ATTACHMENT WM-44C

POLYCHLORINATED BIPHENYLS (PCB)

NOTIFICATION PLAN

Pechiney Cast Plate, Inc. Facility

Vernon, California

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Geomatrix

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This report was prepared by the staff of Geomatrix Consultants, Inc., under the supervision of the Engineer and/or Geologist whose signature appears hereon.

The findings, recommendations, specifications, or professional opinions are presented within the limits described by the client, after being prepared in accordance with generally accepted professional engineering and geologic practice. No warranty is expressed or implied.

The signatories certify that all sampling plans, sample collection procedures, and laboratory reports presenting sample preparation procedures, extraction procedures, and instrument/chemical analysis procedures used to assess or characterize the PCB contamination in aboveground structures located at the Pechiney Facility in Vernon, California are on file at the offices of Geomatrix Consultants, Inc. in Newport Beach, California for the work performed by Geomatrix Consultants on behalf of Pechiney Cast Plate, Inc. (the former property owner). All files are available for EPA's inspection.

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1.0 INTRODUCTION

Geomatrix Consultants, Inc. (Geomatrix) is providing this Polychlorinated Biphenyls (PCBs) Notification Plan (PCBNP) for the aboveground decontamination and building demolition at the Pechiney Cast Plate, Inc. facility (facility or Site) located at 3200 Fruitland Avenue in Vernon, California (Figure 1). The City of Vernon occupies 5.2 square miles and contains over 1,200 businesses (primarily industrial) that employ over 44,000 people.

The City of Vernon has its own health department (Health & Environmental Control [H&EC]) and it is a Certified Unified Permitting Agency (CUPA). As the CUPA, H&EC is the regulatory agency overseeing this site. The demolition and removal/disposal of building material containing hazardous materials (including PCBs) is being conducted pursuant to the City of Vernon H&EC's March 28, 2005 letter and subsequent Order dated July 26, 2006. This document is therefore being submitted to H&EC for review and approval. In addition, this document has been prepared as notification to the United States Environmental Protection Agency (EPA) in compliance with the Code of Federal Regulations (CFR), Title 40, Subchapter R, Toxic Substances Control Act (TSCA), Part 761 (40 CFR 761) including applicable amendments (June 29, 1998, 40 CFR Parts 750 and 761, Disposal of Polychlorinated Biphenyls [PCBs], Final Rule), that includes provisions for self-implementing an on-Site cleanup of PCB releases and disposing of PCB remediation waste. The proposed pre- and post-decontamination sampling and chemical analysis of the building materials, and the approach and techniques that will be used for removal and handling of PCB-impacted building materials and/or PCB remediation waste are presented herein. The primary PCB remediation waste associated with this project is impacted concrete flooring containing PCBs.

1.1 BACKGROUND

The original facility buildings were constructed in the 1940's for the manufacturing of various aluminum components and were once part of a 56-acre aluminum manufacturing facility operated by Aluminum Company of America (Alcoa). In approximately 1997, Alcoa sold the eastern half of their facility, which subsequently was razed and redeveloped for industrial and commercial uses. In December 1998, Alcoa sold the western portion of their facility to

Century Aluminum Company. The western portion of the former facility is herein referred to as the Site located at 3200 Fruitland Avenue. In 1999, Pechiney Cast Plate, Inc. (Pechiney) purchased the Site.

Pechiney manufactured high-precision cast aluminum plates until the end of January 2006, when the operations were shut down. Pechiney began demolition of the above ground structures and features at the Site in June 2006 and plans to remediate the subsurface through the middle of 2007. Pechiney sold the Site to the City of Vernon, and it is Pechiney's understanding that the Site will be used for industrial purposes.

The present day Site lies within an area zoned as industrial and commercial and covers an area of approximately 26.9 acres. The buildings on the Site occupy approximately 600,000 square feet. The remainder of the Site is paved with asphalt and concrete (Figure 2).

Historically, various hydraulic fluids that may have contained PCBs were reportedly in equipment used for the aluminum manufacturing process. Documentation regarding the specific source of the hydraulic fluids is not available or known to the current owner of the Site, although the locations of various large, hydraulic and extrusion machinery and manufacturing activities performed in various portions of the Site are known based on historical facility drawings. Furthermore, Pechiney as the current owner of the Site since 1999 did not use PCB-containing hydraulic oil as part of its manufacturing operations.

