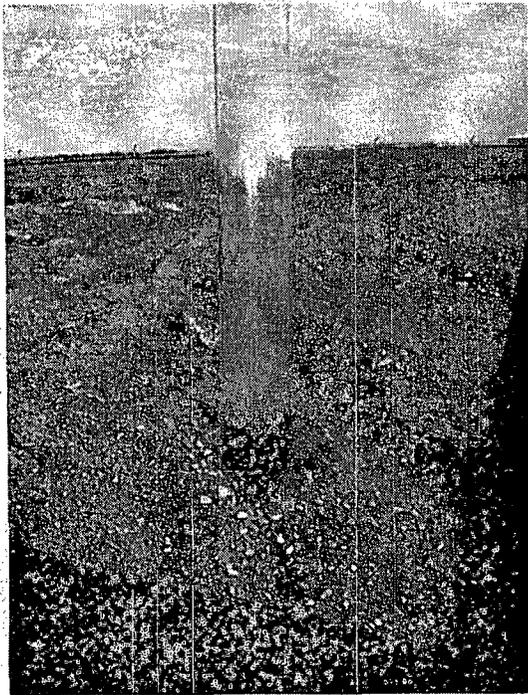


Looking south at storm water retention pond inlet

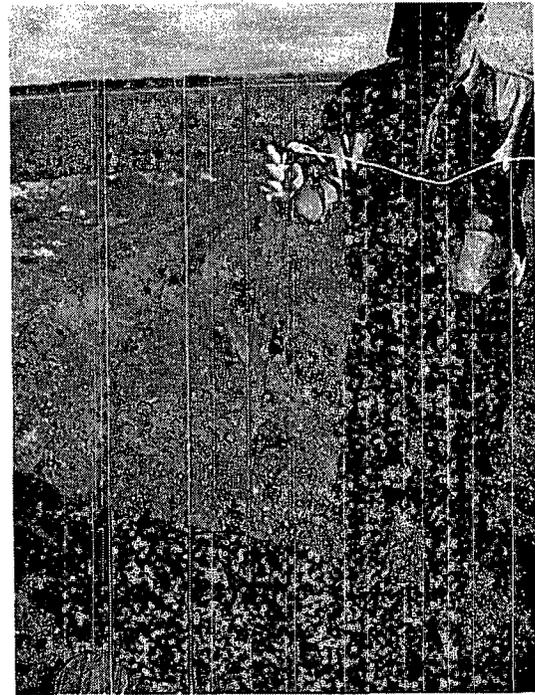


SE of farm field ~ KWB-13

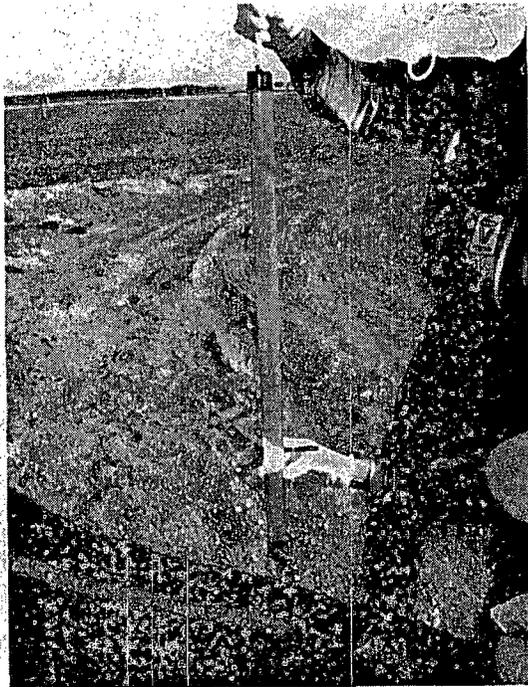
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
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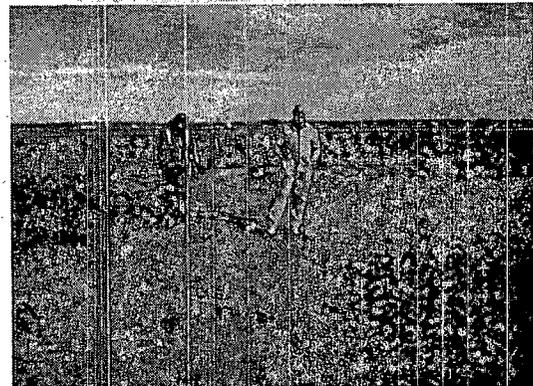
KWB-13 Milky turbidity appearance of GW
w/ SWL ~ 22 ft.



KWB-13 Using New Disposable Bailer

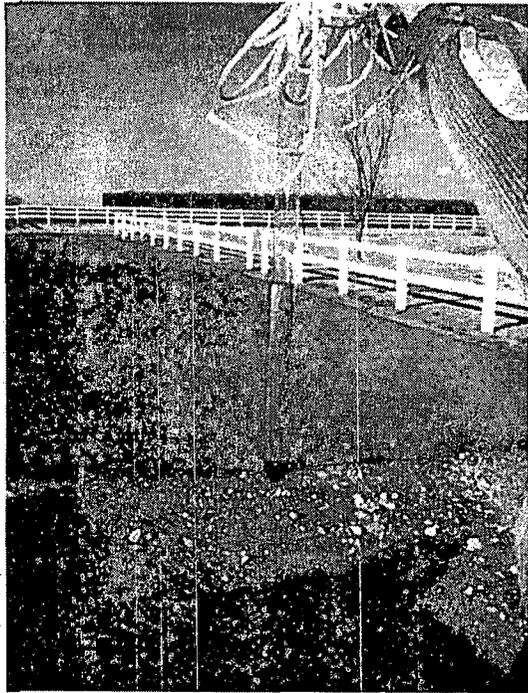


KWB-13 Disposable Bailer farm field in
background



Looking north from recovery well field
located SE of refinery w/ flat topography in
background - Agricultural area.

