Environmental Protection Agency, Region III
Resource Conservation and Recovery Act – Subtitle C Compliance Evaluation Inspection

American Zinc Recycling
900 Delaware Avenue
Palmerton, PA 18071

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NAICS code: 331492
Dates of Inspection: August 29 & 30, 2017

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11/2/2017
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1.0 Introduction

On August 29 & 30, 2017, the United States Environmental Protection Agency, Region III, Land and Chemicals Division, RCRA Waste Branch (EPA) conducted an unannounced Compliance Evaluation Inspection (CEI) under the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. Sections 6901 et seq., of American Zinc Recycling in Palmerton, PA ("AZR," "the Facility," or "the Palmerton Facility"). EPA representatives Martin Matlin and Rebecca Serfass were accompanied by Pennsylvania Department of Environmental Protection (PADEP) representatives Dean Ritter, Amy Faulch, and Jennifer Cimera. The Facility was represented by Joseph Falko, Environmental Manager; Michael Foster, Plant Manager; and by telephone: Tim Basilone, V.P. Environmental Affairs, and Ali Alavi, Senior V.P. for Corporate Environmental Affairs.

The inspectors arrived at the Facility at 8:55 a.m. on August 29, and presented credentials to the Facility Gate Guard at the northern vehicle entrance. The weather throughout the first day of the inspection consisted of on and off rain. The inspectors then met Mr. Falko and Mr. Foster, and assembled in a conference room where the purpose and scope of the inspection was explained and an opening conference was held. Mr. Basilone was called by telephone to join the opening conference.

Information included in this report is the result of statements made by Facility representatives, materials shown to the inspectors by Facility representatives during the inspection, and information and documents provided by Facility representatives to EPA during and/or subsequent to the inspection. In addition, information gathered prior to or subsequent to the inspection from a review of EPA or State records may be included in this report.

2.0 Facility Background Information

2.1 Description of Facility

This Facility was established in Palmerton in the late 1800's as a primary zinc smelter, under the name of New Jersey Zinc Company. Primary zinc smelting operations ended around 1981, replaced by secondary zinc smelting and electric arc furnace dust processing. Over time, it has gone through several names and owners, including Gulf & Western Industries, Inc., Zinc Corporation of America, Horsehead Resource Development Company, Horsehead Industries, and Horsehead Corporation. The Facility's parent corporation, Horsehead Holding LLC, emerged from Chapter 11 bankruptcy as a private company in September, 2016. In May, 2017, it changed its name to American Zinc Recycling LLC ("AZR LLC"), and changed the name of its subsidiary, Horsehead Corporation, to American Zinc Recycling Corp. According to the representative, AZR LLC is a consortium of various investor groups, and owns several other Electric Arc Furnace (EAF) dust processors, including in Barnwell, SC; Rockwood, TN; and Chicago, IL, all of which send zinc oxide to the Palmerton Facility for calcining.

AZR LLC also owns INMETCO in Ellwood City, PA, which recovers nickel from stainless steel dust and recycles batteries; Zochem in Ontario, Canada, which processes zinc metal into zinc oxide; and American Zinc Products in Mooresboro, NC. The representative stated that the Mooresboro facility is currently shut down for renovations, but is expected to take

over the calcining process from the Palmerton Facility within two years. Horsehead Corp. also used to run a facility in Monaca, PA, which was shut down in 2014. According to the representative, materials were shipped from that site to the Palmerton Facility in the year or two following that shut down.

The Facility currently employs about 130 personnel working three shifts, 24 hours a day, seven days a week. It covers about 163 acres, although many parts of the property are owned or leased by other entities or have been abandoned (See Attachment 1 for Facility Site Map). AZR primarily processes EAF dust from carbon steel manufacturers, as well as zinc oxide generated offsite, to create an intermediate recovered zinc material, "calcine," which is shipped offsite for further refining. Other saleable materials may be generated in the process. The Facility's primary NAICS code is 331492.

2.2 Permit Status

AZR is a permitted RCRA Treatment, Storage and Disposal Facility (TSD) and a Large Quantity Generator (LQG). The permit allows for the acceptance and storage of approved hazardous wastes with waste code K061, issued on 10/10/06 and listed as expired 10/10/16. The Facility stated that it had submitted its Part B permit renewal application to PADEP.

The Facility is also operating under a 1995 Consent Decree ("1995 CD") between EPA, PADEP and the Facility, which includes requirements under several regulatory programs, including RCRA.

The Facility also maintains a Title V Air permit for its kilns and baghouses, and an NPDES permit for two outfalls discharging non-contact cooling water and storm water. Portions of the property and the surrounding area were added to the National Priority List in 1983 as the Palmerton Zinc Pile Superfund Site, currently being managed by CBS Corporation and overseen by EPA.

2.3 Process Description

There are two main processing operations at AZR: "Waelzing" and "Calcining," which utilize four kilns, numbered #1, #2, #5, and #6. Kilns #2 and #5 are dedicated to Waelzing, #6 to Calcining, and #1 may be used for either. All of the kilns are suspended, inclined, cylindrical structures, which slowly rotate while operating.

Waelzing

At the beginning of the Waelzing process, EAF dust (EPA Waste Code K061) from carbon steel mills is brought in either by hopper railcars, pressure differential (PD) railcars, PD trucks, or dump trucks. According to the Facility, most of the dust is currently coming in by truck. After entering the Facility, samples are taken of each load of K061 EAF dust to test for radiation and zinc levels. If acceptable, the dust is off-loaded to the Conditioning/Blending Building 608, which is covered by the RCRA permit. Here it is mixed with coke and wetted, sent through a pelletizer, and fed into a kiln. In the kiln, natural gas burners start an exothermic reaction, that burns around 1,000 degrees Celsius. The reaction generates fumes which are directed to a baghouse, as well as residual solids. Dust collected from the baghouse is referred to

as "crude zinc oxide" (CZO). This material is stored in the "G & H" Building or CZO Storage Building 644, prior to entering the Calcining process. Solid material that drops out of the Waelzing kilns is referred to as "iron rich material" (IRM). This material is released into quench pits (concrete bunkers full of water) and taken by loader to the "Dome" Building. The IRM is analyzed for hazardous metals concentration by the Toxicity Characteristic Leaching Procedure (TCLP), and is held in the Dome until the analytical results show that none of these levels exceed the RCRA Hazardous Waste (HW) thresholds. According to Facility representatives, the IRM material occasionally has failed in the past for zinc levels, in which case the IRM is returned to a Waelzing kiln for further processing. After confirming the IRM material passes the analytical tests, it is stored in piles in an area on the eastern end of the Facility, known as Stony Ridge, and sold primarily to cement manufacturers.

Calcining

CZO taken from either the onsite Waelzing operation or one of the three other AZR Waelzing facilities, and/or other "zinc-rich material" from the closed Monaca site, is added with water to a Calcining kiln, and heated by natural gas burners. This process burns around 1300 degrees Celsius and generates another fume, which is sent to a separate baghouse. The dust from that baghouse is directed to a packing area, where the material is loaded into supersacks and referred to as either "lead concentrate" or "lead chloride" (PbCl). PbCl supersacks were previously shipped to China for lead reclamation.Solid material remaining in the Calcining kiln is referred to as "calcine," the Facility's primary product. It is released into quench pits, and moved by loader to the Calcine Storage Building. From there it is shipped by railcar or truck to companies in Maryland and Canada for further zinc refining.

Another small operation, referred to as "Metal Powders," is located in an area near the Facility's Sample Room. Zinc ingots are shipped in from Canada, put through a horizontal atomizer, and solidified as powder. The powder is then sold to a battery manufacturer, and the skimmings sold as scrap. The representative stated that this operation was not currently running.

3.0 Hazardous and Non-Hazardous Waste Generation

The following waste streams are classified as hazardous or non-hazardous according to the Facility's generator knowledge:

- **Kiln rubble:** D006/D008 HW generated from maintenance and/or renovation of the kilns, primarily consisting of refractory brick that is either damaged or covered with burn residue. Typically stored in roll-off boxes onsite prior to offsite disposal; also stored in an open shed near Building 608 at the time of inspection (see Section 5.5, below).

- **Spent baghouse bags:** placed into kilns to recover any remaining material.

- **PPE, hoses:** also considered D006/D008 HW and stored in roll-offs, prior to shipment to Giant Resource Recovery in South Carolina to burn in cement kiln.

- **Conveyor belts:** clogged or degraded conveyor belts are either cut and shipped offsite as D006/D008 HW, or cleaned and either reused or sent offsite as non-HW.

- **Wastewater:** truck wash wastewater from Building 608 and any floor wash/sweeper waste from the area is added to the pelletizer inside Building 608 to wet the EAF dust.

- **Used oil:** generated from gear boxes and other equipment, stored in Waste Oil tank outside Mobile Shop and 55-gallon drums in Warehouse.

- **Electronic waste:** stored in Warehouse, occasionally brought to Palmerton municipal electronics collection events.

- **Aerosol cans:** collected in 55gal drums throughout Facility, brought to Warehouse for puncturing, with contents treated as HW.

- **Universal Waste:** used fluorescent lamps and batteries are stored outside Electric Shop prior to offsite recycling.

4.0 Hazardous Waste Storage

The Facility's RCRA permit allows for storage of up to a year of K061 EAF dust in Building 608. Less-than-90-day HW storage areas are also maintained near the Mobile Shop, outside the G&H Building, and outside of the PbCl Packaging Building. The representative stated that, besides drum storage of spent aerosol cans, no other satellite storage areas are maintained.

Besides the areas described above, the 1995 CD lists several areas where PbCl, CZO, and IRM may be stored, none of which would be considered HW while compliance with the CD is maintained.

5.0 Inspection Observations

Day One – August 29, 2017

At approximately 10:55 a.m., Mr. Basilone informed the inspectors that Ali Alavi, Senior Vice President for Corporate Environmental Affairs, had joined the conversation by phone. Mr. Alavi requested that he be able to view all photos taken during the inspection to determine whether any included Confidential Business Information (CBI). The State inspectors suggested that they would take similar photos to those taken by EPA, and would forward those to Mr. Alavi for his review. A tour of the Facility began at 11:15 a.m. on August 29, and resulted in the following observations:

5.1 Warehouse

The inspectors, joined by Mr. Foster and Mr. Falko, walked from the conference room to the main storage section of the Warehouse Building, also known as Building 604. This part of the building is composed of several different room sections arranged in a line, divided by partial walls, with a connecting walkway along one wall. In the first section visited, several dozen PbCl supersacks were observed, each sitting on its own wooden pallet (See Attachment 2 – Photographic Log, Photo #1). Each was labeled: "Environmentally Hazardous Substance Solid

N.O.S. (Lead Oxide Material)" and with UN number 13H2/Y/1216 or 0217/IND/71450339/4512/2507 (Photo #2). Weight in pounds was also listed on each supersack, ranging generally from 3,000 – 6,000 pounds (Photos #3 & #4). The supersacks were also dated, and the Facility stated that this represented the date the supersack was filled. All of the supersacks observed in this section were dated sometime in June 2017, although several dates were unobservable due to the dense way the supersacks were packed together. Each supersack also appeared to have a batch number, along with a smaller number denoting the bag number for that batch, according to the representative. See Photos #5-#7 for additional views of PbCl supersacks in the first area of the Warehouse. The inspectors also observed white, powdery material on the floor of this area that the Facility representative stated he did not believe was PbCl, but rather broken up concrete of the Warehouse floor (Photo #8).