Based on the June 1998 amendments to 40 CFR 761, PCB remediation waste can be managed based on its PCB concentration rather than the original PCB source concentration; and Pechiney is planning to manage the PCB remediation waste in accordance with these amendments to 40 CFR 761.

1.2 PURPOSE AND OBJECTIVE

The purpose of this work is to remove aboveground structures and features at the Site. The majority of the Site is proposed for reuse as a power generating facility with high occupancy areas (office buildings) and low occupancy areas (power generating units, parking lots, storage areas, etc.). The specific location of high versus low occupancy use will be identified by the City.

The objectives of the activities conducted under this PCBNP are to remove and properly dispose of the PCB remediation waste from demolition of the aboveground structures and

features (e.g. building materials that are primarily concrete flooring impacted by PCBs) related to past site operation. Activities conducted under this PCBNP will first address the aboveground materials (e.g. concrete containing PCBs) followed by selected below-grade deeper structures and soils containing PCBs. Portions of the concrete slabs located in the vicinity of former hydraulic or electrical equipment are already known from previous testing to be impacted with PCBs at concentrations greater than 50 milligrams per kilogram (mg/kg). The extent to which concrete impacted with PCBs will be removed from the Site will depend on whether a 25 mg/kg or 50 mg/kg cleanup level is applied. The selection of the cleanup level will be based on whether H&EC approves of the reuse of PCB-impacted concrete (e.g. porous surfaced waste) as crushed fill material where the Site has been designated as low occupancy use. The cleanup levels for porous-surfaced remediation waste that may be applied are provided below along with the associated site reuse provisions.

- Concrete (e.g. crushed concrete) containing less than 25 mg/kg may be used on Site if managed using the low-occupancy criterion without invoking the capping, fencing and signage requirements of 40 CFR 761.61(4)(i)(B)(1). This cleanup level would require a deed covenant.

- Concrete (e.g. crushed concrete) containing greater than 25 mg/kg but less than or equal to 50 mg/kg may be used on Site if managed using the low-occupancy criterion, with fencing and signage requirements of 40 CFR 761.61(4)(i)(B)(2). This cleanup level would also require a deed covenant.

The majority of the concrete surfaces at the Site contain PCBs at concentrations less than or equal to 1 mg/kg, and therefore the majority of the concrete (in its crushed form) may be used on Site with no restrictions, including reuse in high occupancy areas (40 CFR 761.61(4)(i)(A)(1).

In addition, subsurface soil investigation activities have identified localized areas impacted with PCBs in the vicinity of some building features, not all of which can be tied to surface concrete exhibiting high concentrations of PCBs. Upon completion of building and structure demolition, additional subsurface work will be conducted to characterize and remediate soil. Remediation activities associated with PCB-impacted soil, necessary to complete the real estate transaction, will then be addressed under a separate plan that will be prepared and submitted at a later date. The removal activities described herein will be performed in accordance with EPA's self-implementing regulations pursuant to 40 CFR 761.61(a) (latest edition).

2.0 SITE CHARACTERIZATION

For the purposes of this PCBNP, this section includes a summary of the PCB Site characterization data collected during previous investigations and remediation activities conducted by consultants to Alcoa and recent investigations by Geomatrix for the aboveground structures at the Site. Geomatrix collected and analyzed samples for PCBs from various building materials components including steel structures, concrete flooring, wood block flooring, Galbestos® siding, and residual surface dust. The previous and recent investigation data are summarized in Table 1 and presented graphically on Figure 3.

2.1 PREVIOUS SITE CHARACTERIZATION AND REMEDIATION

Previous Site characterization assessments were conducted by Alcoa's consultants and were related to the closure of its facilities and manufacturing operations on and east of the Site (Geomatrix, 2005a). The assessments for the Site were conducted under the oversight of City of Vernon H&EC. Previous characterization activities included the collection and analysis of several media including building materials, soil, and groundwater found at the Site. In addition, PCB characterization and remediation activities at former Building 114 (present day parking lot located along Fruitland Avenue) were conducted by Alcoa under a US EPA consent agreement. Remediation activities included hazardous building materials removals and/or mitigation (e.g. asbestos containing materials [ACM] removals, PCB-impacted wood block flooring removal, PCB-impacted concrete removal and/or capping, and impacted dust removal) and soil removal in a number of Site areas. According to Ursic (1999b), EPA approved the PCB remediation at Building 114 in December 1991. In a letter dated September 2, 1999, H&EC approved closure of Alcoa's operations at the Site based on the assumption that the information submitted in the documentation was complete and accurate, and that further review or determinations may be necessary if subsequent information, which significantly affects any decision, is found. H&EC also noted in their letter that the known Stoddard solvent-impacted soil would be the continued responsibly of Alcoa (City of Vernon, 1999). The Stoddard solvent impacted soil in located in the southern portion of Building 112A.