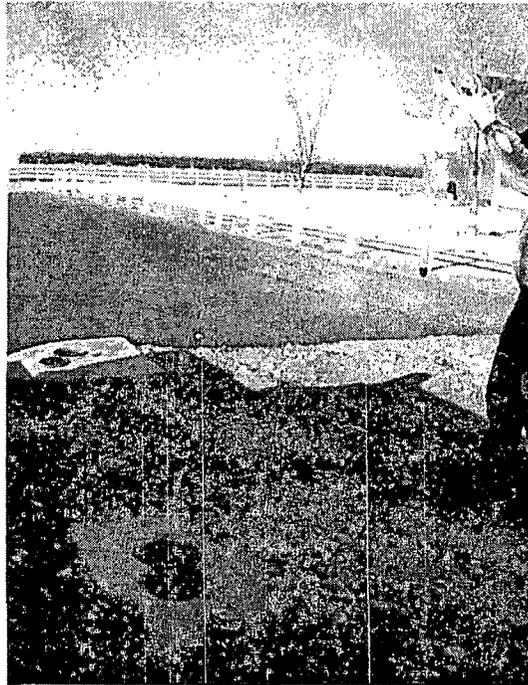
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
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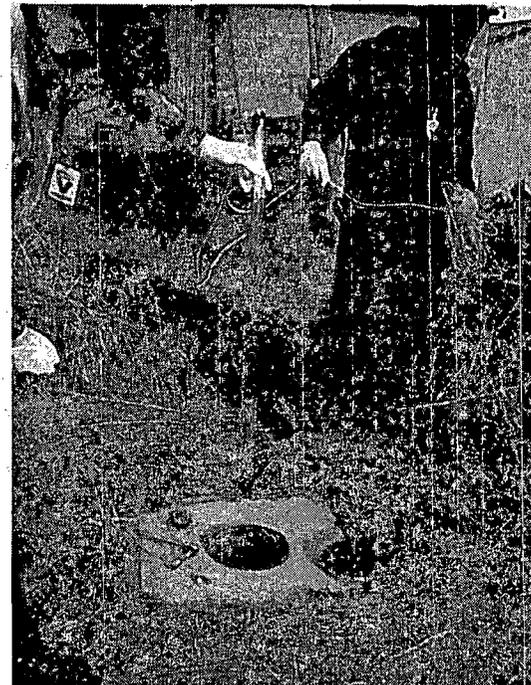
GW from KWB-9



KWB-9 no PSHs present in GW

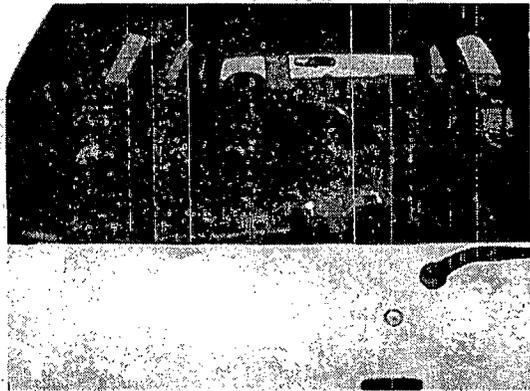


KWBs 12A & 12B locations: no PSHs present in GW at KWB-12B & 12A was a dry well

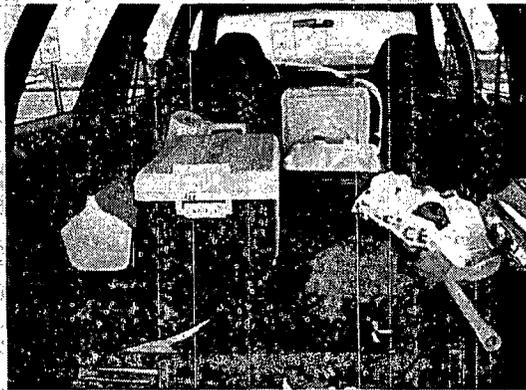


KWB-3R location

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Sample cooler stored in locked vehicle



Vehicle storage area

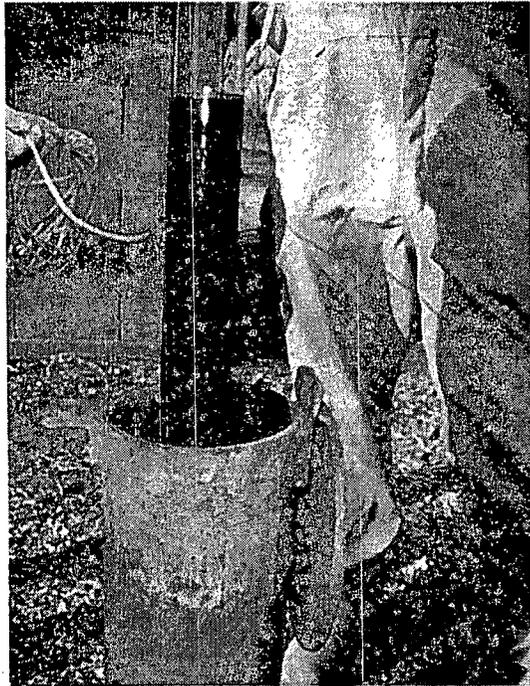


KWB-3R no PSH present in GW



KWB-8 in pecan orchard in-line w/ GW plume.