At the time of the inspection, the Facility representative stated that they were planning to send a 10 ton (2 supersacks) trial to Clean Harbors to be disposed of as HW. The container from Clean Harbors was scheduled to arrive on the day of the inspection to be loaded and shipped before the following week's end. The Facility representative also stated that the Palmerton Facility typically generates 25-45 tons of the PbCl material a day, but because of the increase in Calcining operations occurring to catch up from a previous renovation shut down, the Facility is currently generating approximately 80 tons per day of the PbCl.

Next to the supersack storage area, the inspectors observed four 55gal drums, each full of spent aerosol cans (Photos #9 - #12). All of the drums were open, unlabeled, and undated. The representative stated that he was unsure how long it took to generate these, and that they were awaiting puncturing. Nearby, in a caged area, a puncture device was observed attached to the lid of a 55gal drum (Photo #13). The drum it sat on was labeled as HW "Waste Paint from Aerosol Cans" and was not dated (Photo #14). The top of the puncture device was open and smelled of solvents (Photo #15).

In the next major room section, several hundred more PbCl supersacks were observed. They each appeared to have similar labels as those described above, with dates ranging from 5/21/17 to 8/5/17 (Photos #16 - #25). Small spots of white, powdery material were also observed on the floor of this area, and in subsequent areas where the supersacks were being stored (Photos #26 & #27).

Also in this section, four 55gal drums were observed on a pallet, unlabeled except for their original product labels (Photos #28 & #29). The representative stated that these contained either waste oil or used antifreeze. Each of the drums was rusty and in apparently poor condition. Several other 55gal drums, approximately 20, were viewed along the walkway wall, as well (Photo #30). The representative stated that they all contained waste oil. One of these drums had an open bung hole and was labeled "Waste Oil" (Photo #31). No other drum was labeled, besides some showing original product labels.

In the next room section, at least 50 more PbCl supersacks were observed (Photos #32 & #33). This room contains a ramp which leads down to a recessed center area. The ramp was completely filled with PbCl supersacks, down to the recessed area, and no other method of reaching the recessed area was visible. PbCl supersacks also completely filled the back part of this room section, with no means of access except by removing each sack from the front of the

room. The supersacks that could be observed showed dates in June 2017 with a few in August 2017. In the recessed area itself were several smaller sacks (seen in Photo #32), all covered with grey/brown dust. According to the representative, these contained desiccant, a raw material used in the Facility's air compressors.

In the next adjoining room section, many more PbCl supersacks were observed, several squeezed between support columns and other machinery. The representative stated that this section of the building might now be considered Building 611. Dates on supersacks here ranged from 5/5/17 through 7/1/17 (Photos #34 - #38).

Steve Meining, Operations Manager for Powdered Metals, joined the group here, and stated that the next adjoining room area is considered the High Purity Oxides and Powders Storage Building within Building 611. Several pails sitting on pallets were observed here, described as zinc powder products of various grades. He also stated that the smaller sacks in the previously-observed recessed area would have contained zinc product as well.

In the next adjoining room, an approximately 30gal drum was observed in a corner, labeled "Aerosol Cans," and about 3/4 full of used aerosol cans (Photo #39 & #40). More product pails were observed in this area, as well as several empty 55gal drums. Beyond this area, unused offices and old lab rooms followed, which were not observed. The inspectors then broke for lunch, at around 12:15 p.m. While driving back to the Facility after lunch, the inspectors drove along Stoney Ridge Road to observe the Facility from an area next to the public roadway (Photos #41 - #43).

5.2 Driving Tour

The inspectors returned to the Facility around 1:15 p.m., and began a driving tour at 1:25 p.m. The EPA inspectors traveled in a minivan with Mr. Foster and Mr. Falko, and the PADEP inspectors followed in their own vehicle. This part of the tour began at the northwestern edge of the Facility, driving down an access road that runs roughly parallel to Delaware Ave., built by the Facility to remove truck traffic from that road, according to the Facility representative. The Scale House and Railyard at the western side were observed, and several railcars were found stationary, on the tracks. The representative stated that all of the railcars viewed contained CZO from other facilities. He further stated that Kiln #6 had previously been down for eight weeks, so there was a large backlog of materials for calcining. He stated that the Facility was currently running about 600 tons of CZO per day to catch up and generating around 80 tons of PbCl per day.

We then drove to the western Gatehouse, where four tractor trailers were waiting. The representative stated that they probably contained EAF dust waiting to enter or Calcine product waiting to depart.

5.3 Sample Room - Building 601

The inspectors then continued driving east, following generally along the southern side of the Facility. The inspectors got out of their vehicles upon arrival at the Sample Room – Building 601. Here, the inspectors were introduced to Neal Gower, Supervisor of the Railroad and Sample Room. He stated that sampling is conducted here for both incoming EAF dust and

outgoing products. Analytical machines present include an x-ray diffractor and a carbon analyzer. Samples are typically analyzed for lead, cadmium, iron, zinc, and/or carbon percentage. Samples are also monitored for radiation levels. Some materials which may require more in-depth sampling would be sent to the Mooresboro facility. Any waste generated from the sampling and analytical processes is placed back into trucks carrying EAF dust into the Facility.

In an adjoining room, on a workstation under a fume hood, inspectors observed an open, unlabeled pail of small plastic containers and ceramic cups with ash residue (Photo #44). The representative stated that these were samples which had already gone through the x-ray diffraction and carbon analyzer. Also, next to this pail were nine additional ceramic cups with smudges of ash residue on them, which were described as having been through the carbon analyzer. None of the items were labeled or dated, and according to Mr. Gower, all waste generated in the lab is deposited into one of the trucks bringing in EAF dust to be recycled. Inspectors also observed the sampling pad where the trucks carrying EAF dust pull in to be sampled (Photo #45 – claimed as CBI).

Mr. Gower also stated that titrations are sometimes conducted on samples for chlorine analysis, which generate a waste containing nitric acid and silver nitrate – about a half-gallon is generated every other week. One approximately 3gal jug was found beneath a sink, closed and labeled "Hazardous Material for Recycle On Site" (Photo #46). According to Mr. Gower, when full, this material would also be added to the top of an incoming EAF dust truck on the way to Building 608.

5.4 PD Station

This area is where pressure-differential trucks are able to discharge EAF dust to Building 608, through a specialized connection and enclosed conveyor (Photos #47 & #48 – claimed as CBI). As the inspectors drove up to this area, a truck was connected for discharging, but a large cloud of EAF dust was observed escaping from the vehicle to the atmosphere. Mr. Falko donned a respirator and left the vehicle to speak to the truck driver. Mr. Foster described it as a "blow-out" and when asked about the frequency of such events, stated that they are infrequent. The inspectors also asked whether a Facility employee is typically stationed at this location, and the representative said it is not manned. He also stated that, had it not been raining, the area would be periodically cleaned by designated vehicles conducting sweeping, water spraying and vacuuming. Any material collected from the sweeping and vacuuming activities is then deposited into Building 608. Mr. Falko returned to the vehicle and as the emission ceased, he stated that he believed a blocked line had caused the release.

5.5 Building 608

Just east of the PD Station is Building 608, the Facility's permitted EAF storage area. On the south side of the building is a bay door for trucks to enter, next to a personnel door (Photo #49 – claimed as CBI). The personnel door did not appear to remain completely closed when shut, and gaps were visible both below the door and at the top right corner (Photos #50 & #51). Just to the right of the personnel door, an additional bay door made of hinged, corrugated steel wall panels was not fully extended, leaving a gap at the center through which the interior of the building was visible (Photo #52). Inspectors were unable to enter Building 608 because it is a

respirator-required area, but they observed the inside of the building from outside of the open truck entrance bay. Inspectors observed large piles of EAF dust, a front-end loader moving dust around, and water being hosed onto the piles as part of the conditioning process (Photos #53 - #56 – claimed as CBI). Inspectors also observed the area inside the building near the truck bay entrance. The EAF dust material was observed to be stored very close to the bay opening, almost spilling out of the building (Photos #57 & #58 – claimed as CBI). Two holes were observed in the exterior south wall – one through corrugated steel siding, and another through cinderblock in an area further east, which Mr. Foster believed was part of the truck washing area (Photo #59).

At the furthest east side of the building, three bay doors allow trucks to exit from the truck washing area (Photo #60 – claimed as CBI). Viewing these doors, the center one had an approximately six inch opening at the bottom, whereas the one on the northern side had a gap of about two inches at the bottom (Photo #61 – claimed as CBI). Drains were observed here, which the representative stated are connected to sumps which pump their contents back to the pelletizer used in the conditioning of the EAF dust. Inspectors viewed the inside of the southernmost truck washing bay through the window of the personnel door (Photo #62 – claimed as CBI).

Looking back along the northern side of the building, it appeared that a section of wall about halfway down was bulged outward (Photo #63 – claimed as CBI).

Facing Building 608 to the east is a three-walled roofed structure, which, at the time of the inspection, contained a large pile of debris and dust material (Photos #64 & #65 – claimed as CBI). The representative stated that it consisted of "rubble" from cleaning out Kiln #6, and would be considered HW. The Facility representative stated that this kiln rubble was generated sometime in July, 2017 and would be sent offsite as HW to Envirosafe. No labels or dates were visible on the structure or its contents.

5.6 Kiln #1 Quench Pit and East

The Quench Pits consist of large concrete basins filled with water, which also contain a mechanism that pushes quenched material out of the pit. At the time of the inspection there were piles of granular material just outside the basin associated with Kiln #1, which was described as either quenched calcine or IRM awaiting pick-up by front loader (Photo #66 – claimed as CBI).

East of this pit is a larger, three-walled roofed structure, referred to as the "Calcine Shed," which contained piles of dark grey, granular material at the time of inspection (Photo #67 – claimed as CBI). The Facility representative reiterated that this product material would be sent out on either trucks or rail cars.

Near this area, the inspectors observed the structure named the "Dome Building," which is used to temporarily store IRM while it undergoes analysis (Photo #68). It receives new IRM through an enclosed conveyor entering from its western side, about halfway up its wall. There is also a large bay door on the southwest side, which was open at the time of inspection (Photo #69). Once it is confirmed that the IRM passes the analytical tests, it is taken to an area at the eastern end of the Facility called Stony Ridge. The inspectors inquired if Stony Ridge is a separate company that the IRM is sold to, and the Facility representative stated that the IRM is not sold to Stony Ridge and that "for accounting purposes [Stony Ridge] is separate, but same

company."

