UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Purpose:	Focused RCRA Subtitle C Compliance Evaluation
Date of Evaluation:	August 29, 2002
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US Filter/Westates Carbon
AZD983441263
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Purpose of Inspection

On August 29, 2002, representatives of the United States Environmental Protection Agency (USEPA) performed a focused compliance evaluation inspection (CEI). The purpose of the evaluation was to gather additional information and make observations related to conditions noted at the facility during the inspections of June 2001 and January 2002. The conditions observed during those two inspections pertain to (a) the condition of the secondary containment pad in the hazardous waste processing and loading/unloading areas; and (b) the capacity of the secondary containment area.

A. Condition of Secondary Containment Areas

1. Observations of the Condition of the Containment Pads in the Hazardous Waste Processing and Loading/Offloading Areas

Containment, Storage/Tank and Furnace Area

Inspectors observed scored and chiseled portions of the pad in the hazardous waste processing area [storage/tank/furnace area] (Photos # 1, 3 - 3(a), 4, 5, 6, 7-7(a), 7(b)) . Westates' Containment Pad Crack and Gap Maintenance Plan (Maintenance Plan) (Attachment # 1) states that "In this process, previously repaired cracks are often chiseled out to ensure a good bond when the new epoxy sealant is applied." The areas observed in the hazardous waste processing area were chiseled out in the process of repair. However, the repair process, as described in the Maintenance Plan was not complete. The Daily Inspection Checklist (Attachment #3) did not contain a notation of any observation made describing the incomplete nature of the secondary containment pad maintenance activities and any ongoing remedial actions in the hazardous waste processing area. No notation was made pertaining to the areas of the pad that were gouged, chiseled out, scraped and/or still in the process of being repaired and awaiting additional steps.

EPA inspectors observed cracks and gaps in the containment pad areas (Photo #s 1,2,3 - 3(a),4,5,6,7(c) -(c)(2)(i), 9 - (9)(a)(1)(i),11- 11(a)(1)(i). Inspectors observed numerous and frequently interconnecting fractures and cracks in the area designated on the facility's Daily Inspection Checklist as 'containment area/storage/tank/furnace area'. Some of the cracks observed appeared to be newly forming and were not in the process of being repaired or re-repaired. (Photo #s 7(c), 7(c)(2), 7(c)(2)(i)). Areas of the pad in the storage/tank/furnace area showed deterioration and cracking in places where previous attempts to repair the cracks had been made (Photo #s 7, 7(c)(1), 7(c)(1)(i) - (ii), 8, 8(a), 10, 10(a), 12- 12(a)(1)(i)). Sections of the pad were characterized by lines forming a star-like configuration (Photo #s 3- 3(a)). Gaps were observed at the edges of the pad (Photo #s 9 - 9(a)(1)(i). Inspectors observed a section of the pad that appeared to have a slice removed and a crack extending down into the pad (Photo #s

11 - 11(a)(1)(i)). There were no recorded observations of these cracks and gaps on the Daily Inspection Checklist of August 27th.

Page Two of the Daily Inspection Checklist includes a section for entering any corrective actions. No corrective actions or work orders were noted on the August 27, 2002 Daily Inspection Checklist. No notation was made that the repair shown in Photo # 1 was not complete**.** No notation was made regarding any of the cracks, gaps, incomplete repairs or the cracking in areas where previous attempts were made to repair cracks observed by the inspectors at the time of the inspection.

Loading/Unloading Area

In the loading/unloading area, EPA inspectors observed that the number and length of black strips of filling material created a patchwork appearance (Photo #2). The strips of filling were frequently more than 1inch across and more than 6 inches in length. The filling strips intended to patch cracks and gaps were themselves showing signs of developing cracks. There was no checkmark in the 'unsatisfactory' column of the Daily Inspection Checklist or other notation recording the fractures forming in the patching material or the existence of cracks in the 'loading/unloading area'.