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KWB-8 Approx. 16-18 in. PSHs in GW-
operator currently bailing to remove product

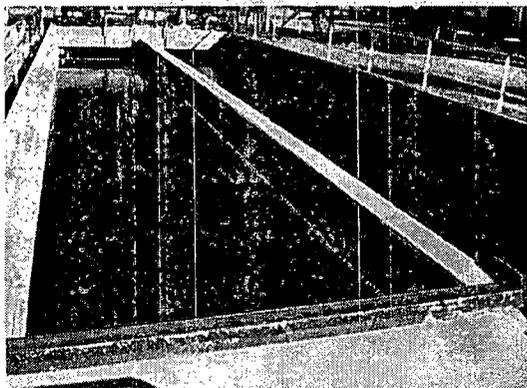


KWB-8 Gas odor touch bottom of well, pure
product in well

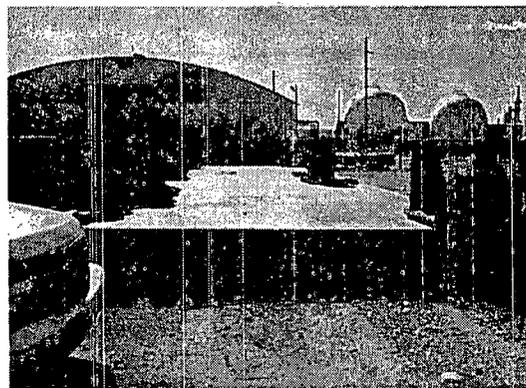


KWB-P2 no PSHs in GW

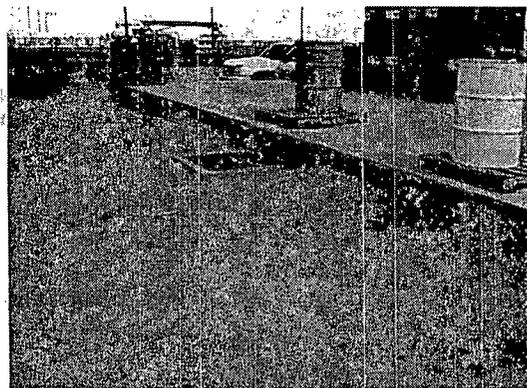
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



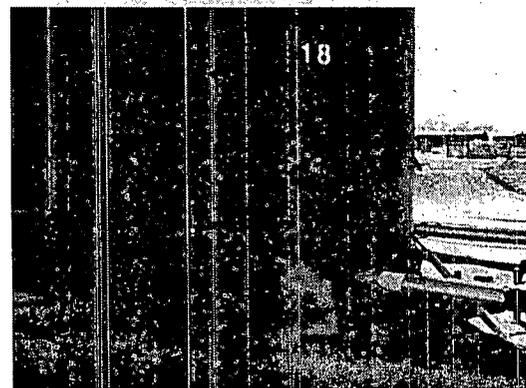
WWTP API used as settling basin for FCC fines



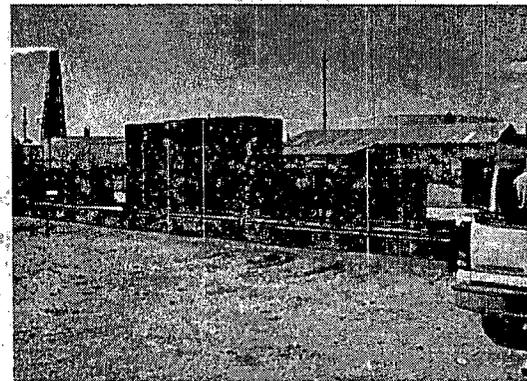
Warehouse 5 chemical drum storage pad-issue #1



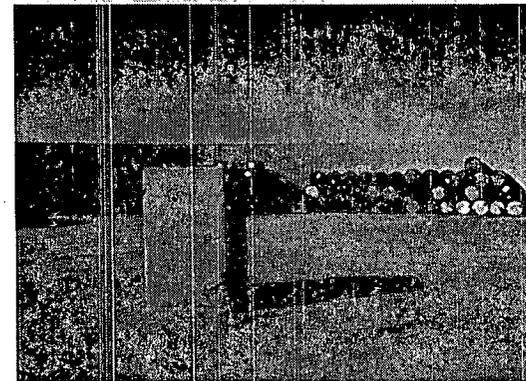
WH 5 drum storage pad catchment system full of sand w/ berm needed for containment



Tank 18 Steam leak at based of Carbon Black Oil tank.



WH 5 Chemical drum storage pad-improper secondary containment

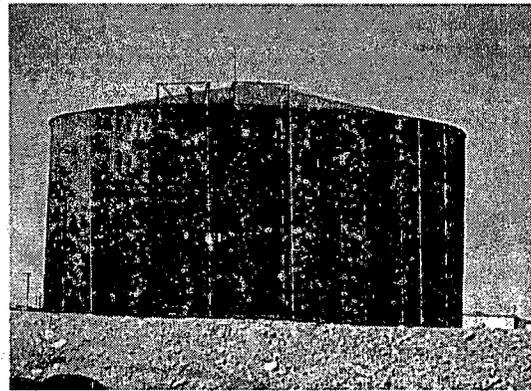


The Bullring-storage area for empty totes and drums on ground w/o secondary containment.