The Site characterization for PCBs in aboveground structures and building materials was initially conducted in two separate investigations. The first characterization sampling and analysis was conducted by Geraghty and Miller, Inc. (GM) in 1990. The second characterization sampling and analysis was conducted by McCulley, Frick & Gilman (MFG) in 1998 and included bulk concrete core sampling. The GM sampling results have not been used for purposes of this PCBNP because the concrete was reportedly remediated in these areas and

therefore, the results would no longer be relevant. Additional testing of the concrete at one of the locations was conducted by Geomatrix in 2005. Analytical results are discussed in Section 2.4. Additional testing for confirmation for the presence of PCBs in concrete is proposed at several locations, and will be conducted during demolition.

2.2 RECENT CHARACTERIZATION

The recent investigation involved characterization sampling and analysis conducted by Geomatrix and its subcontractor Aurora Industrial Hygiene, Inc. (Aurora) in 2005 and 2006. This work included bulk concrete sampling (Geomatrix) and surface wipe sampling (Aurora) to assist the planning of demolition and removal activities. The available data are summarized in Table 1 and are presented graphically on Figure 3. The analytical laboratory reports from these investigations are available upon request. The findings of the investigations are discussed in the following sections.

2.3 SAMPLING PROCEDURES

The method of concrete sampling (i.e. coring or chip samples) by GM is not known. Available information consists of sample location, material sampled and the analytical result. Also, the specific depth of bulk concrete samples collected by MFG is not known.

The Geomatrix bulk concrete samples were collected by coring the upper 3-inches of the concrete in general conformance with TSCA protocols. The samples were shipped under chain of custody to American Analytical laboratory in Los Angeles (American) for analysis of PCBs using EPA Method 8082. At locations where detection of PCBs was expected, the bulk sample was divided into a top and bottom sample, each representing 3 inches of both the top and bottom of the concrete slab, respectively.

The bulk and wipe samples collected by Aurora were shipped under chain of custody to American Scientific Laboratories, LLC for analysis. The wipe samples collected by Aurora were collected from a 1 square foot area. The concentrations have been calculated and are presented per 100 centimeter square (cm^2) area.

2.4 ANALYTICAL RESULTS

The characterization work has identified the following building materials that either contain or are impacted by PCBs:

- concrete floor slab;
- transformer pads (suspect);
- wood block flooring surface material over a portion of the floor slab;
- surface coatings and/or dust on structural steel members in some areas;
- corrugated siding of the building known as Galbestos®; and
- textured paint on select metal building material containing PCBs and asbestos.

The type and extent of PCB detections in each sampling area are discussed below.

2.4.1 Concrete Floor Slab

The MFG investigation included collection of a total of 32 bulk samples. The Geomatrix (and Aurora) investigation included 26 bulk samples collected from 17 locations and 16 wipe samples. The Geomatrix bulk sample locations were selected based on the highest likelihood of impact from former equipment and/or operations and as indicated by previous MFG sampling results as high-impact areas.

PCBs were detected above the detection limit of 0.033 mg/kg in 25 out of 32 samples collected by MFG. The concentrations ranged from 0.033 mg/kg to 71 mg/kg, with an average PCB concentration of 4.7 mg/kg.

In samples collected by Geomatrix in Buildings 104 and 108, PCBs were detected at concentrations above the detection limits in 20 out of 26 samples. Although the detection limits varied from 0.1 to 2 mg/kg, PCB concentrations ranged from 0.1 mg/kg to 3300 mg/kg, with an average PCB concentration of 194 mg/kg. Three samples had detected concentrations greater than 10 mg/kg, at 32, 120, and 3300 mg/kg. The primary PCB congener detected was Aroclor 1248.