Further east of the Dome Building, the inspectors observed railcars described as containing calcine waiting for offsite shipment. A large section of property was then driven by, containing several buildings, which the representative stated was not owned by AZR.

The inspectors then observed the approximately eight-acre, five-foot tall pad constructed of IRM, located towards the eastern side of the property just west of the Aquashicola Creek (Photos #70 & #71). The Facility representative stated that they began building the IRM pad in 2015 and stopped sometime in 2016. According to the Facility representative, the intended plan for the pad was to store tested IRM piles and the IRM screener, rather than storing them at Stony Ridge. The recent owners have not moved forward with that plan at this time, but may resume in the future, according to the Facility representative.

The inspectors then drove past a section of property described as managed by Viacom, relating to the Superfund Site. The inspectors then crossed the Aquashicola Creek and turned back west to view large piles of IRM stored on the open, paved area known as Stony Ridge. According to the representative, the piles to the north in this area have been sold to Viacom, whereas the remaining piles are still owned by AZR. In this area, the inspectors observed a Quonset-style garage used for storing and maintaining the IRM loader and truck. A few 55gal drums of oil/hydraulic fluid were observed on spill totes in this building.

The inspectors then drove back across the north-south leg of the creek, heading west along the northern side of the facility. Driving past Kiln #6, inspectors observed from their vehicles "Product Collectors" #1 & #6 (baghouses collecting PbCl) and "Product Collectors" #2 and #5, painted green, (baghouses used to collect CZO) (Photo #75 – claimed as CBI). Inspectors then viewed a large brown tower above Building 616, the PbCl Packing Building (Photo #76 – claimed as CBI). In this building, the PbCl material is dropped into supersacks for storage. Inspectors observed the large bay door of this building to be open and could see supersacks of PbCl that had recently been filled.

5.7 Outside PbCl Packing

Outside Building 616, eight roll-off containers were observed (Photos #77 - #79 – claimed as CBI). The Facility representative stated that some of the kiln rubble contained in the roll offs was initially stored in the three-sided structure previously observed (see Section 5.5, above), and that some of it went right into these roll-off containers upon generation. Each container was covered by a tarp, and seven of the eight roll-offs were labeled as HW D006/D008 "K6 Lumps" (Photo #80 – claimed as CBI). One container was empty, and its HW label was partially scratched off (Photo #81 – claimed as CBI). The inspectors asked the Facility representative to partially remove the tarp of this roll off container to confirm that it was empty (Photo #82 – claimed as CBI). Each container was also marked with a start accumulation date, ranging from 5/31/17 to 8/14/17 (Photos #83 & #84 – claimed as CBI).

The inspectors continued west to view another roll-off storage area outside the northwest corner of the "Zinc Oxide Feed Building" or "G&H Building." Seven roll-offs were observed here. Mr. Falko stated that five were empty. One was labeled as HW D006/D008 "Partial Load"

and dated 8/21/17. The other roll-off containing material was labeled only as HW D006/D008, and dated 7/7/17.

The first day's physical tour of the plant ended at 3:20 p.m. The inspectors went back to the conference room in Building 604 and held a brief meeting with just the two EPA inspectors, Mr. Foster and Mr. Falko. Some documents were requested for review on the following day, and the inspectors departed the site at approximately 3:45 p.m.

Day Two – August 30, 2017

The inspectors returned to the Facility at approximately 8:45 a.m. on 8/30/17. The inspectors again showed their credentials to the gate house guard, and met the Facility representatives in the Building 604 conference room. The physical tour of the plant resumed at 9:10 a.m., with the following observations:

5.8 Lithopone Building 719

The EPA inspectors again rode with Mr. Foster and Mr. Falko, while the PADEP inspectors (Mr. Ritter, Ms. Faulch, and Ms. Cimera) followed in a separate vehicle. On the way to Building 719, the inspectors observed about 40 PbCl supersacks sitting on pallets in an outdoor lot next to the PbCl Packing Building. The representative stated that these had been recently filled and were being staged here prior to being moved to a storage building.

The inspectors continued to Building 719. This is a primarily wooden structure with corrugated steel siding on the exterior walls. The building was densely filled with PbCl supersacks, packed practically solid into the corners of the building (Photos #85 - #92). Dates observed on the supersacks ranged from 4/8/17 through 5/5/17.

Walking around the outside of this building, the inspectors noted that some of the building's windows and doors were either open and/or damaged, with PbCl supersacks stored so close to the interior walls that they were clearly visible from the outside (Photos #93 - #96). Near the Lithopone Building 719, inspectors observed what was described as an abandoned steam pipe, which appeared to have degraded insulation material leaking from the exterior of the pipe (Photo #97 – claimed as CBI).

5.9 Barium Building 710

This building, which had previously been used to store historic bulk PbCl, was constructed with walls made of concrete and steel beams. It was mostly empty at the time of the inspection, except for a forklift and what looked like a rabbit hutch. The representative believed those objects were placed there by employees of Airgas, which leases property onsite for their business. Inside the building, many areas of corroded/degraded concrete were observed.

5.10 Cathedral Building 864

This building was also constructed with concrete and steel beams on the first level, then shifts to steel beams with corrugated steel panels above that level. Running along one side of the

roof, as well as the roof ridge, is a series of corrugated fiberglass panels acting as a kind of skylight. This building had also previously been used to store historic bulk PbCl. According to the Facility representative, the Cathedral Building 864 was bought by AZR approximately two years ago and is used solely for storage.

At the time of the inspection, more than half of the building was filled almost to the roof with a large pile of what was described as "zinc-rich material" received from the Monaca facility after it shut down (Photos #98 - #100 – claimed as CBI). The other side of the building was filled with hundreds of tightly-packed PbCl supersacks, each one on a pallet (Photos #101 & #102. Dates observed ranged from 8/9/17 through 8/28/17, although many were unobservable due to how closely they were stored, leaving no room to maneuver between them. It was also observed that the space between the loose pile of zinc-rich material, which had very steep sides, and the PbCl supersacks, narrowed to about two feet towards the eastern end of the building (Photo #103 – claimed as CBI). Forklift access to any PbCl supersacks from the long center line of the building would have been problematic, requiring access only from either end.

A smaller, more newly-constructed area at the eastern side of the building held about 16 PbCl supersacks at the time of inspection, all dated 8/29/17, and labeled as part of lot #680 (Photo #104). The representative stated that they had been generated the night before.

Leaving this building, the inspectors again observed the eight-acre IRM pad, which is located just east of the building. The Facility representative stated that the newly-constructed area of the Cathedral Building 864 was built to be used as a scale house for the IRM they planned to store on the IRM pad (Photos #105 & #106). The inspectors also observed a large rubble pile just south of the building. The representative was unsure of the source of the rubble, but stated that it was not owned by AZR (Photos #107 & #108).

5.11 Dock 1 Field Station and Alloy Plant

Located at the northeast corner of the property, the Dock 1 Field Station is a fenced area containing a series of buildings of various sizes. One of the larger buildings was labeled "1002," and was currently being used for storage and offices by a contractor named RAS. Another large building was observed to be mostly empty, and in poor condition. Five other smaller buildings were observed from the outside only, as the doors were closed and they were not currently being used. The Facility representatives expressed a safety concern of going into some of the buildings in this area, due to their condition. One small building, labeled "1007," contained several shelves of what appeared to be plastic sample bottles containing material (Photos #109 & #110).

The inspectors then drove outside the north gate and turned east to visit a section of property where the Facility's Alloy Plant used to reside. The Facility representatives believe that AZR no longer owns this area, which contains two buildings connected by a walkway covered in corrugated steel panels. Both buildings were primarily empty, containing some trash/debris/old equipment, and in very poor condition.

The physical tour of the plant ended at 10:30 a.m. on 8/30/17. PADEP inspectors Amy Faulch and Jennifer Cimera then proceeded to collect samples of some materials onsite, while EPA inspectors Rebecca Serfass and Martin Matlin, as well as PADEP representative Dean

Ritter, went back to the conference room to review records.

6.0 Records Review

Review of the Facility's records began at 10:40 a.m. on 8/30/17 and resulted in the following observations:

6.1 Manifests and LDR Forms

Manifests and Land Disposal Restriction (LDR) forms for the last three years were requested for review. Shipments dating from 8/15/17 through 2/25/15 were reviewed. The Facility appears to maintain at least one LDR form for each waste stream and Treatment, Storage and Disposal Facility (TSD). The Facility generally splits the HW shipments into two categories: "rubble," comprised primarily of refractory brick and debris from maintenance/renovation of the kilns, and "hoses," which includes used hoses, PPE, conveyor belt pieces, and other process-contaminated debris. All HW is designated D006 and D008. HW manifests were signed by: Raquel Lutton, Mary Huber, and Joe Falko in 2017; and in earlier years by George Albert, Mike Foster, and Pat Hennessy.

In 2017, starting in May and continuing through August, the Facility shipped multiple roll-offs of HW each month. Prior to May, only one HW shipment was made in April, and none in the preceding three months of 2017.

In 2016, the month of December alone showed 20 different shipments of HW "rubble," and one of "hoses." No other "rubble" shipments were found in 2016, whereas "hoses" shipments also occurred in August, April, and January.

In 2015, no "rubble" shipments were documented. The representative stated that the Facility used to crush "rubble" wastes in Building 608 and add the crushed material to the kiln feeds, but that the crusher broke down some time in 2015 and was not repaired. "Hoses" shipments occurred in November, August, May, and February of that year.

Universal Waste shipments were documented in 2017, 2016, 2014, and 2013, but not in 2015. Copies of example HW manifests can be seen in Attachment 3.

6.2 Inspection Records

6.2.1 Weekly HW Inspections

Hazardous Waste Accumulation Area ("HWAA") weekly inspection records were requested for the previous three years, and were reviewed from the dates of February 2014 through present.

The HWAA weekly inspection logs reviewed for 2014 began on 2/20/14 and went through 12/17/14. The inspector did not observe inspection logs for the first month and a half and the last week of 2014. The documents showed that the inspections were conducted by Gary Newhard, Don Smith, Todd German, and Patrick Hennessy in 2014.

The HWAA weekly inspection logs reviewed for 2015 included logs from 1/9/15 through 12/29/15. The inspector did not observe a HWAA weekly inspection log for the first week of 2015. The inspections were conducted by Don Smith and Patrick Hennessy in 2015.

The HWAA weekly inspection logs reviewed for 2016 included logs from 1/4/16 through 12/22/16. The inspector noted aside from not observing a log for the last week of 2016, that the logs appeared to be complete. The inspections were conducted by Patrick Hennessy and George Albert during 2016.

The HWAA weekly inspection logs reviewed for 2017 included logs from the beginning of January 2017 through 8/25/17. The inspector noted that starting on 4/13/17, the Facility representative began indicated the container storage location on the inspection log, rather than writing dates in that section of the log. The logs now make note of each area inspected that contained HW roll-off containers at the time of the weekly inspection. The inspections were conducted by George Albert and Joe Falko and appeared to be complete.