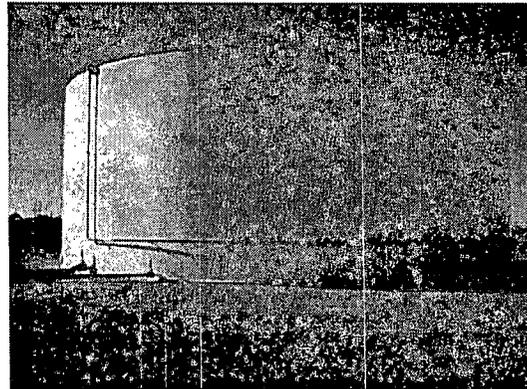
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
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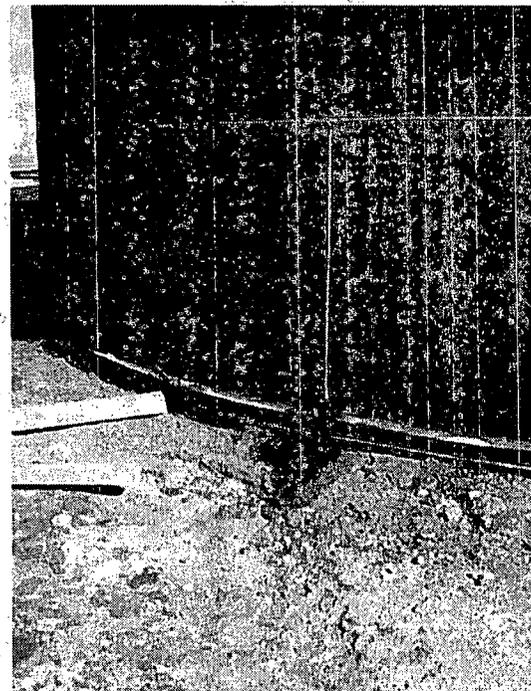
The Bullring-storage area for empty totes and barrels



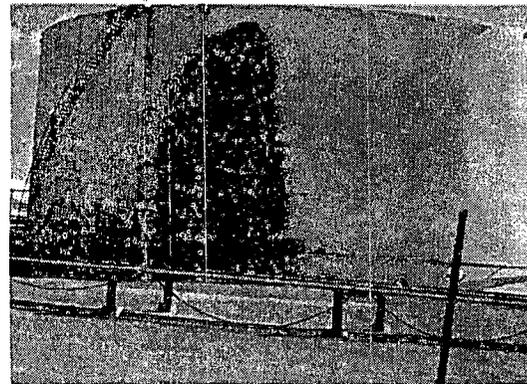
Tank# 61 signs of Carbon Blk. Oil leaks



Tank# 815-new tank built on concrete ring w/o modification request to OCD



Tank# 59 CBO leak

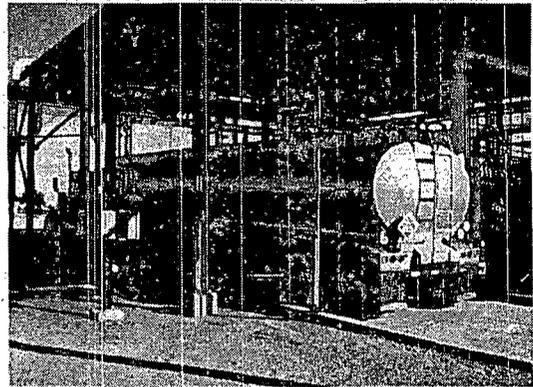


Tank# 439 release form tank due to overflow

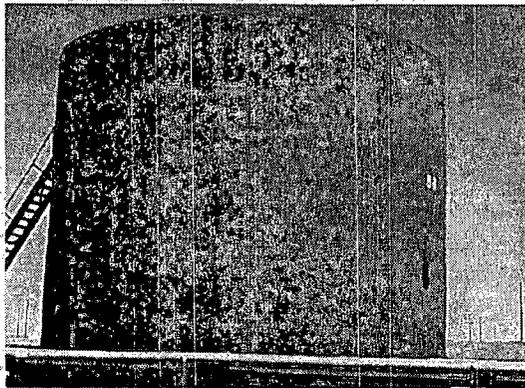
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