The highest concentrations of PCBs were observed in concrete floor samples collected from the Cast House (Building 104). A concentration of 3300 mg/kg was detected at sample location #41 in the top 1.5-inch portion of the 3-inch concrete core collected by Geomatrix. The

concentration in the bottom portion of the Geomatrix sample was lower by an order of magnitude with a concentration of 120 mg/kg. The MFG sample C-28 collected in this area contained PCBs at a concentration of 30 mg/kg. In the nearest concrete samples (approximately 20 feet away), concentrations were several orders of magnitude lower, ranging from 0.17 mg/kg to 5.6 mg/kg, with an average PCB concentration of 1.56 mg/kg.

PCBs were detected in 15 out of 16 wipe samples collected from concrete floors at concentrations ranging from 0.26 micrograms per 100 cm^2 (µg/100 cm^2) to 9.39 µg/100 cm^2, with an average PCB concentration of 2.70 µg/100 cm^2. The highest PCB concentrations in the wipe samples were also detected in Building 104 (at sample location WS026).

In summary, the highest concentration of PCBs was detected in the Cast House (Building 104). PCBs concentrations in all the bulk samples collected in Buildings 112 and 112A were at or below 2 mg/kg.

2.4.2 Concrete Transformer Pads

The transformers on Site were decommissioned and recycled by Pechiney as part of the Site closure and decommissioning of the transformers is not addressed in this document. The concrete transformer pads were not characterized during previous investigations due to the safety hazards associated with sampling in close proximity to energized electrical equipment. The concrete pads will be characterized as part of the delineation sampling proposed during Site demolition and removal activities for concrete.

2.4.3 Wood Surfacing Material

A relatively small area of the floor slab in Building 112A is covered with a 2.5-inch thick layer of wood blocks. The wood was intended to absorb oil and metal shavings that might spill or spread on the floor during historical operations. Three bulk samples and two wipe samples of the wood flooring were collected by Aurora for analytical testing. PCBs were detected in the bulk samples at concentrations ranging from 0.181 mg/kg to 1.48 mg/kg, with an average PCB concentration of 0.73 mg/kg. One wipe sample detected PCBs at concentration of 0.96 µg/100 cm^2, and the other wipe sample was < 0.16 µg/100 cm^2.

2.4.4 Metallic Surfaces

Aurora collected eight wipe samples from the metallic surfaces in the buildings. PCBs were detected in all eight of the samples at concentrations ranging from 0.32 µg/100 cm^2 to 42.24 µg/100 cm^2, with an average PCB concentration of 21.86 µg/100 cm^2. A large portion of

the steel surfaces in Building 104 is coated with a textured paint which also contains asbestos. Textured paint is discussed in Section 2.4.6.

2.4.5 Corrugated Siding

The building was constructed with manufactured, corrugated siding containing asbestos and PCBs, known as Galbestos®. As specified by 40 CFR 761.62(b)(i), Galbestos® siding may be disposed at a facility permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill that meets the criteria listed in the regulations. EPA was contacted on July 20, 2006, and through voice message communication removal and disposal of Galbestos® as outlined above was approved (personal communication, Max Weintraub, Regional PCB Coordinator, EPA, Region 9). As a result Galbestos® will not be discussed in this document with respect to the PCB content. The characterization data collected from the Galbestos® siding is, however, included in Table 1.

2.4.6 Textured Paint

Certain surfaces within Buildings 104 and 106 are coated with a black, textured paint that contains asbestos as well as PCBs. Based on several discussions with the Site personnel, different portions of the interior surfaces in those buildings were "painted" at different times with different products by several contractors. The textured coating of interest described in this section is a shiny coating that has been found in limited areas. One bulk sample of this material was analyzed for PCBs and had a detected concentration of 22.7 mg/kg of PCBs. Additional samples were not deemed necessary, since the textured paint areas will be abated due to the presence of asbestos.

3.0 DELINEATION OF IMPACTED AREAS

Those areas previously identified by historical site operations or site characterization activities, as containing PCB-impacted materials (e.g. concrete floors in Buildings 104 and 106) at concentrations above the cleanup levels will be removed and disposed of offsite as TSCA waste without further decontamination efforts. The lateral margins around those areas will be characterized further during Site demolition in order to evaluate the extent of building materials that must be decontaminated and disposed as PCB-remediation waste. In order to accomplish this objective, the PCB-impacted areas of the buildings will be sampled and tested, as necessary, and appropriate decontamination and demolition techniques will be selected based on the aerial extent and depth of the PCB-impacted areas that exceed cleanup levels.