See examples of HWAA weekly inspection logs in Attachment 4.

6.2.2 PbCl Weekly Inspections

The 1995 CD requires weekly inspections of the buildings where PbCl may be stored [Paragraph 34(d)(2)]. Inspection logs were requested for these areas, covering the last three years. The following documents were observed:

- "Building 672 Weekly Inspection Form" – logs from 2015 through 2017 were reviewed. These logs included checks for whether PbCl is currently stored there, aisle space, dates, container closure, leaks, and whether any corrective action is recommended. The logs were generally dated weekly, and signed by either Dave Kunkle or Gary Newhart.

- "Building 719 Weekly Inspection Form" – logs were provided back to 2015, and reviewed for 2017 and 2016. These logs included the same information as those for Building 672, and were generally dated weekly.

Another inspection form was observed, titled "Lead Concentrate Weekly Inspection Form." These included reviews of container labeling/dating, whether the containers can be inspected, container closure, leaks, and any corrective action recommended. Instead of being dedicated to one building, these logs include columns that may be filled in with the building containing PbCl supersacks at that time. These logs were only found starting from the date of 2/6/17, and include the following:

- Building 11/604: from the dates of 2/6/17 through 8/14/17, generally weekly, except in May and June 2017 when only one inspection for each month was documented

- "Metal Powder" Building 611: through the dates of 2/6/17 – 4/17/17, generally weekly

- "Church" Building 864: through the dates of 2/6/17 – 4/10/17, generally weekly. The

inspection dated 4/10/17 included a note that states: "4/12/17, this building no longer contains PbCl sacks." Two subsequent inspection dates were observed for 8/7/17 and 8/14/17, which indicated the presence of PbCl supersacks.

- "Barium" Building 710: through the dates of 2/6/17 – 4/4/17, generally weekly, with a similar note on 4/6/17 stating that the building no longer contains PbCl supersacks, then one more inspection logged on 4/24/17 indicating supersacks.

See examples of PbCl inspection logs in Attachment 5. The referenced inspection logs were claimed as CBI by the Facility.

6.3 Inventories

The Facility maintains inventory information for many materials present at the site. Copies of IRM and PbCl inventories can be seen in Attachment 6. The referenced inventories were claimed as CBI by the Facility. Inspectors observed the following:

- "Materials On Hand Report" prepared 8/10/17 for materials present as of 7/31/17. This included columns for type of material, "Start Balance," "Made or Received," "Used or Shipped," and "End Balance," all in dry weight tons. Materials tracked included "Waelzing Oxide," "EAF Dust," "Brick Tear Out/Debris," "PbCl – Current," "Calcine," "IRM Fines," and "IRM Oversize." For the month of July, each of those materials showed an increased amount in the End Balance, with the exception of EAF Dust, Brick Tear Out/Debris, and IRM Oversize."

- "IRM Production/Sales" included information relating only to IRM. Inspectors reviewed one page which showed information ranging from 2008 through 2017.

- "Monthly PB-CL Production" included information such as lot numbers, number of supersacks, "Begin Inventory," "Shipped Dry," "Recycled," and "End Inventory," all relating to PbCl alone. Months from January 2016 through August 2017 were observed. According to this document, no amounts are shown for "Shipped Dry" or "Recycled" for the first two months of 2016, resulting in an End Inventory of 9,289 tons at the end of March 2016. Additionally, both shipping and recycling showed zero entries again in June 2017, and did not show any more entry values by the end of the period shown, resulting in an End Inventory of 6,971 tons in August 2017.

6.4 Hazardous Waste Training

Training records and documentation were requested for the last three years. The inspectors reviewed HW training records for the 2015, 2016, and 2017 calendars years.

The 2015 HW training was conducted by George Albert. The documentation of the training consisted of a sign-in sheet for the 8-hr annual refresher that included approximately 4-5 slides of information on solid and hazardous waste. The inspectors reviewed training documentation for the following employees in 2015: Patrick Hennessy, Mike Foster, Dave Kunkle, Gary Newhard, George Martino, and Aaron Perkins. The inspectors noted that training

documentation was not provided for Don Smith in 2015, who conducted HWAA weekly inspections during that year. Also, no additional training documentation was observed for George Albert.

The 2016 HW training was conducted by George Albert. The documentation of the training consisted of a sign-in sheet. The inspectors reviewed training documentation for the following employees in 2016: Mike Foster, Dave Kunkle, Gary Newhard, George Martino, and Aaron Perkins. The inspectors noted that training documentation was not provided for Patrick Hennessy in 2016, who conducted HWAA weekly inspections during that year. Also, no additional training documentation was provided for George Albert.

The 2017 HW training was conducted by George Albert. The documentation of the training consisted of a sign-in sheet. The inspectors reviewed training documentation for the following employees in 2017: Mike Foster, Dave Kunkle, Gary Newhard, George Martino, Aaron Perkins, and Joe Falko. The inspectors noted that training documentation was not provided for Raquel Lutton and Mary Huber in 2017, who signed HW manifests that year. Also, no additional training documentation was observed for George Albert.

6.5 Contingency Plan

The inspectors requested to review the Facility's Contingency Plan. The Facility representatives provided the inspectors with the Palmerton Facility's "PPC Plan and Emergency Manual" that contained elements of: PPC Plan, SPR Plan, SPCC Plan, OSHA EAP and RCRA CP Plan ("CP"). The CP was updated in November 2015. The inspectors observed that the CP has Michael Foster listed as the Facility's primary emergency coordinator ("EC") with his address, title, and office and home phone numbers. Secondary ECs were listed as George Albert (Director of Safety and Health), Dave Kunkle (General Foreman Environmental Controls / Materials), Gary Newhard (Waelzing General Foreman), George Martino (Maintenance Supervisor), and Aaron Perkins (Plant Engineer and Electrical Supervisor).

The CP also included an emergency notification phone list with local emergency and utility contacts. A list of emergency providers downstream of the Aquashicola Creek and Lehigh River were also listed. The CP provided a list and location of emergency response equipment as well as an evacuation plan with a Facility diagram depicting an evacuation route and alternative route. The inspectors observed an Environmental Incident Report form within the CP. The Facility representative stated that he was unaware of ever having to use the form. He did however note that there was another form used by the Facility to report equipment malfunctions and/or releases. The inspectors requested to review these forms. Copies of the form documenting a lead chloride release and an EAF dust release can be seen in Attachment 7.

The inspectors inquired about whether the CP was sent to local authorities. The Facility representative requested Mr. George Albert answer this question. Mr. Albert stated that copies of the CP go out to all local authorities, but that the Facility did not have receipt of sending. Subsequent to the inspection, when the Facility provided the requested copies of records, the Facility provided a cover letter documenting that the CP was sent to the Carbon County Emergency Management Agency & Local Emergency Planning Committee on January 26, 2016. He also stated that the Facility conducts yearly drills with the local fire and ambulance company

and described safety and emergency drills they've conducted in the past.

6.6 Biennial Reports

The inspectors requested the two most recent biennial reports submitted by the Facility. The Facility representatives provided a Biennial Report ("BR") for the 2013 and 2015 reporting years. The inspector observed that the 2013 BR was submitted under AZR's previous name of Horsehead Corporation. The BR was certified and signed by Mr. Michael Foster on February 24, 2014. The BR indicated that the Facility was a TSD and a recycler of HW on site. The 2013 BR also indicated that the Facility generated about 34 million pounds of D006/D008 PbCl from calcining and 29,460 pounds of D006/D008 Contaminated Debris from kiln maintenance.

The inspectors also reviewed the Facility's 2015 BR. It was also submitted under AZR's previous name of Horsehead Corporation and was certified and signed by Mr. Michael Foster on February 22, 2016. The 2015 BR indicated that the Facility generated about 3.2 million pounds of D006/D008 PbCl from calcining activities and 20,160 pounds of D006/D008 Contaminated Debris from kiln maintenance.

6.7 Waste Analyses/Profiles

Waste profiles were found for the following D006/D008 HW materials (included in Attachment 8):

- "Kiln Rubble," dated 5/9/17 and signed by Mike Foster
- "Used Hoses, and PPE," dated 6/12/15 and signed by Mr. Foster
- "Debris – Conveyor Belts," dated 5/7/15 and signed my Mr. Foster, and
- "Conveyor Belt Pieces "Contaminate Debris)," dated 11/5/15 and signed by Patrick Hennessy.

6.8 Part B Permit

The inspectors requested to review the Facility's Part B Permit. The permit was issued on 10/10/2006 and expired in 10/10/2016. The Facility representatives stated that they have submitted a permit renewal application that is under review with the State. A PADEP representative confirmed that they received the application on time and the most recent permit should be referred to while the application is under review.

The inspectors inquired about security measures taken at the Facility as required by the permit to secure the site and respond to emergencies. The Facility representative stated that employees carry 2-way radios and that there are always guards stationed at the two gate entrances. The inspectors also reviewed annual inspections of the Building 608 floor required by the permit and requested a copy of the January 2017 inspection. The inspectors also requested to review any records documenting any maintenance done to Building 608. The Facility representatives provided a folder with various work and purchase orders, with some appearing to document maintenance on Building 608. See Attachment 9 for the January 2017 B608 floor inspection and 4/20/17 Purchase Order

The inspectors also requested a copy of the Facility's Closure Plan and Closure Cost Estimate. The inspectors reviewed the plan and cost estimates and observed closure cost estimates for the years 2000 through 2017. No issues were noted related to the Closure Plan and Closure Cost Estimates.

6.9 PbCl and IRM Bills of Lading

The inspectors requested to review PbCl shipping documents. A PADEP representative reviewed these documents and the inspectors requested a copy of the Facility's most recent shipment of PbCl, which occurred on 5/25/17. PADEP representatives also reviewed shipping documents of the Facility's IRM. The inspectors noted that although most of the IRM shipments went to cement manufacturing companies, some of them went to what appeared to be a scrap yard by the name of Schneider's Yard located in Allentown, PA. The inspectors requested copies of the IRM shipments going to this location. The Facility representative explained that the scrap yard sends shipments of iron scrap to China and was using the IRM to fill in spaces in the packaging of these shipments. According to the Facility representative, IRM shipments to Schneider's Yard have ceased.

See Attachment 10 for documentation of IRM shipments made to Schneider's Yard and the Facility's most recent shipment of PbCl.