Tank# 58 signs of CBO leaks



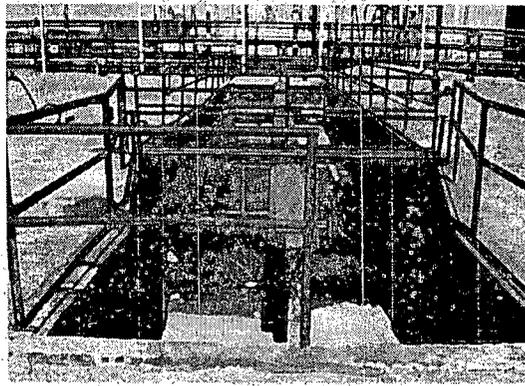
South Gasoline pump area sump



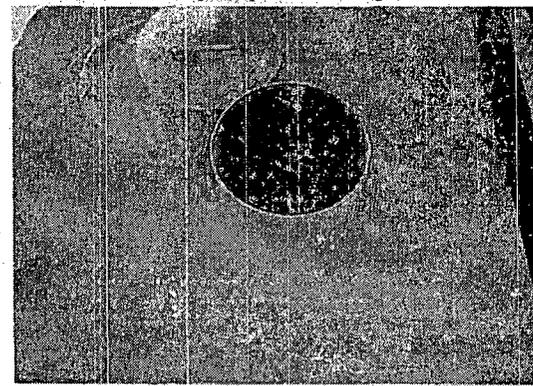
Tank# 58 CBO leaks



South Gasoline pump area sump

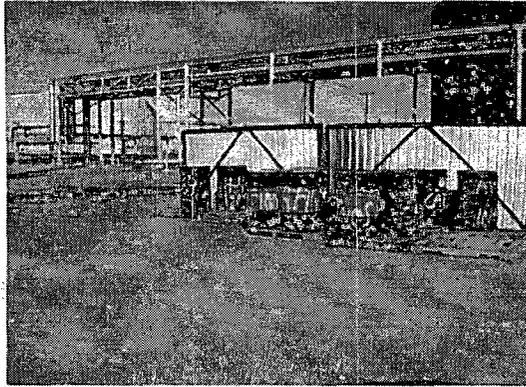


South Plant API

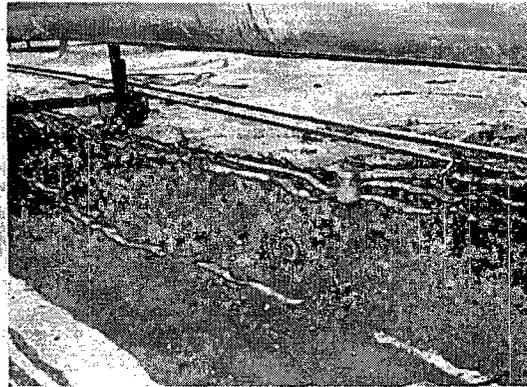


South Gasoline pump area sump

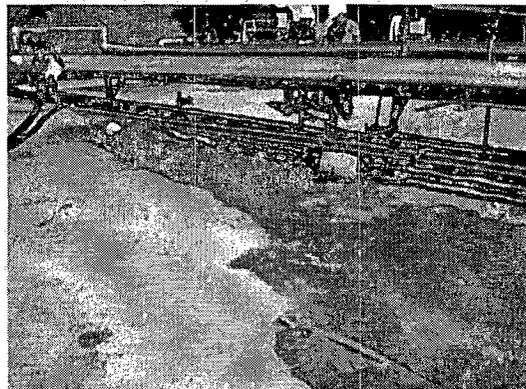
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



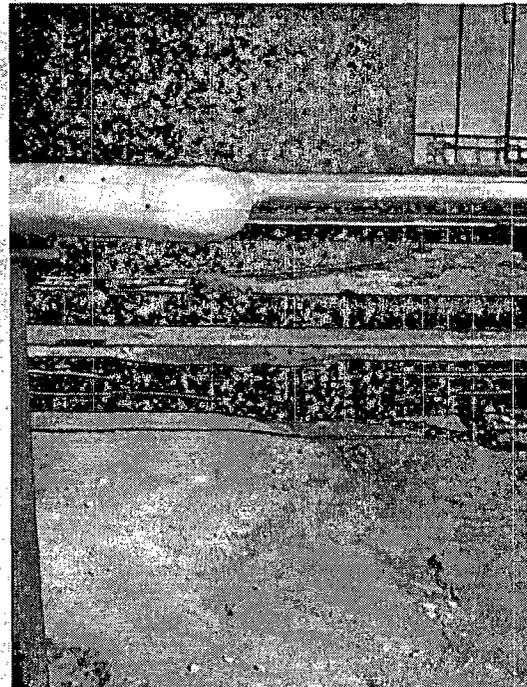
South bundle pad-FCC fine storage



Small leak in one of the Carbon Black Oil lines beside slurry oil treatment area



Small leak in one of the Carbon Black Oil lines beside slurry oil treatment area

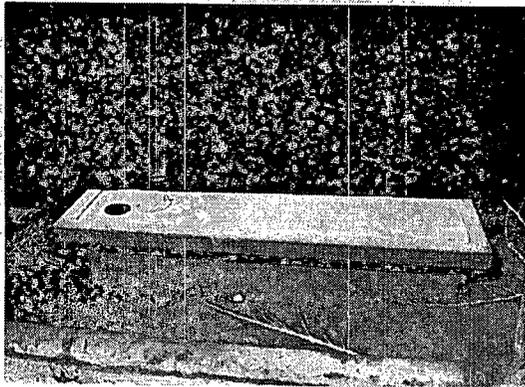


Small leak in carbon black oil line beside Tank# 58



Small leak in one of the Carbon Black Oil lines beside slurry oil treatment area

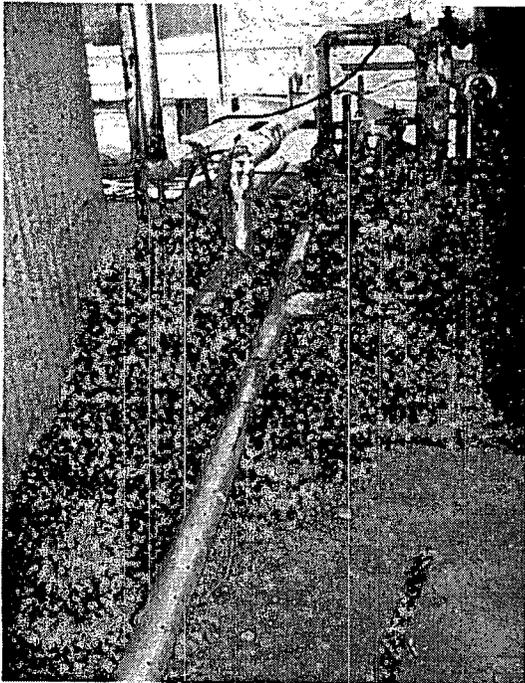
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



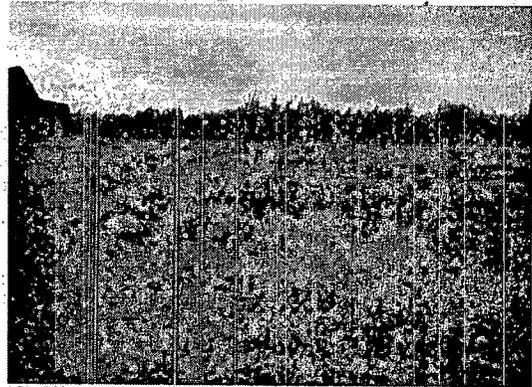
Slurry Oil Treatment area - steel tanks placed in existing concrete containment