3.1 CLEANUP LEVELS

The use of PCB-containing oils by the manufacturing industry ended during the early- to mid-1970's. Pechiney has owned and operated the Site since 1999 and has not used PCB-containing hydraulic oils during their operations. On the basis of this knowledge, it is assumed that any releases of PCBs at the Site occurred prior to 1979.

TSCA regulations allow management of bulk remediation waste based on concentrations of PCBs in the remediation waste. The cleanup levels for the aboveground demolition project are being established as follows.

- Non-porous surfaces: The cleanup level for non-porous surface will be 100 µg/100 cm^2. Data collected from the Site indicate that the PCB concentrations on non-porous surfaces (steel) are well below the cleanup level, and the steel scrap recovered during demolition will be transported to a smelter as described in Section 3.3, without further testing.

- Porous surfaces: The cleanup level for porous-surfaced waste will be less than or equal to 25 mg/kg. Remediation waste containing greater than 25 mg/kg will be managed off Site at an appropriately permitted facility. Porous surfaced-waste (e.g. crushed concrete) may be used on Site if managed using the low-occupancy criterion without invoking the capping, fencing and signage requirements of 40 CFR 761.61(4)(i)(B)(1), but would require a deed covenant. As noted earlier, if a cleanup level of greater than 25 mg/kg and less than or equal to 50 mg/kg is deemed acceptable to the H&EC, the crushed concrete will be managed for re-use as described in 40 CFR 761.61(4)(i)(B)(2).

The removal of the concrete floor slabs and concrete surfaces associated with this project will begin after November 2006.

3.2 IMPACTED AREAS

As previously stated, those areas of the concrete floor slab within Buildings 104 and 106 with the highest concentrations of PCBs will be removed and disposed offsite without additional delineation or decontamination. Based on the PCB data obtained from Site investigations, much of the remaining concrete floor slab in Buildings 104 and 106 and possibly the concrete transformer pads will require decontamination during demolition. Therefore, subsequent sections will discuss concrete sampling and analysis for characterization, delineation, and confirmation. A brief overview of the proposed Site demolition activities and final disposition of PCB-containing materials is discussed in Section 3.3.

3.3 PROPOSED ACTIVITIES

The proposed aboveground decontamination and demolition activities for this project, some of which are related to the presence of PCBs, are described below in the sequential order that they will be implemented:

- vacuum dust on the building floor slabs with equipment utilizing high efficiency particulate air (HEPA) filter systems;
- pressure wash all interior building surfaces and collect/contain the wash water (e.g. wastewater);
- pre-treat the wastewater generated on Site then discharge under appropriate permit authority to the local Publicly Owned Treatment Works (POTW);
- remove wood block floor covering and dispose off Site;
- abate/remove Galbestos siding and dispose as asbestos-containing waste;
- abate/remove asbestos and PCB-containing textured paint;
- demolish the building and recycle the metallic components through a secondary smelter; and
- sawcut and remove limited concrete slab areas in Buildings104 and 106 already known to be impacted with PCBs either from previous testing or operational site history, and dispose off site
- characterize remaining concrete slab areas then demolish/remediate as necessary.

Floor vacuuming and pressure washing (and/or steam cleaning) of building interior areas will remove dust that may contain residual amounts of PCBs. Pressure washing will also remove some, if not all, of the surficial PCBs on interior building surfaces.

The wastewater generated from pressure washing will be passed through filters to remove suspended solids followed by granular activated carbon (GAC) adsorption to remove dissolved PCBs and oils. Figure 4 presents a schematic of the proposed treatment system. The wastewater will be analyzed after pretreatment to verify that PCB concentrations are less than 3 micrograms per liter (µg/l) (40 CFR 761.50(a)(3)), or as required by the POTW (less than the method detection limit), which ever is more stringent.

The Galbestos® siding will be disposed off Site as asbestos-containing waste pursuant to 40 CFR 761.62(b)(i).

The metallic components (non-porous surfaces, i.e. steel) will be recycled without prior decontamination through a secondary smelter in accordance with 40 CFR 761.72(b), so any residual PCBs will be incinerated. The waste generated from textured paint removal, all non-liquid waste generated from the wastewater pretreatment system, as well as PCB remediation waste from concrete decontamination and demolition will be characterized and disposed in accordance with requirements of 40 CFR 761.61. All other waste generated during this project will be characterized and disposed off Site accordingly.

