Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

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Berkeley, California 94710-2721

Arnold Schwarzenegger
Governor

September 28, 2007

CERTIFIED MAIL

FILE COPY

Mr. Brian A. Spiller
General Manager Environmental Services and Engineering
Astra Zeneca
1800 Concord Pike FOP3
Wilmington, Delaware 19850-5438

Dear Mr. Spiller:

On June 29, 2007, the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) issued to you via certified mail a Summary of Violations (SOV) outlining DTSC's findings regarding the unauthorized treatment and disposal of hazardous wastes that may have taken place during the 2002-2004 remedial activities at the UCRFS and Zeneca sites.

This letter supersedes the initial SOV sent on June 29, 2007, because supporting information and compliance action required by Zeneca for Violation 7 was not included in the original letter.

The California Department of Toxic Substances Control (DTSC) has reviewed your submittals dated August 3, 2005, August 11, 2006, and November 20, 2006 in response to our requests for information regarding remedial activities conducted at the Zeneca Inc.'s (Zeneca) former site and the University of California Richmond Field Station (UCRFS).

On March 14, 2005, DTSC became aware that unauthorized treatment and disposal of hazardous wastes may have taken place during the 2002-2004 remedial activities at UCRFS and Zeneca sites. On July 1, 2005, July 6, 2006 and October 25, 2006, DTSC sent information request letters to Zeneca to determine if the remedial activities at Zeneca were conducted in accordance with California's hazardous waste laws and regulations. Separate letters were also sent to the University of California, Richmond Field Station (UCRFS) and Cherokee Simeon Venture. Cherokee Simeon Venture became the owner of the Zeneca site on January 1, 2003.

Based on our review of the above submittals, violations of hazardous waste laws and regulations were discovered. A Summary of Violations outlining DTSC's findings follows. As we note at the conclusion of this letter, we anticipate meeting with you at a mutually convenient time to discuss this matter.

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SUMMARY OF VIOLATIONS

Class 1 Violations

Storage and/or Acceptance of Hazardous Waste Without a Permit or Authorization

1. Zeneca violated Health and Safety Code (HSC) section 25201 (a) in that Zeneca received and/or accepted hazardous waste without a permit or authorization from the DTSC, to wit:

   On or about October 13, 2002, Zeneca accepted approximately 2,046 cubic yards of metal-contaminated vegetation, at concentrations of 850 mg/kg arsenic and 13,000 mg/kg zinc. The Total Threshold Limit Concentrations (TTLC) for arsenic and zinc are 500 mg/kg and 5,000 mg/kg, respectively. The metal-contaminated vegetation was excavated from marsh Areas 2 and 3 during phase 1 activity at UCRFS, for stockpiling and/or storage in Subunit 1. The stockpiled vegetation waste was returned to UCRFS on October 27 and 29, 2003 (Also see Violation 4).

[A waste is hazardous if it exhibits any of the characteristics identified in California Code of Regulations, title 22, section 66261.20(a). A waste exhibits the characteristic of toxicity if representative samples of the waste contain a substance listed in subsection (a)(2)(A) or (A)(2)(B) of Section 66261.24 at a concentration in milligrams per liter (mg/l) of waste extract, as determined using the Waste Extraction Test (WET), which equals or exceeds its listed soluble threshold limit concentration (STLC) or at a concentration in milligrams per kilogram (mg/kg) in the waste which equals or exceeds its listed TTLC. (See California Code of Regulations, title 22, section 66261.24(a) (2) (A). The TTLCs for arsenic and zinc are 500 mg/kg and 5,000 mg/kg, respectively.]

Corrective Action

Although no further action is required regarding this violation, please be advised that in the future, any storage and/or acceptance of hazardous waste from off-site would require a permit or other grant of authorization from DTSC.

Treatment of Hazardous Waste Without a Permit

2. Zeneca violated Health and Safety Code (HSC) section 25201 (a) in that Zeneca treated hazardous waste without a permit or authorization from the DTSC, to wit:

   a. On or about September 18, through November 4, 2002, Zeneca treated with 7.5% limestone, approximately 12,140 cubic yards of excavated cinders and sediment originating from UCRFS Areas 1 and 4 containing mercury at

concentrations between 20 mg/kg and 50 mg/kg, copper from 9,300 to 20,000 mg/kg, and zinc from 7,900 to 22,000 mg/kg, before disposing and capping into Subunit 1 (Also see Violation 3a). The TTLCs for mercury, copper, and zinc are 20 mg/kg, 2,500 mg/kg and 5,000 mg/kg, respectively.