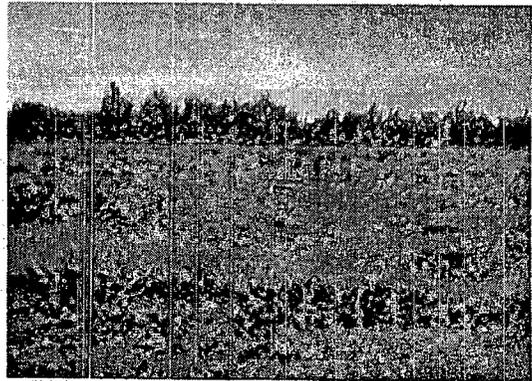
Pumps at WWTP



Slurry Oil Treatment area - Back of building-NMED investigation plan



Old evaporation ponds-fugitive waste barrels

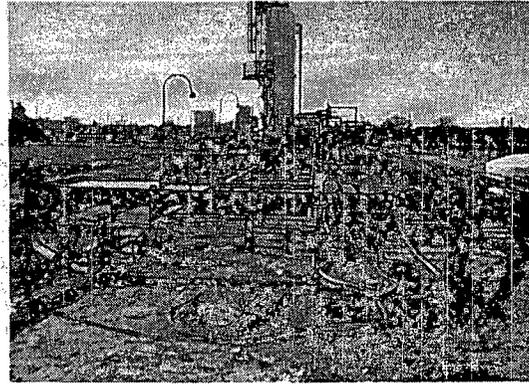


Old evaporation ponds-fugitive waste barrels

Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



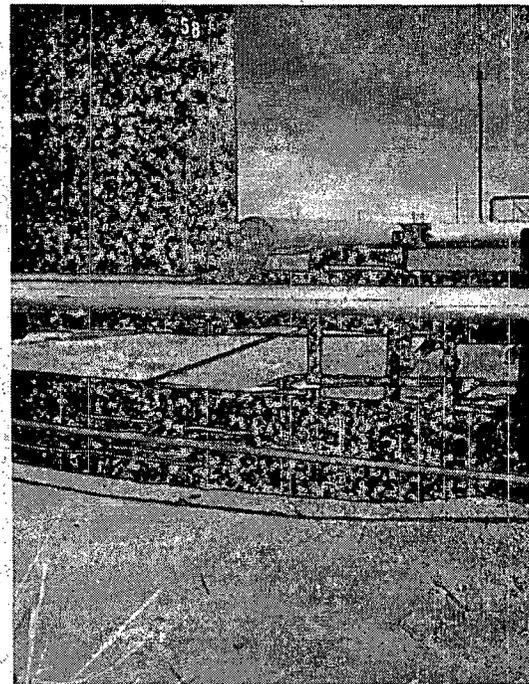
Old evaporation ponds-fugitive waste barrels



North Plant API



Old evaporation ponds

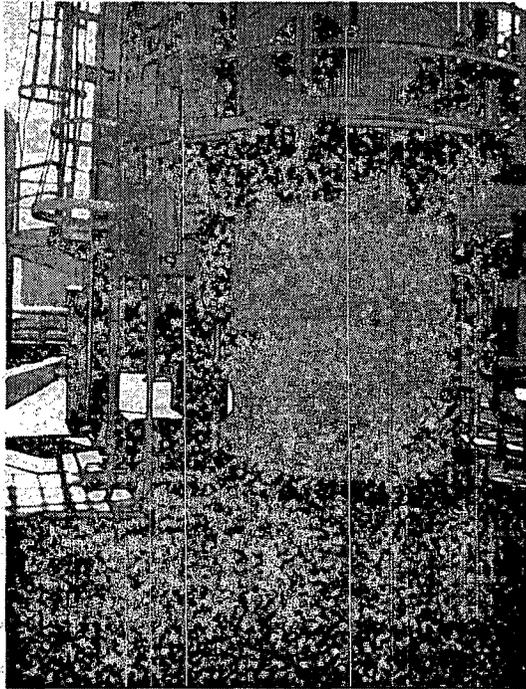


New small leak in carbon black oil line
beside Tank# 58

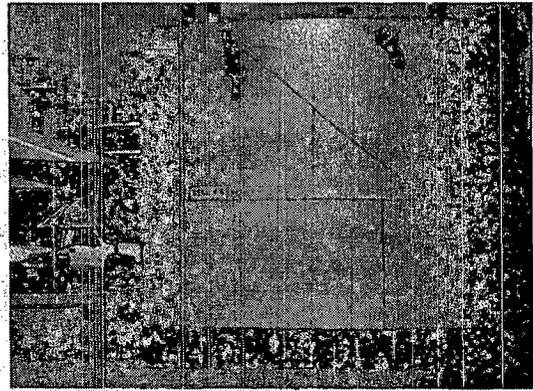


Old evaporation ponds

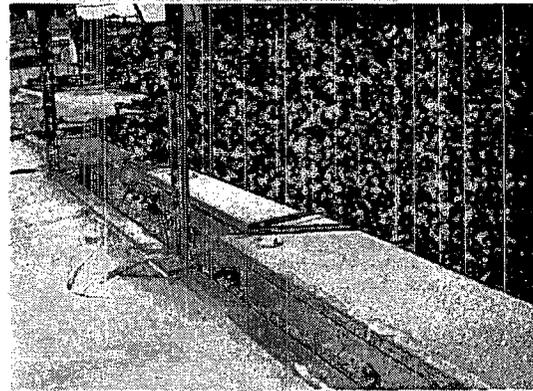
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