2. Westates Containment Pad Crack and Gap Maintenance Plan

On May 15, 2002, Westates responded in part to a request for information dated April 10, 2002 from USEPA Region 9 (Attachments 1 and 2). The April 10, 2002 letter requested the following:

> "a written plan for the management of cracks and gaps for all areas of the pad. The plan should, at a minimum, include the description of the materials for pad repair, the appropriateness and the effectiveness of the material used, and the criteria used to determine that the repair prevents migration of waste or accumulated liquid out of the system. The written plan should contain a schedule for maintenance and repair and the protocol for the repairs."

The Westates Containment Pad Crack and Gap Maintenance Plan (Attachment # 1) states in part: "The containment pad must be observed continuously and carefully inspected, in any case, not less than once per day per the RCRA Daily Inspection requirements."

Item #6 on Page 2 of Westates' response to EPA's request for information (Attachment #2) contains statements pertaining to the protocol for pad repair and maintenance:

- "If a crack is discovered, it is required to be repaired not later than 24 hours after its discovery."
- "It should be noted, however, that epoxy sealant is readily available near the containment area, and our operators are instructed to make repairs right away if an unsealed crack is discovered rather than wait for an inspection to occur."
- "Since that time [1993], maintenance directed at cracks in the pad has principally involved the maintenance of repaired rather than repair of new cracks."
- "In addition to daily inspection and repair as needed, containment pad maintenance activities are conducted when time permits, generally on a more frequent than annual basis. During these activities, worn areas of epoxy sealant are removed and replaced. In this process, previously repaired cracks are chiseled out to ensure a good bond when the new epoxy sealant is applied."
- "It should be noted, however, that epoxy sealant is kept readily available near the containment area, and our operators are instructed to make repairs right away if an unsealed crack is discovered rather than wait for an inspection to occur."
- "The site of a repair is then given special attention during the inspection the next day to ensure that the repair was satisfactory."

The Maintenance Plan (Attachment #1) also states:

- "If a crack in the concrete containment pad is discovered, it must be repaired no later than 24 hours after its discovery."

Finding of Potential Violation - Continuing Condition 40 CFR§265.193(e)(1)(iii)

Based upon the observations of the EPA inspectors during the August 2002 inspection, there was no improvement in the condition of the secondary containment pad. EPA's reports for inspections conducted on June 19 and 20, 2001 and January 2002 cited a potential violation of 40 CFR§265.193(e)(1)(iii). "(e)In addition to the requirements of paragraphs (b),(c) and (d) of this section, secondary containment systems must satisfy the following requirements:(1) External liner systems must be: .....(iii) Free of cracks and gaps."

Finding of Potential Violation - 40 CFR§265.15(d)

The August 27th Daily Inspection Checklist form did not include a notation of observations made and the date and nature of any repairs. The Daily Inspection Checklist did not contain a notation recording the presence of cracks and gaps or the incompletely repaired areas of the containment pad.

B. Capacity of Secondary Containment

Chronology

June 19 & 20, 2001: EPA representatives reviewed secondary containment pad calculations from the Part B permit application. During the inspection, it was noted that five downspouts on one side of the sloped roof of the warehouse building terminated inside the secondary containment pad. The report based upon this inspection concluded that the secondary containment capacity was not large enough to contain 100% of the capacity of the largest hazardous waste tank as well as the volume of precipitation from a 25-year, 24-hour storm.

August 20, 2001: Westates' response to EPA's inspection stated that the facility had redirected the downspouts so that they no longer terminated on the secondary containment pad. In addition, Westates clarified that Tank T-12 (25,080 gallons) was incorrectly designated as the largest hazardous waste tank. Tanks T-12 and Tank T-9 were deleted from a revised Part A (1/4/94) because they were process tanks used for storage of recycled water and/or rainwater. The hazardous waste tanks are Tanks T-1, T-2, T-5 and T-6 with a capacity of 8,319 gallons each. Therefore, 8,319 gallons is the capacity of the largest hazardous waste tank.