b. On or about November 15, 16, 25 and 26, 2002, Zeneca treated with crushed limestone, approximately 122 truckloads of excavated cinders and sediment originating from UCRFS. These excavated cinders and sediment contained between 50 mg/kg and 260 mg/kg mercury and zinc at 5,000 mg/kg. The TTLCs for mercury and zinc are 20 mg/kg and 5,000 mg/kg respectively. These contaminated cinders and sediment had been pre-treated with 5% powdered activated carbon at UCRFS. After treatment with crushed limestone, the excavated cinders and sediment were placed into Subunit 1 at Zeneca. (Also See Violation 3b).

c. On or about June 17, 2002 through August 4, 2002, Zeneca treated via thermal desorption using a Transportable Treatment Unit (TTU), 2,760 cubic yards of perchloroethylene (PCE)-contaminated soil, EPA waste code U228. The PCE-contaminated soil (U228) had been excavated from the southwest corner of the site, named POI-2. Analytical results indicated that PCE was present in the soil at a level up to 1,700 mg/kg.

[According to a Zeneca's submittal dated August 3, 2005, the source of the PCE was from above-ground storage Tank 150, which was formerly located above or near the POI-2 excavation area. The PCE is Resource Conservation Recovery Act (RCRA) listed hazardous waste and is assigned an EPA waste code U228. Pursuant to the California Code of Regulations, title 22, section 66261.30 (a), a waste is a RCRA hazardous waste if it is listed in article 4 of Division 4.5 of Title 22, unless it has been excluded from this list pursuant to 40 CFR sections 260.20 or is categorized as a non-RCRA hazardous waste pursuant to section 66261.101.]

d. On or about July 2001 through October 2002, Zeneca treated through onsite carbon columns, approximately 90,000 gallons of PCE-contaminated groundwater (U228) pumped from the POI-2 excavation. The treated ground water (U228) was discharged to the Richmond Publicly Owned Treatment Works.

Corrective Action

Although no further action is required regarding the above violations, please be advised that any future treatment of hazardous waste would require a permit or other grant of authorization from DTSC.

Disposal of Hazardous Waste at an Unauthorized Point

3. Zeneca violated Health and Safety Code, section 25189.2 (c) in that Zeneca disposed of hazardous waste at a point not authorized by DTSC, to wit:

   a. On or about September 18 through November 4, 2002, approximately 12,140 cubic yards of treated excavated cinders and sediment containing mercury at concentrations between 20 mg/kg and 50 mg/kg, copper from 9,300 to 20,000 mg/kg, and zinc from 7,900 to 22,000 mg/kg were received,. The materials originated from UCRFS Areas 1 and 4, and were disposed of and capped into Subunit 1 (Also see Violation 2a). The TTLCs for mercury, copper, and zinc are 20 mg/kg, 2,500 mg/kg, and 5,000 mg/kg, respectively.

   b. On or about November 15, 16, 25, and 26, 2002, approximately 122 truckloads of excavated cinders and sediment containing between 50 and 260 mg/kg mercury and zinc at 5,000 mg/kg, originating from UCRFS were received. The TTLCs for mercury and zinc are 20 mg/kg and 5,000 mg/kg respectively. These cinders and sediment had been pre-treated with 5% powdered activated carbon at UCRFS prior to placement into Subunit 1 (Also see violation 2b).

   c. On or about October 11, 18, 23, 25, 28, 31, 2002, November 1 through 3, 2002 and December 5 through 6, 2002, approximately 908 truckloads of solidified soft marsh cinders and sediment containing between 20 mg/kg and 50 mg/kg mercury were received from UCRFS for placement into Subunit 1. The TTLC for mercury is 20 mg/kg.

   d. On or about September 11, 16, October 1, 2, 21, 22, and 25, 2003, a total of 681 truckloads of treated cinder related materials, containing between 20 mg/kg and 50 mg/kg of mercury (described by UCRFS as less than 50 mg/kg and referred to as "Type A materials"), were received for placement into Subunit 1. The TTLC for mercury is 20 mg/kg.

   e. On or before September 10, 2003, a total of 109 truckloads of treated cinder impacted materials containing between 20 mg/kg and 50 mg/kg mercury materials (described by UCRFS as less than 50 mg/kg of mercury and

referred to as "UC Berkeley Type A Materials"), were received from UCRFS for placement into Subunit 1. The TTLC for mercury is 20 mg/kg.

f. On or about October 25, 2003, a total of 1,115 truckloads of cinder related soil containing mercury at concentrations greater than 50 mg/kg and less than 260 mg/kg mercury (referred to by UCRFS as "Type B materials") were received from UCRFS, for placement into Subunit 1. The TTLC for mercury is 20 mg/kg.

Corrective Action

Within 15 days of receipt of this Summary of Violations, Zeneca shall contact the DTSC Northern California Cleanup Operations Coastal Branch, to initiate and establish a schedule to remove the contaminated cinders and otherwise restore the Subunit 1 areas at Zeneca, where the treated contaminated cinders were disposed of.