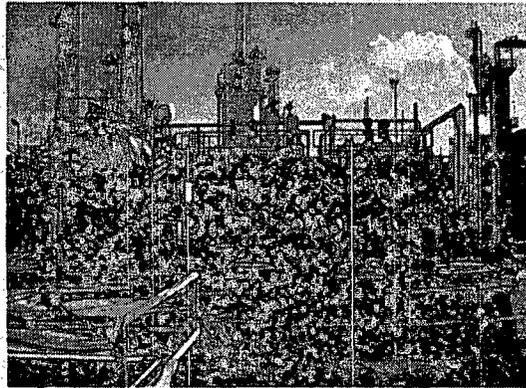
New ROSE Unit - installed over old API removal area



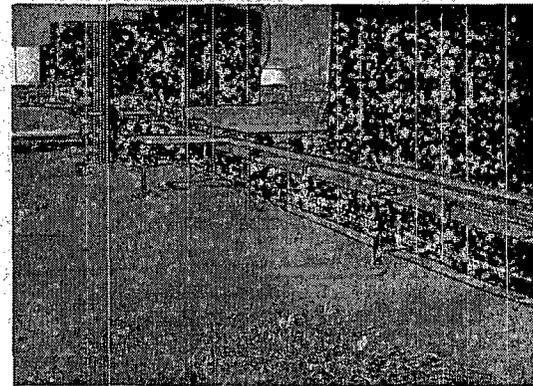
Recovery well storage tank labeled



Slurry oil treatment unit

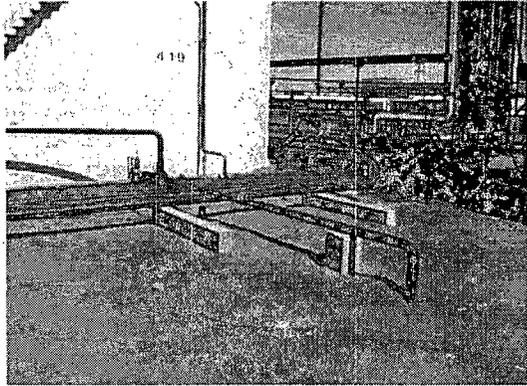


New Dual API Unit

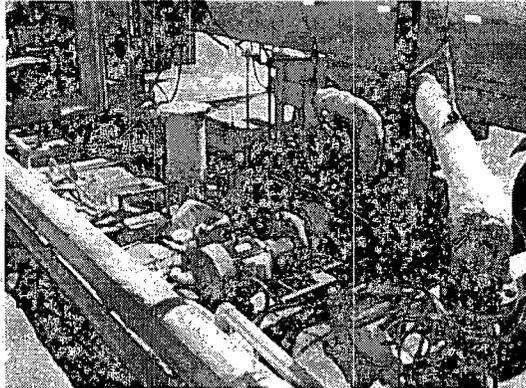


Issue 11 repair of small leak in carbon black oil line

Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



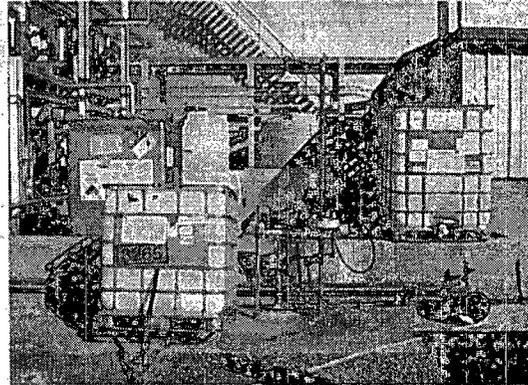
Issue 9 - South Plant tank #419 repair, leak, and cleanup