The August 20, 2001 response from Westates to the June 19 & 20, 2001 inspection did not contain Westates' explanation concerning the utilization of additional means to supplement the containment capacity as it existed at the time of the June 19 & 20, 2001 inspection. Information concerning this approach was not presented by Westates until its inclusion in the facility's June 14, 2002 response to the April 19, 2002 EPA information request.

May 1, 2002:

On May 1, 2002, a Westates representative made a clarification regarding their April 23, 2002 drawing and confirmed the correct amount of precipitation for a 25-year, 24-hour rainfall event during a phone conversation with EPA environmental engineer, Kaoru Morimoto. On May 2, 2002, EPA environmental engineer, Kaoru Morimoto provided the result of his evaluation of the secondary containment capacity prior to June 19, 2001. The result was documented in an email on May 2, 2002 (Attachment #4). Based on this corrected rainfall event quantity, the revised calculations are as follows:

Rain volume directly on the pad (25-year, 24-hour event):	24,120 gallons
Warehouse rain run-on (prior to June 29, 2001 diversion):	+9,774 gallons
Total rain volume:	33,894 gallons

The pad containment capacity is 40,003 gallons. This would mean that the capacity of the largest RCRA tank could not exceed 6,109 gallons prior to June 19, 2001.

Pad containment capacity:	40,003 gallons
Total rainfall volume:	-33,894 gallons
Maximum capacity of largest tank prior to June 29, 2001:	6, 109 gallons

After June 29, 2001, the capacity of the largest RCRA tank cannot exceed 15,883 gallons.

Prior to June 19 & 20, 2001 and before the diversion of the five downspouts off of the pad, the capacity of the secondary containment was deficient by the amount of approximately 2,210 gallons. This figure represents the difference between the largest tank of hazardous waste (8,319 gallons) and the secondary containment capacity available after rainfall and run-on (6,109 gallons).

Volume of largest tank:	8,319 gallons
Available capacity after rainfall and run-on:	-6,109 gallons
Capacity deficiency	2,210 gallons

June 14, 2002: Westates provided Part II of its answer to EPA's April 10, 2002 Request for Information. The response states in part:

> ".....We believe that at all times the secondary containment system at our facility has been designed or operated to accommodate the capacity of the largest RCRA hazardous waste tank within the containment area and the precipitation from a 25-year, 24-hour rainfall event."
>
> "Specifically, the facility's secondary containment system includes the containment pad and a system of sumps containing permanent pumps that provide the capability to pump liquids from the containment pad to storage tanks....."
>
> "The containment pad was designed with a slope so that liquids on the pad will run to each of these sumps, and the sumps are piped directly to Tanks T-9 and T-11, which have a combined capacity of approximately 21,000 gallons."

August 29, 2002: Inspectors' Observations

The plant manager explained that, in the event of a power outage, a backup generator can be used to maintain the tower light and run the computers that monitor tanks, equipment and the treatment process. During a power outage, the pumps for the sumps in the storage tank and

furnace secondary containment area would not function.

The plant manager showed EPA inspectors a portable, gasoline powered pump (independent of any sumps with submersible pumps) that would be used in the event of a power failure during an emergency. The plant manager stated that using the portable pump called the "trash pump" during an overflow from sump blockage or failure of submersible sump pumps would allow liquids to be pumped into Tanks T-9 or T-11 (Photo #s 13, 13(a)).

EPA inspectors were shown that the volume of tanks T-9 and T-11 could be monitored via the facility's computer system. EPA inspectors presented the possibility of a 'worst case scenario': an emergency condition could occur when both tanks T-9 and T-11 already contained liquids and might not have sufficient capacity.