7.0 Copies Requested

The inspectors requested copies of several documents while onsite. Mr. Basilone and Mr. Alavi refused to allow the onsite Facility personnel to provide copies of any documents until they had reviewed the documents requested. Documents for which copies were requested included the following:

- 5/7/15 waste profile for "Debris – Conveyor Belts"
- 5/9/17 waste profile for "Kiln Rubble"
- 6/12/15 waste profile for "Used Hoses"
- 11/5/15 waste profile for "Conveyor Belt Pieces"
- Manifest #000216575GRR for a shipment dated 1/27/16
- Manifest #016077589JJK for a shipment dated 11/29/16
- Manifest #000234460GRR for a shipment dated 12/5/16
- Manifest #003164678GBF for a shipment dated 6/29/17
- Manifest #000238697GRR for a shipment dated 7/25/17
- Manifest #017135875JJK for a shipment dated 8/2/17
- "Materials On Hand Report" prepared 8/10/17
- "IRM Production/Sales" sheet covering 2008-2017
- "Monthly PB-CL Production" sheets covering Jan 2016 – Aug 2017
- Inspection Logs for PbCl Storage from 2/6/17 – 8/14/17
- "Daily General Inspection Checklist for Kiln #1, #2, #5, and #6" for the date of 8/14/17
- Last Bill of Lading for PbCl, dated 5/25/17
- Bill of Lading for a 5/25/17 shipment of PbCl
- Bills of Lading for 1/18/17, 1/25/17, 2/1/17, 3/8/17, 3/13/17, 3/22/17, 4/25/17, 4/26/17,

5/16/17, and 6/16/17 shipments of IRM to Schneider's Yard in Allentown, PA
- Daily General Inspection Checklist for 8/16/17
- Equipment Malfunction Review Forms – 1 for EAF dust emission, 1 for PbCl emission
- January 2017 Annual Building 608 Floor Inspection
- Purchase Order from 4/20/17 relating to maintenance work done on Building 608
- HW Weekly Inspection Log for weeks of 12/19/14 – 1/16/14, 1/25/17 – 2/24/17, and 3/10/17 – 3/30/17
- HW Weekly Inspection Log for 4/3/17, 7/12/17, 8/25/17
- Facility's Closure Plan and Closure Cost Estimate

8.0 Closing Conference

A closing conference was held at 3:15 p.m. on 8/30/17, including EPA inspectors Martin Matlin and Rebecca Serfass, and PADEP representatives Dean Ritter, Amy Faulch, and Jennifer Cimera (Ms. Faulch and Ms. Cimera left at 3:30, prior to the end of the closing conference). The Facility was represented in person by Mike Foster and Joe Falko, with Tim Basilone and Ali Alavi joining by teleconference. The inspectors concluded the closing conference and departed the Facility at 4:04 p.m.

9.0 Post-Inspection Correspondence

With letter dated 9/13/17, Mr. Basilone submitted two cds. One, labeled as "Unredacted Documents," contained the following files:

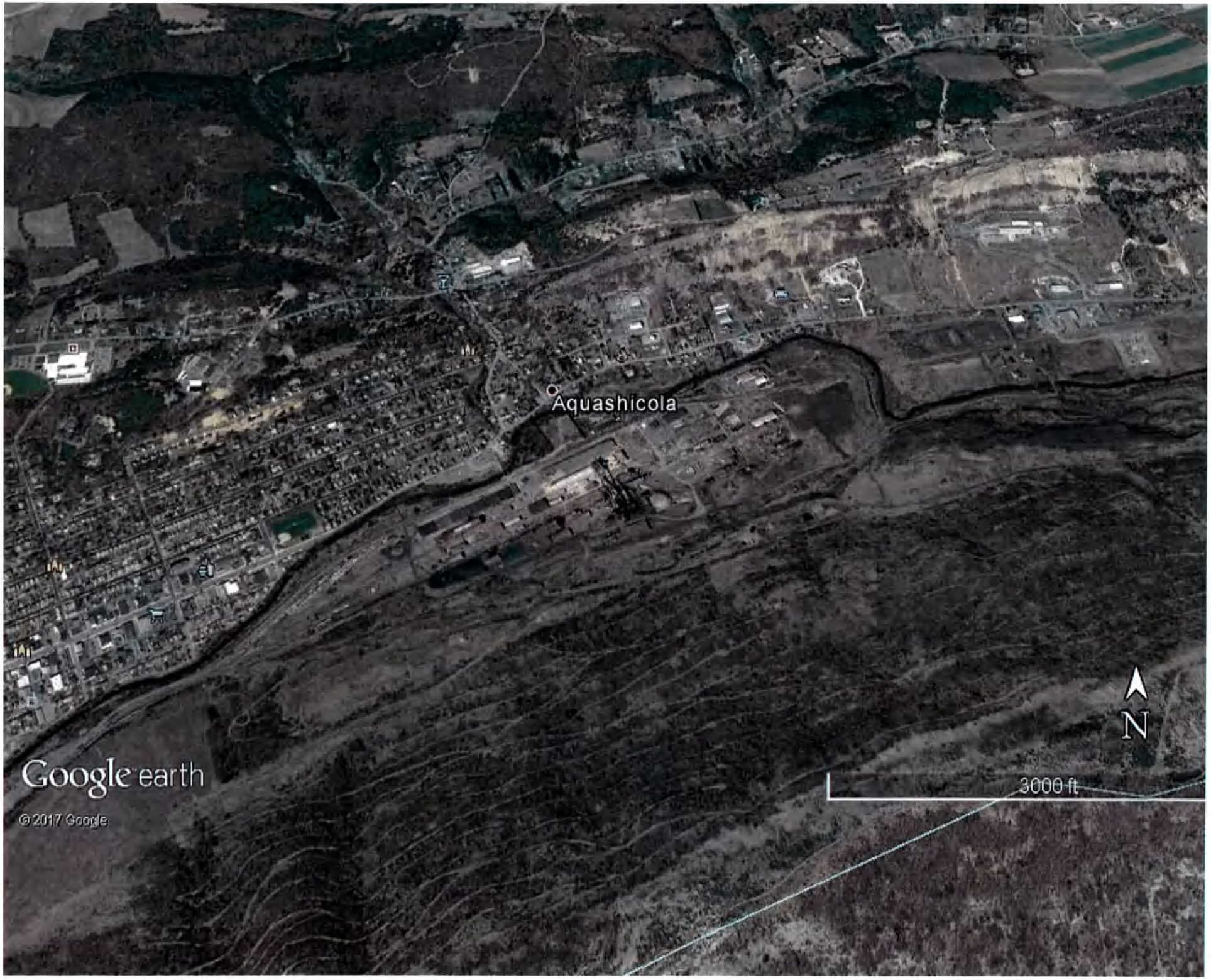
- Customer Manifests_BillsLading CBI Unredacted.pdf
- Disposal Manifests_Profiles.pdf
- Equipment Manfunction Reviews CBI Unredacted.pdf
- ICP.pdf
- Inspections_CapEx CBI Unredacted.pdf
- Production Records CBI Unredacted.pdf

The other cd, labeled "Redacted Documents," included only those files not labeled as CBI, above. The letter also requested that 16 of the photos taken by PADEP (reflecting similar photos taken by EPA) be considered CBI.

A Facility representative sent an email to EPA and PADEP on 9/28/17 as a follow-up to the CEI documenting actions taken subsequent to the inspection (See Attachment 11). EPA also sent the Facility a letter dated 10/13/17 requesting that the Facility review the photographs taken by the EPA during the CEI and document what photographs, if any, they would like to claim as CBI (See Attachment 12). The EPA received a response to that letter from the Facility, dated 10/26/17 describing that they wish to assert a claim of CBI on 29 out of the 118 photos taken during the inspection (See Attachment 13).

Attachment #1

Facility Site Map


Aquashicola
N
3000 ft
Google earth
© 2017 Google

Attachment #2

Photographic Log (Redacted)

Complete Photographic Log Located in Region III CBI File Room

Photographic Log
American Zinc Recycling – PAD002395887
August 29-30, 2017 Compliance Evaluation Inspection

Photo #1: Overview, looking south, of PbCl supersacks stored in the first area of the Facility's Warehouse

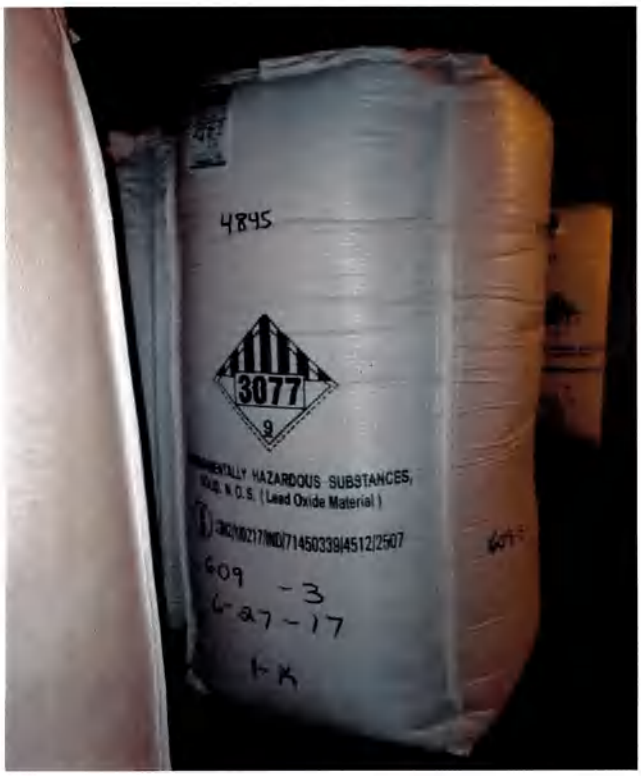


Photo #2: Close-up view of a PbCl supersack located in first area of Warehouse – Labeled with a fill date of 6-27-17

Photo #3: Additional supersacks of PbCl stored in the first area of Warehouse

Photo #4: Additional view of supersacks of PbCl stored in the first area Warehouse – Weight in pounds can be seen marked on the supersacks

American Zinc Recycling – PAD002395887
08/29/17 – 08/30/17 CEI
Photographs taken by Rebecca Serfass

Photo #5: Additional view of supersacks of PbCl stored in the first area of Warehouse

Photo #6: Overview, looking north, of PbCl supersacks stored in first area of the Warehouse

American Zinc Recycling – PAD002395887
08/29/17 – 08/30/17 CEI
Photographs taken by Rebecca Serfass

Photo #7: Additional view of PbCl supersacks in first area of Warehouse

Photo #8: White powder material observed on the floor in the first area of the Warehouse

American Zinc Recycling – PAD002395887
08/29/17 – 08/30/17 CEI
Photographs taken by Rebecca Serfass

Photo #9: Overview of 4 x 55-gallon drums of waste aerosol cans in Warehouse

Photo #10: View of contents of blue, 55-gallon drum seen in the front left of Photo #9, containing waste aerosol cans

American Zinc Recycling – PAD002395887
08/29/17 – 08/30/17 CEI
Photographs taken by Rebecca Serfass

Photo #11: Additional overview of 4 x 55-gallon drums containing waste aerosol cans – located in the Warehouse

Photo #12: View of contents observed in the 3 x 55-gallon drums seen in the rear right of Photo #9 – containing waste aerosol cans

American Zinc Recycling – PAD002395887
08/29/17 – 08/30/17 CEI
Photographs taken by Rebecca Serfass