Issue 6- gas-oil pumps sump - area not in service

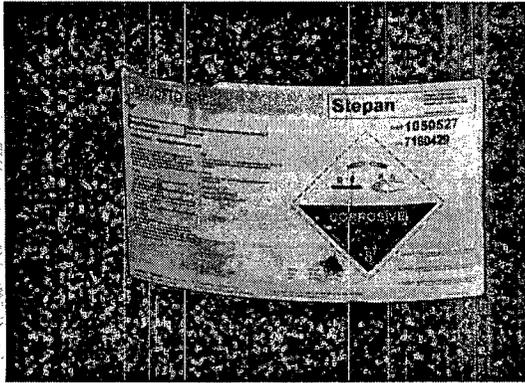


Improper storage of totes (no 2nd containment) WWTP

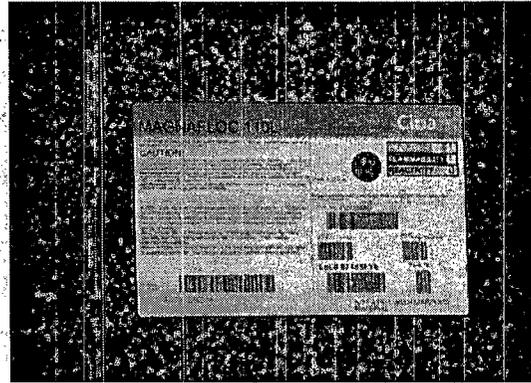


Improper storage of totes (no secondary containment) WWTP

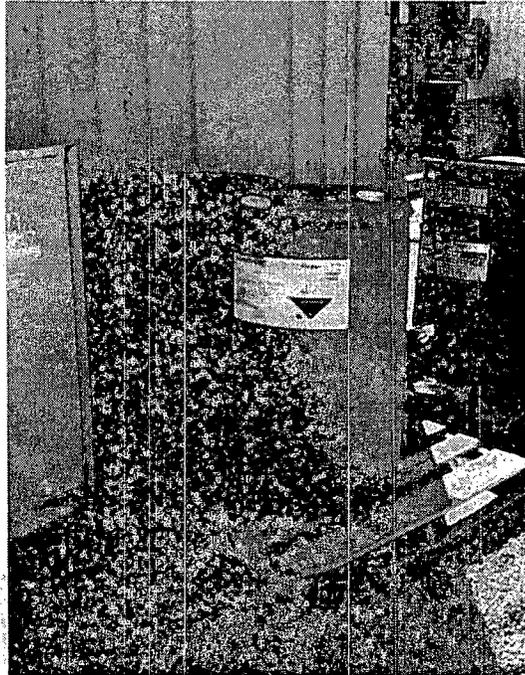
Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



Improper storage of totes (no secondary containment) WWTP



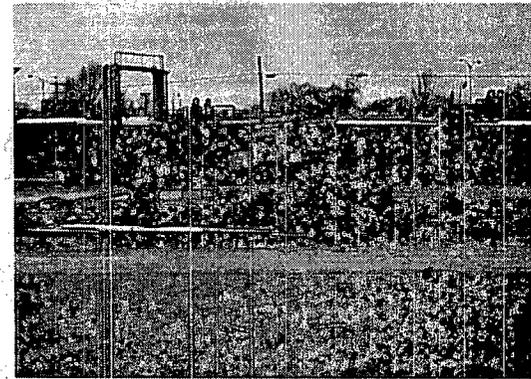
Improper storage of totes (no secondary containment) WWTP



Improper storage of totes (no secondary containment) WWTP

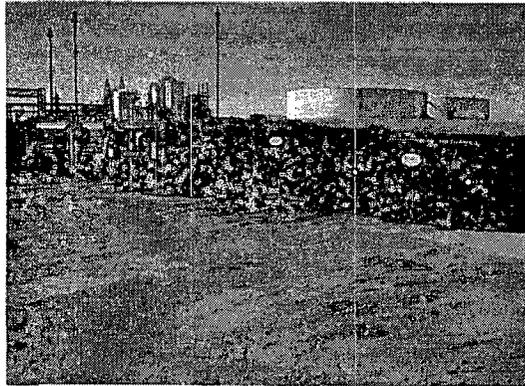


Improper storage of totes (no secondary containment) WWTP

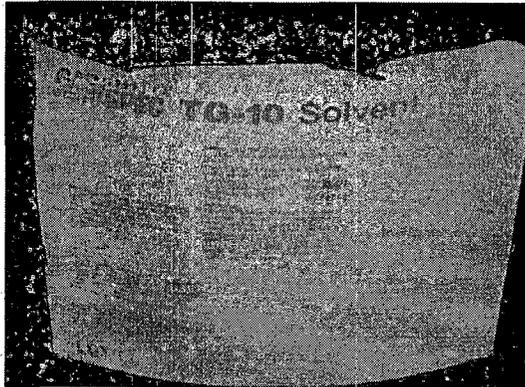


Improper storage of materials without secondary containment-rail yard loading area for CBO

Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



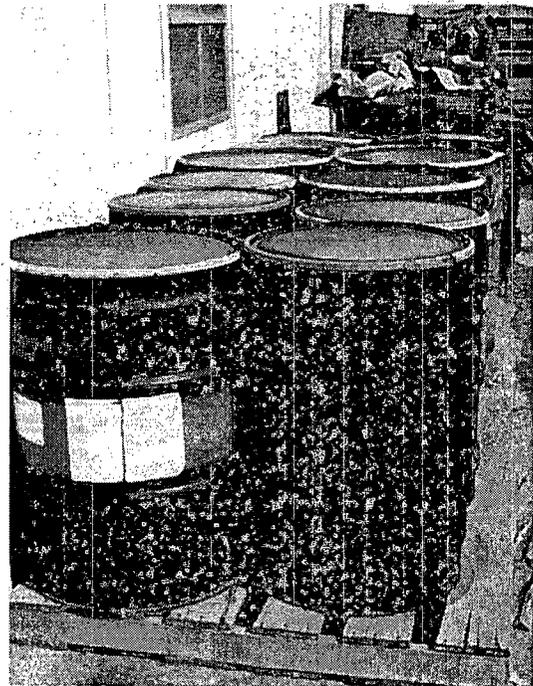
Hazardous waste containers (no secondary containment) - TEL impoundment



Gas Company of NM yard - improper storage, no secondary containment

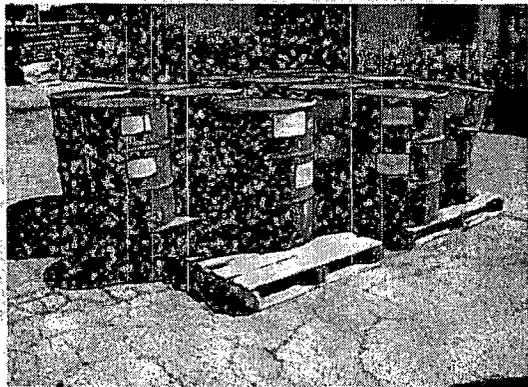


Gas Company of NM yard - improper storage of spent material



Gas Company of NM yard - improper storage of spent material

Navajo Refining Company February 19-20, 2007 Artesia Refinery (GW-028)
Sunny ~ 65°F OCD Inspectors: Carl Chavez, Ed Hansen & Brad Jones



Gas Company of NM yard improper storage of spent material



Gas Company of NM Pipeline Group yard - improper storage, no 2nd containment