Conclusion

For the period of time prior to the diversion of the five downspouts away from the containment pad in the storage tank/furnace area, EPA Region 9 has determined that Westates' approach of utilizing both barrier and operational controls to achieve adequate secondary containment volume did not satisfy the requirements of 40 CFR§265.193 (e)(1)(i) and (ii), as used in this case.

Discussion

Tank T-11 stores wastewater before discharge to the POTW and is considered by Westates to be part of the pretreatment system. The capacity of T-11 is 20,000 gallons. Tank T-9 has a capacity of 10,500 gallons and is considered by Westates to be a recycled water storage tank. T-9 was deleted as a hazardous waste tank from Westates' revised Part A permit application of 1/4/94. Utilization of the 'trash pump' as an operational control does not meet the secondary containment requirements and the goal of preventing releases into the environment.

The operational controls depend upon the following:

(1) Dedicated pumps in the sumps;
- Non-operational during a power failure
- Pumps and sumps could become clogged with carbon granules

(2) 'Trash Pump' as a backup for sump pumps;
- 'Trash Pump' requires gasoline
- Starting the pump and connecting the hoses would need to be done manually
- The pump could become clogged

(3) Tanks T-9 and T-11 have adequate capacity;

- Backup generator would need to come online in order to monitor the tank capacity using the computer system
- Tanks T-9 and T-11 may already be filled with recycle water and wastewater resulting in a release to the environment if sufficient capacity is not available

(4) Implementation of measures in the contingency plan and procedures to prevent hazards

- Procedures for utilization of the 'trash pump' including the procedures for connecting hoses, ensuring that the pump is operational and filled with a specific amount of gasoline and monitoring for clogging when the pump is in use are not contained in the November 1995 Contingency Plan (Attachment #5) and the Procedures to Prevent Hazards (Attachment #6) or the August 2000 Contingency Plan section on emergency equipment (Attachment #7).

As discussed previously, the 'trash pump' would be the only operational control to pump liquids on the containment pad into the designated tanks in the event of a power outage. In a letter dated November 30, 1989 (Attachment #8). EPA responded to an inquiry concerning the interpretation of the phrase "operated to contain" as found in 40 CFR §§264.193 and 265.193 secondary containment requirements for hazardous waste tank systems. The letter states "EPA believes that the risk of release to the environment is much less when a full barrier is used, as opposed to relying on a downsized barrier operated in conjunction with pumps. The chances of a mechanical device (pump) malfunctioning are significantly greater than with a passive measure, i.e., a barrier." "The acceptability of operational controls as part of a secondary containment system should be determined on a case by case basis, with the appropriate EPA Region/State authority making a decision regarding the adequacy and reliability of such a system; ....."

Finding of Potential Violation - 40 CFR §§265.193(e)(1)(i) and (ii)

During the June 19 and 20, 2001 EPA inspectors observed five downspouts that terminated on the secondary containment pad in the storage tank/furnace area. Prior to the diversion of the five downspouts away from the secondary containment in the storage tank/furnace area, secondary containment was not designed or operated to contain 100 percent of the capacity of the largest tank within its boundary and did not have sufficient excess capacity to contain precipitation from a 25-year, 24 hour rainfall event [See Conclusion in section B]**.**

C. Site Security

Observation

The active portion of the facility is surrounded by a fence and gate (Photo # 14). At the time of the August 29th inspection, bags of processed material were located next to the fence on

both sides. This placement of the bags so close to the fence on both sides created a situation where access to the active portion of the facility could be gained by climbing up the stacked bags on one side of the fence**,** crossing over the barbed wire, and climbing down the bags on the other side.

Finding of Potential Violation - 40 CFR §265.14(a)

By placing the bags of processed material close to the fence on both sides, the owner or operator did not minimize the possibility for the unauthorized entry of persons onto the active portion of the facility.

Correction of Violation

The facility Plant Manager directed an employee to move the row of bags next to the outer side of the fence a sufficient distance away eliminating a means to step over the barbed wire portion of the fence. This action corrected the violation.