Photo #13: View of the device used to puncture waste aerosol cans located in a caged area nearby the 55-gallon drums of waste aerosol cans

Photo #14: Close-up view of label on 55-gallon drum used to collect contents of punctured waste aerosol cans

American Zinc Recycling – PAD002395887
08/29/17 – 08/30/17 CEI
Photographs taken by Rebecca Serfass

Photo #15: View of top of the puncture device seen in Photo #13 with top observed to be open

Photo #16: Supersacks of PbCl in second area of the Warehouse – dated 5-29-17

American Zinc Recycling – PAD002395887
08/29/17 – 08/30/17 CEI
Photographs taken by Rebecca Serfass

Photo #17: Overview of row of PbCl supersacks observed in second area of Warehouse

Photo #18: Overview of PbCl supersacks observed in second area of Warehouse

Photo #19: Overview of additional PbCl supersacks observed in second area of Warehouse

Photo #20: View of two PbCl supersacks located in second area of the Warehouse, dated 5-28-17

American Zinc Recycling – PAD002395887
08/29/17 – 08/30/17 CEI
Photographs taken by Rebecca Serfass

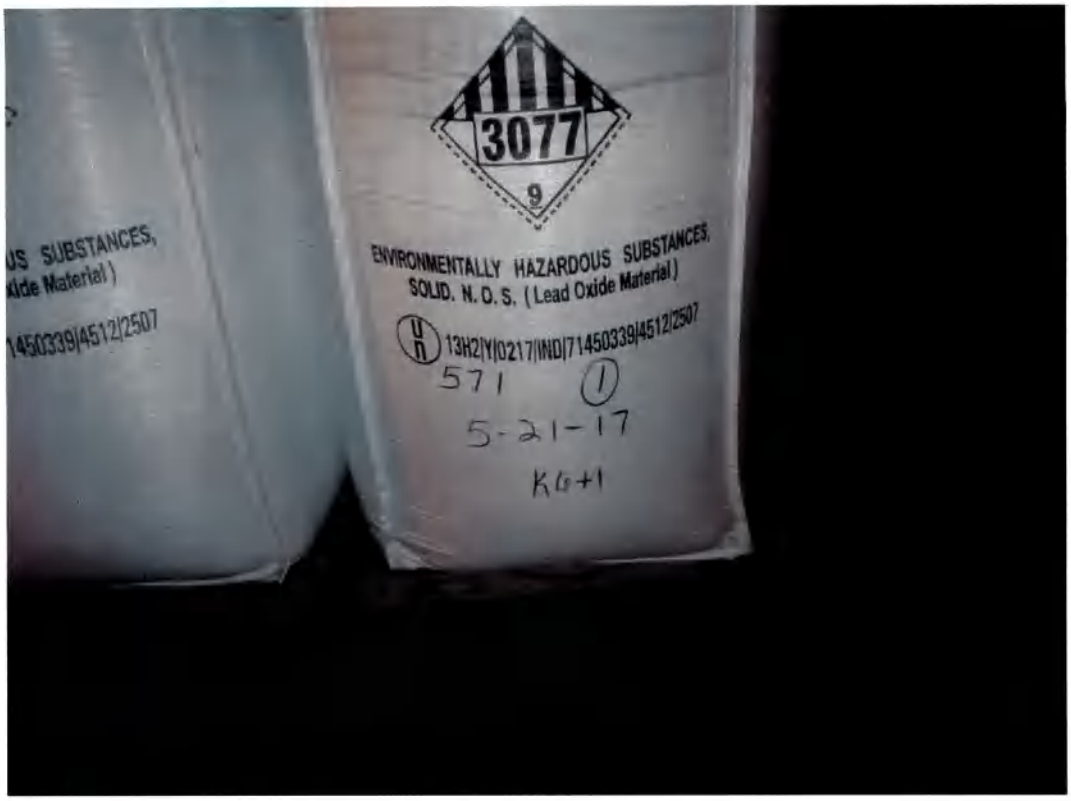


Photo #21: Close-up view of PbCl supersack located in second area of Warehouse, dated 5-21-17

Photo #22: Overview of additional PbCl supersacks observed in second area of Warehouse

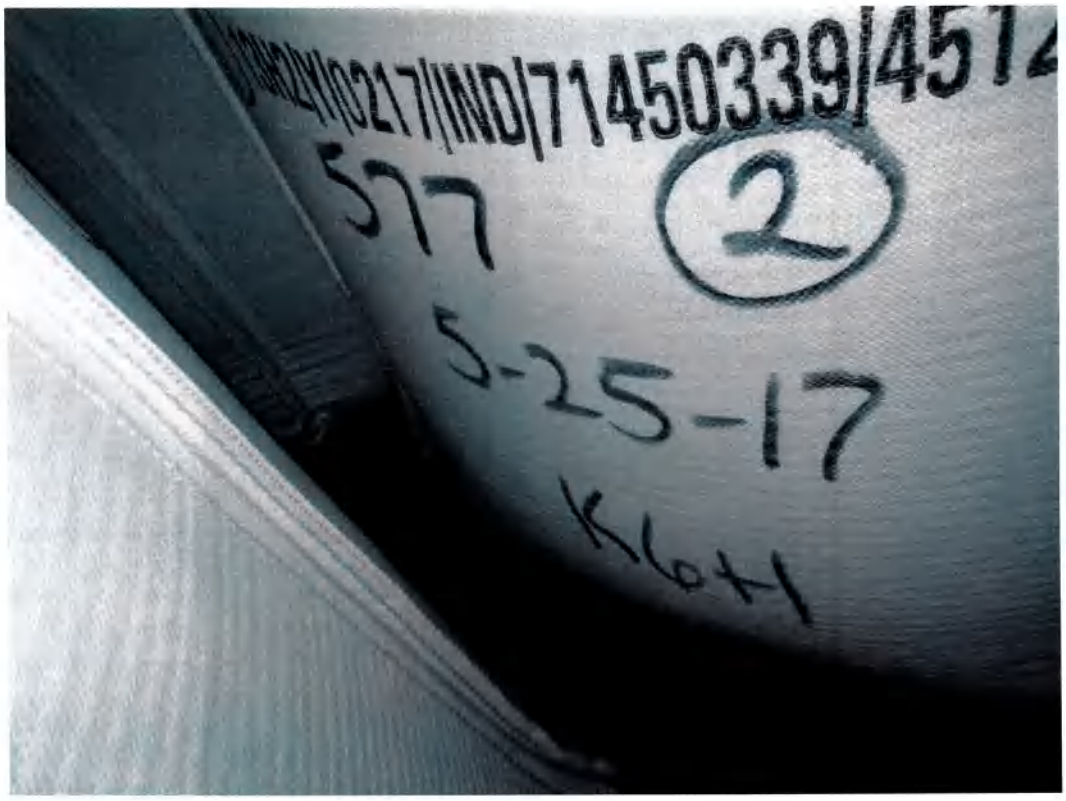


Photo #23: Close-up view of label on PbCl supersack located in second area of Warehouse, dated 5-25-17

Photo #24: Close-up view of label on PbCl supersack located in second area of Warehouse, dated 5-26-17

Photo #25: View of labels on two PbCl supersacks located in second area of Warehouse, dated 5-22-17

Photo #26: White material observed on floor of second area of Warehouse

Photo #27: Additional white material observed on the floor of second area of Warehouse

Photo #28: 4 x 55-gallon drums observed in the second area of the Warehouse that Facility representative stated to contain either waste oil or used antifreeze

Photo #29: Additional view of 4 x 55-gallon drums seen in Photo #28

Photo #30: 55-gallon drums of waste oil located along the north wall of the second area of the Warehouse

Photo #31: 55-gallon drum with open bung hole, labeled as Waste Oil located in second area of Warehouse

Photo #32: Overview of additional PbCl supersacks located on ramp leading to the recessed area of third area of Warehouse

Photo #33: Additional overview of PbCl supersacks located on ramp and in recessed portion of third area of Warehouse

Photo #34: Overview of PbCl supersacks located in the fourth area of the Warehouse/Building 611

Photo #35: Overview of PbCl supersacks, arranged in long rows, some 13 supersacks deep, in fourth area of Warehouse/Building 611

Photo #36: Close-up view of labels on PbCl supersacks located in fourth area of Warehouse/Building 611, dated 5-9-17

American Zinc Recycling – PAD002395887
08/29/17 – 08/30/17 CEI
Photographs taken by Rebecca Serfass

Photo #37: Overview of additional PbCl supersacks located in fourth area of Warehouse / Building 611

Photo #38: Overview of additional PbCl supersacks located in fourth area of Warehouse / Building 611

Photo #39: ~30-gallon drum (right) labeled Aerosol Cans in Building 611 containing waste aerosol cans

Photo #40: View of inside waste aerosol can drum seen in Photo #39, about ¾ full of waste aerosol cans

American Zinc Recycling – PAD002395887
08/29/17 – 08/30/17 CEI
Photographs taken by Rebecca Serfass

Photo #41: View of the Facility from Stoney Ridge road, looking south – at center is IRM pad, approximately 8 acres in size

Photo #42: Additional view of Facility from Stoney Ridge road – IRM pad seen on left

Photo #43: View of Facility from Stoney Ridge road, looking southeast – piles of IRM material located in Stoney Ridge area

Photo #44: Pail of plastic containers and ceramic cups containing ash residue observed within fume hood in Sample Room – Building 601

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #45 (brightness increased by 50%): The sampling pad outside of Sample Room – Building 601 where samples are taken from trucks containing EAF dust