3.4 CONCRETE EVALUATION APPROACH

In order to assess the extent of PCB-impacted concrete in areas that exceed 25 mg/kg-demolition sampling and analysis will be conducted using a systematic approach based on the results of the previous investigations. Pre-demolition sampling of residual PCBs will be performed after completion of building vacuuming, pressure-washing and asbestos abatement as described in the previous section. The characterization and delineation sampling approach proposed for concrete is specific to this project. The sampling requirements specified in 40 CFR 761.120(a) Subpart G do not apply to spills that occurred prior to May 4, 1987 and are not applicable to this project.

A grid sampling approach, modeled after the requirements for Self-Implementing PCB Cleanups (40 CFR 761.130), will also include historical Site information and previously collected data to further assess the areas of consideration at the Site.

3.4.1 Approach to Floor Slab

The requirements of PCB Spill Cleanup Policy (40 CFR 761, Subpart G) do not apply to this project because PCBs were phased out of industry use prior to 1987. However, the approach described herein complies with the intent of the policy. Three different grid spacing approaches are proposed for characterization of the floor slab. The grid spacing and proposed sample locations are shown on Figure 5. Each grid spacing approach is described below:

- A grid spacing of approximately 80 feet by 160 feet (approximately13,000 square feet per grid) is proposed for Buildings 108, 112, and 112A where PCB concentrations were previously detected below 10 mg/kg and mostly below 2 mg/kg.
- In the remaining areas of Buildings 104 and 106, a denser sampling grid of approximately 80 feet by 120 feet (approximately10,000 square feet) is where concentrations of PCBs were detected at two locations in concrete above 50 mg/kg.

As previously stated, concrete in these areas will be removed and disposed offsite at an appropriate TSCA landfill.

- For Building 104 at location #41, and Building 106 at location #10, an approximately 20 feet by 20 feet (approximately 400 square feet) grid spacing is proposed.

The sampling scheme developed by Midwest Research Institute (MRI), referenced in 40 CFR 761.130(e) was reviewed and found not to be directly applicable to the scope of this project. The maximum number of samples proposed by the MRI approach is 37 samples, but we do not believe that quantity of samples is adequate for this project. The sampling grids developed will provide 41 new sample locations (123 sub-samples) in addition to the 58 samples previously collected which will provide sufficient information for characterization and delineation of the PCB-impacted concrete.

The grid configuration was selected based on the building layout and column spacing to facilitate the sampling effort. In each grid, one sample will be used for evaluation. No additional sampling is proposed in grids where analytical data are available. New sample locations will be selected at locations with visual staining. If staining is not observed, the sample will be collected from approximately the middle of the grid. At the locations where the 20-foot grid is proposed, if the samples from any perimeter grid exceeds the cleanup level (25 mg/kg), the grid will be extended another 20 feet in that direction until a concentration of less than 25 mg/kg is detected.

Samples will be collected by coring a 2-inch diameter section of the floor slab to the depth of 3 inches. The samples will be shipped to a laboratory certified by the California Department of Health Services Environmental Laboratory Accreditation Program laboratory using chain of custody for segmentation and analysis using EPA Method 8082. The laboratory will cut each core into 3 segments or Sub-samples:

- Sub-sample A will be from surface to the depth of 0.25 inch,
- Sub-sample B will be from the depth of 0.25 inch to 1.5 inch, and
- Sub-sample C will be from the depth of 1.5 to 3.0 inches.

These intervals have been selected to identify the "hot" segment of the concrete that may have PCB concentration of greater than 25 mg/kg. In addition the lower interval samples below 25 mg/kg will serve as confirmation sampling for that location. The Sub-sample intervals have

been selected based on the proposed decontamination and demolition techniques discussed in Section 4.

Sub-sample A from all sample locations will be analyzed first. Sub-sample B will be analyzed only at locations where Sub-sample A results exceed 25 mg/kg and Sub-sample C will be analyzed only where Sub-sample B exceeds 25 mg/kg. All characterization analyses will be conducted on discrete samples; no compositing of samples is proposed. Composite samples, if necessary, will only be used for waste characterization for disposal.