Shipment of Hazardous Waste to an Unpermitted Facility

4. Zeneca violated Health and Safety Code Section 25189.2 (b) in that Zeneca shipped hazardous waste to UCRFS, a facility not permitted or authorized to receive hazardous waste, to wit:

On or about October 27 and 29, 2003, Zeneca shipped back to UCRFS approximately 2,046 cubic yards of vegetation, with concentrations of 850 mg/kg arsenic and 13,000 mg/kg zinc. The TTLC values for arsenic and zinc are 500 mg/kg and 5,000 mg/kg, respectively. (These vegetation wastes were accepted from UCRFS on October 13, 2002, and were stockpiled in Subunit 1) (Also see violation 1a).

Corrective Action

Although no further action is required regarding this violation, Zeneca must ensure that in the future any hazardous wastes shall only be shipped to a permitted or otherwise authorized hazardous waste treatment, storage, and/or disposal facility.

Failure to Properly Characterize the Wastes

5. Zeneca violated California Code of Regulations, title 22, section 66262.11 in that Zeneca failed to properly characterize 4,920 cubic yards of PCE-contaminated soil, cinders and sediment, excavated from the southwest corner of the site, named POI-2, to wit:

On or about August 2002, 2,160 cubic yards of PCE-contaminated soil, a RCRA hazardous waste, EPA waste code U228, was shipped to Kettleman Hills as non-RCRA hazardous waste. 2,760 cubic yards of the PCE-affected soil was treated using a TTU, an unpermitted unit (Also see violation 2c).

(The PCE-contaminated soil waste is a listed RCRA hazardous waste, EPA waste code U228, based on Zeneca's submittal dated August 3, 2005 See Violation 2c for more details).

Corrective Action

Although no further action is required regarding this violation, Zeneca must ensure that in the future any hazardous wastes shall be properly characterized.

Transferring Custody of Hazardous Waste to an Unregistered Hazardous Waste Transporter

6. Zeneca violated California Health and Safety Code, 25163 (a)(1) in that Zeneca transferred custody of a hazardous waste to a transporter who does not hold a valid registration issued by the department, to wit:

   a. On or about August 8, 2002, Zeneca transferred custody of non-RCRA Hazardous Waste to Marchbanks Trucking on manifest 21629015.

   b. On or about August 7, 2002, Zeneca transferred custody of non-RCRA Hazardous Waste Solid to Marchbanks Trucking on manifest 21677129.

   Marchbanks Trucking held a transporter registration from July 7, 2000 to July 31, 2002 and from October 7, 2002 to October 31, 2003. Marchbanks Trucking does not currently hold a transporter registration.

   Corrective Action

   Although no further action is required regarding this violation, Zeneca must ensure that in the future all transfers of hazardous wastes must be to Hazardous Waste Transporters holding valid registrations with the department.

Failure to Submit Manifests Within 30 Days to the Department for Wastes Transported Off-Site Within California.

7. Zeneca violated California Code of Regulations, title 22, section 66262.23 (a)(4) in that Zeneca failed to submit to the Department within 30 days of each shipment of hazardous waste, a legible copy of each manifest used, to wit:

   a. On or about August 7, 2002, Zeneca transferred custody of non-RCRA hazardous waste soil contaminated with trace metals and pesticide to Marchbanks Trucking on Manifest No. 21677219. Manifest No. 21677219 is not in the Hazardous Waste Tracking System.

   b. On or about August 8, 2002 Zeneca transferred custody of non-RCRA hazardous waste soil contaminated with trace metals and pesticide to Marchbanks Trucking on Manifest No. 21629015. Manifest No. 21629015 is not in the Hazardous Waste Tracking System.

   Corrective Action

   Effective immediately, Zeneca shall submit to the Department a legible copy of Manifest No. 21677219 and 21629015. In addition, Zeneca shall ensure that in the future legible copies of all manifests used for wastes transported off-site within California are submitted to the Department within 30 days.

If you disagree with any of the violations listed above, please send a written notice of disagreement to DTSC. Such notice of disagreement, if sent, should include the violation being disputed (using the numbering system in this document), the basis for the disagreement and any other additional information that explains why you disagree with the violation being alleged.

DTSC will provide you with a complete report within 65 days of the date of this letter. You may request a meeting with DTSC to discuss our findings. The issuance of the this Summary of Violations does not preclude the DTSC from taking administrative, civil, or criminal action as a result of the violations noted in the Summary of Violations.

We are available to meet with you to discuss this matter beginning the week of July 16, 2007. Please call Ms. Colleen Heck at (916) 324-5780) or me at (510) 540-3855 to schedule a meeting.

Sincerely,

Charlene Williams

Charlene Williams, Chief
Northern California Branch
Enforcement and Emergency Response Program

Enclosure

Certified Mail No.: 7007 0710 0004 5080 5158

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