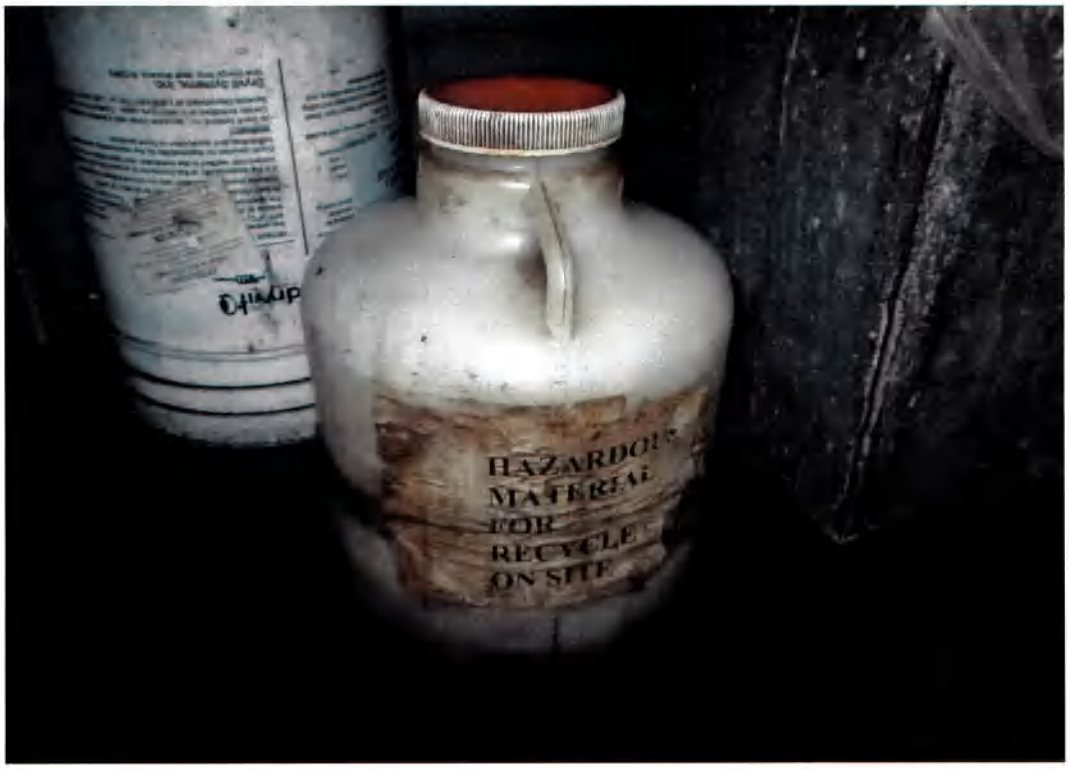


Photo #46: ~3-gallon container of nitric acid and silver nitrate within Sample Room – Building 601, labeled as "Hazardous Material for Recycle On Site"

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #47: Pressure-differential ("PD") station where PD trucks discharge EAF dust into the permitted Building 608 – PD truck in process of unloading EAF dust

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #48: View of PD area where PD trucks discharge EAF dust into Building 608 – PD truck in process of unloading EAF dust

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #49: Dump trucks containing EAF dust observed waiting to unload contents in Building 608 – Bay opening for trucks, next to personnel door (right)

Photo #50: Close-up view of personnel door on south side of Building 608, showing visible gaps

American Zinc Recycling – PAD002395887
08/29/17 – 08/30/17 CEI
Photographs taken by Rebecca Serfass

Photo #51: View of bottom of personnel door of Building 608, showing additional gaps

Photo #52: Close-up of sections of corrugated steel door panels on south side of Building 608, showing partially open hinge, creating visible gap through which interior of the building was visible

American Zinc Recycling – PAD002395887
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Photographs taken by Rebecca Serfass

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #53: View inside Building 608 – piles of EAF dust and front end loader

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #54 (brightness increased by 50%): View inside Building 608 – piles of EAF dust

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #55 (brightness increased by 40%): Additional view of piles of EAF dust within Building 608

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #56 (brightness increased by 40%): View of inside Building 608 – piles of EAF dust being hosed with water

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #57: View of truck bay entrance of Building 608 – EAF dust piled near opening

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #58: View of opposite side of Photo #57 truck bay entrance of Building 608

Photo #59: Holes observed in south side wall of Building 608

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #60: View of three bay doors on east side of Building 608 – truck wash area of building where trucks exit after being washed

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #61: Additional view of three bay doors seen in Photo #60 – center door observed to have approximately 6-inch gap at the bottom, while right side door had approximately 2 inch gap

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #62: View of inside first truck washing bay as seen from the window of the personnel door

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #63: View of north side wall of Building 608 – section of wall observed to be bulging out (at arrow, added)

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #64 (brightness increased by 25%): View of three-sided structure to the east of Building 608 – containing kiln rubble hazardous waste

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #65: Additional view of three-sided structure containing HW kiln rubble

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #66: View of post-quench material coming out of a Quench Pit associated with Kiln #1, described as either calcine or IRM

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #67: Piles of calcine stored in Calcine Shed, three-walled structure

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #68: Overview of Dome Building used to store new IRM while it undergoes analysis

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #69: Close-up view of open bay door on the Dome Building

Photo #70 (brightness increased 25%): View of IRM pad, approximately 8-acres in size and 5-foot deep

Photo #71: Additional view of IRM pad

Photo #72 (brightness increased by 25%): View of IRM piles located at Stony Ridge - Large pile of IRM seen in background to the right described as owned by Viacom, IRM pile in foreground owned by AZR

Photo #73: View of additional IRM pile owned by AZR located at Stony Ridge

Photo #74 (brightness increased by 30%): View of additional piles of IRM owned by AZR located at Stony Ridge

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #75: View of Kiln #6 and Product Collectors / baghouses #1 and #6 used to collect PbCl, and Product Collectors / baghouses (painted green) #2 and #5 used to collect CZO

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #76: View of brown tower connected to Building 616 – PbCl Packaging Building, where PbCl is dropped into supersacks

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #77: View of 3 roll-off containers storing HW kiln rubble outside of PbCl Packing Building 616 – one additional roll off container behind these, not pictured.

Photo #78: Two additional roll-off containers storing HW kiln rubble outside PbCl Packing Building 616

Photo #79: Two additional roll-off containers storing HW kiln rubble outside PbCl Packing Building 616

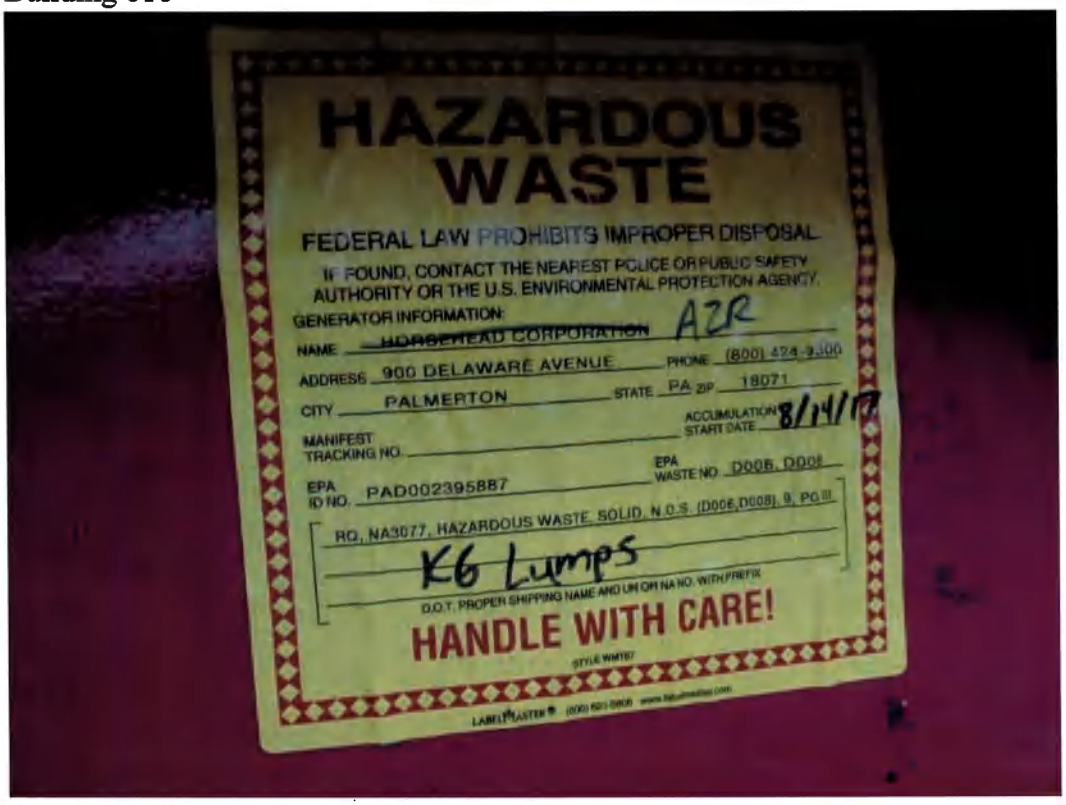

Photo #80: Close-up example of HW label seen on 7 of 8 roll-off containers storing HW kiln rubble outside PbCl Packing Building 616

Photo #81: Partially scratched off HW label on empty roll-off container located outside PbCl Packing Building 616

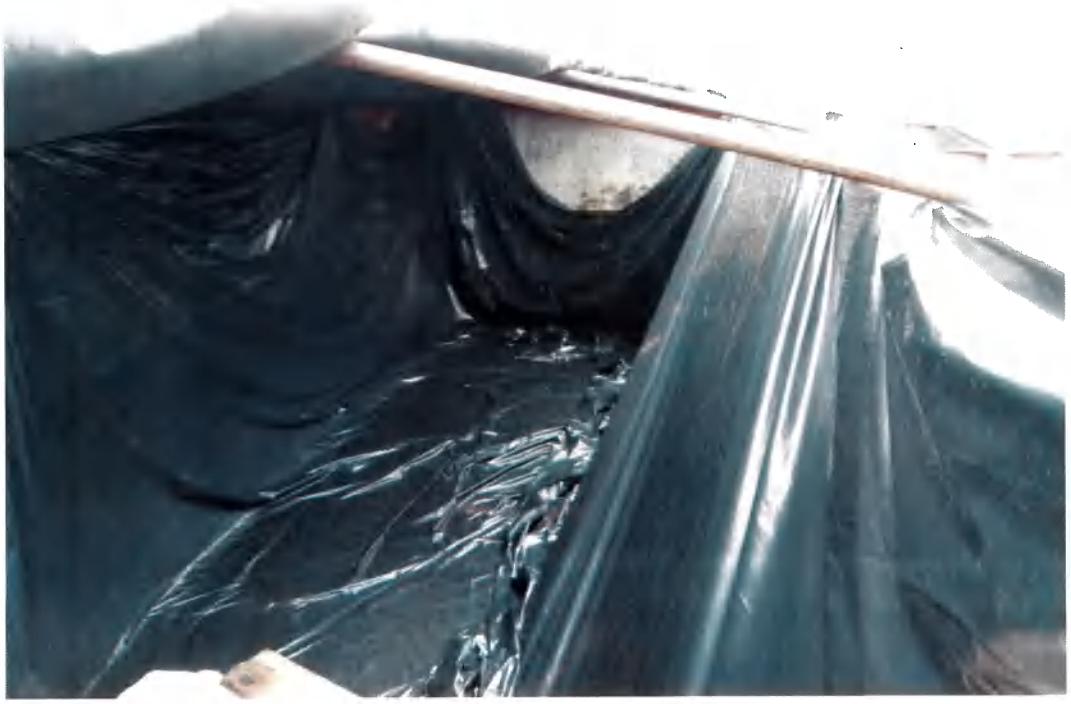

Photo #82: View of inside roll-off container, marked with label seen in Photo #81 - empty

CBI:

Photo located in Region 3 Confidential Busniess Information File Room

Photo #83: Additional view of roll-off containers storing HW kiln rubble outside PbCl Packing Building 616

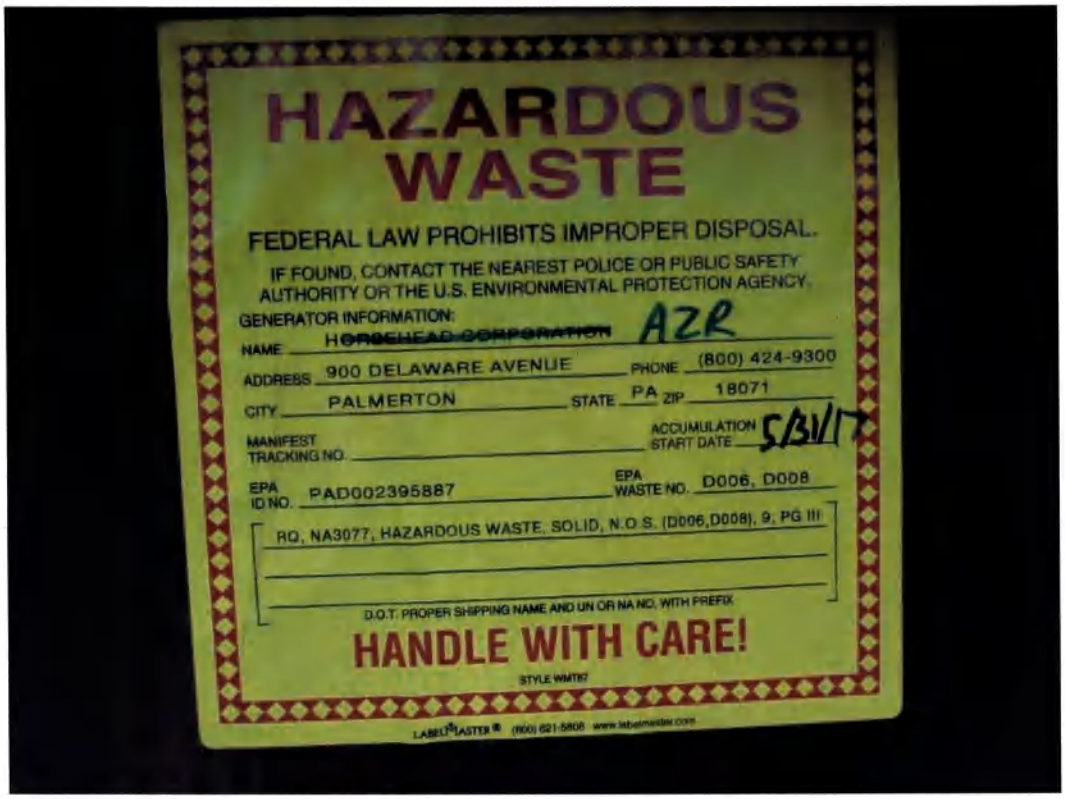

Photo #84: Close-up view of HW label seen on roll-off pictured in front of Photo #83, having the earliest start accumulation date of the roll-off containers – 5/31/17

Photo #85: View of PbCl supersacks located in Lithopone Building 719

Photo #86: Close-up view of labels on PbCl supersacks seen in Photo #85 at center

Photo #87: View of PbCl supersacks in Lithopone Building 719 – densely stored in the building

Photo #88: Additional view of PbCl supersacks being stored in Lithopone Building 719

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Photo #89: View of PbCl supersacks stored in Lithopone Building 719 – examples of packing dates ranging from 4-10-17 through 4-15-17

Photo #90: Overview of densely packed PbCl supersacks stored in Lithopone Building 719

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Photo #90: PbCl supersack stored in Lithopone Building 719 with packing date of 4-8-17

Photo #91: View of additional PbCl supersacks stored in Lithopone Building 719 and view of primarily wooden structure of building

Photo #92: Close-up of labels on PbCl supersacks stored in Lithopone Building 719 – one dated 5-2-17 (right), other missing day of packing date (left)

Photo #93: Overview of southern side of Lithopone Building 719

Photo #94: Additional overview of southern side of Lithopone Building 719

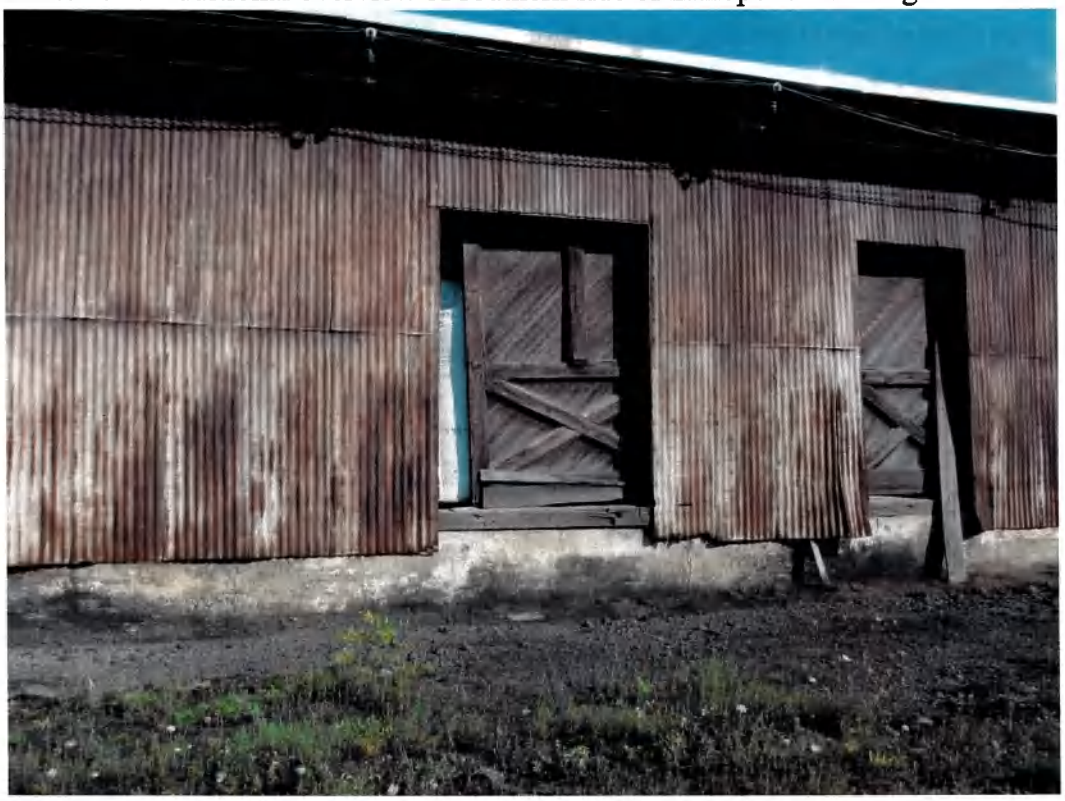

Photo #95: View of southern side of Lithopone Building 719 – showing open/damaged doors and view of PbCl supersacks stored inside

Photo #96: View of southern side of Lithopone Building 719, showing broken window with view of PbCl supersacks stored inside

Photo #97: Abandoned steam pipe observed running across Facility site near Lithopone Building 719

Photo #98: Overview of zinc-rich material being stored, almost ceiling-high, in half of Cathedral Building 864, received from Monaca facility

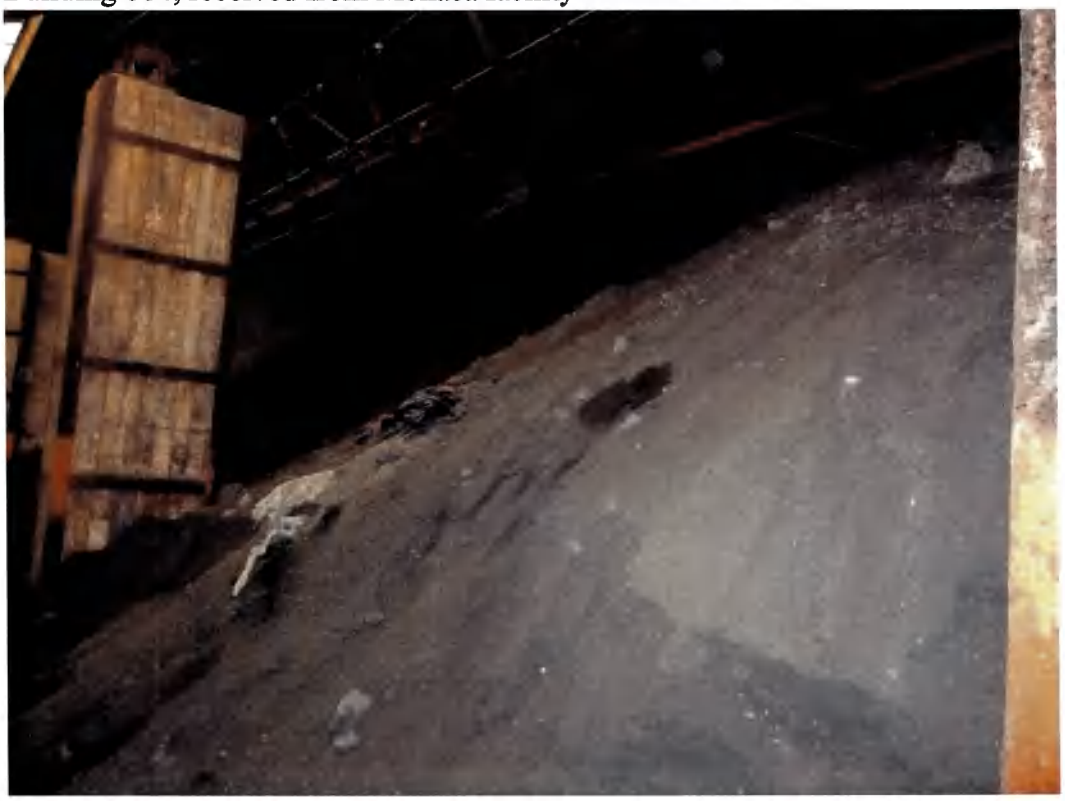

Photo #99: Additional view of almost ceiling-high, zinc-rich material being stored in Cathedral Building 864

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Photo #100: Additional view of zinc-rich material being stored in Cathedral Building 864

Photo #101: Overview of PbCl supersacks stored in Cathedral Building 864

Photo #102: View of additional PbCl supersacks densely stored in Cathedral Building 864

Photo #103: View of narrow space between PbCl supersack storage and zinc-rich material storage in Cathedral Building 864

Photo #104: Additional PbCl supersacks stored in newly-constructed addition on the eastern side of the Cathedral Building 864

Photo #105: View outside of newly-constructed addition to Cathedral Building 864 (left) and IRM pad (right)

Photo #106: View of IRM pad to the east of Cathedral Building 864

Photo #107: View of concrete rubble piles to the south of Cathedral Building 864

Photo #108 (brightness increased 25%): View from south side of Cathedral Building 864 showing concrete rubble piles

Photo #109: View inside Building 1007 in Dock 1 Field Station area that contained what appeared to be plastic sample bottles, many full of grey material

Photo #110: View of the outside of Building 1007 located in Dock 1 Field Station area