3.4.2 Approach to Transformer Pads

Substations #2 and #5 are each approximately 20 feet by 40 feet, and former Substation #8 was approximately 30 feet by 60 feet. At each of these areas, one location will be selected at each end of the pad for concrete core sampling. Substation #1 is approximately 25 feet by 100 feet. Three sample locations will be selected at this substation pad, one at each end and one in the center. Sample locations may be adjusted and/or additional sample locations selected if staining is observed on the pad. The same sampling and segmentation approach discussed in Section 3.4.1 for concrete floor slabs will be used for the transformer pad evaluations.

4.0 REMEDIATION OPTIONS

Prior to PCB sampling, the entire interior of the buildings at the Site will be pressure washed, including floors, siding, and structural steel. All wastewater generated will be contained and transferred to a temporary holding tank and subsequently pumped through a 50-micron filter, followed by a 25-micron filter, then pumped through two GAC canisters (connected in series) and into a second temporary holding tank (Figure 4). Pretreated wastewater will be tested as required by the POTW prior to being discharged to the sanitary sewer system. If the test results indicate presence of PCBs above the allowable limit, the wastewater will be treated again and the procedure will be repeated. Non-liquid waste generated from the wastewater pretreatment will be stockpiled (or contained) and disposed at a TSCA-permitted landfill.

After pressure washing of concrete slabs, the proposed sampling will be implemented, as described in the previous section. Following the receipt of analytical results, decontamination and removal activities will commence in the areas identified as containing PCBs at concentrations greater than 25 mg/kg. If concentrations of PCBs are less than 25 mg/kg, then decontamination and removal will not be necessary at those locations. The proposed decontamination and removal techniques are scarification of the upper 0.25 inch; jack

hammering or similar method for removal of the upper 1.5 inch, or saw-cutting and removal of the entire section of the floor slab.

Scarification (or shot blasting) will be used if PCBs are detected the upper interval (0 - 0.25 inch; Sub-sample A) sample above 25 mg/kg, but the deeper interval (0.25-1.5 inches) is below 25 mg/kg. Jack hammering concrete to the depth of 1.5 inch will be used if the concentration in the second interval sample (0.25 to 1.5 inches; Sub-sample B) exceeds 25 mg/kg. If the third (deepest) interval sample exceeds 25 mg/kg, then the floor slab will be saw-cut into manageable sections (2 or 3 feet square) and removed whole for disposal. In this scenario, the sub-samples will be composited and analyzed to characterize the floor slab for disposal.

The decontamination and removal techniques will be applied to the entire grid represented by the sample. Appropriate safety measures, such as the use of HEPA vacuums, will be employed to control dust generation from the concrete remediation. The PCB-containing waste generated will be disposed in a TSCA-permitted facility.

5.0 REFERENCES

40 Code of Federal Regulations (CFR) 761 Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution, in Commerce, and Use Prohibitions.

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Personal communication—Linda Conlan with Max Weintraub, Regional PCB Coordinator, EPA, Region 9 on July 20, 2006.

United States Environmental Protection Agency (EPA), 2001, Revisions to the PCB Q and A Manual, September 2001.

Ursic, A. J., 1999b, Aluminum Company of America (Alcoa), Divestiture of the Alcoa Cast Plate Facility, Parcels 6, 7, and 8, Vernon, California, Environmental Activities, Parcel 8, July 26.

United States EPA, 2005, PCB Site Revitalization Guidance Under the Toxics Substances Control Act (TSCA), November 2005.

TABLE

TABLE 1

Geomatrix

SUMMARY OF AVAILABLE PCB SAMPLE RESULTS - ABOVEGROUND MATERIALS

Pechiney Cast Plate, Inc. Facility
Vernon, California

Location ID on Figure	Sample No. in Chain of Custody	Type of Sample	PCBs (mg/kg)	Material
PREVIOUS INVESTIGATION				
SAMPLES COLLECTED BY McCLULLEY, FRICK & GILMAN				
C-1	Core-1	Core	6.70	Concrete Floor
C-2	Core-2	Core	0.073	Concrete Floor
C-3	Core-3	Core	71.00	Concrete Floor
C-4	Core-4	Core	0.345	Concrete Floor
C-5	Core-5	Core	0.088	Concrete Floor
C-6	Core-6	Core	0.92	Concrete Floor
C-7	Core-7	Core	0.20	Concrete Floor
C-8	Core-8	Core	1.00	Concrete Floor
C-9	Core-9	Core	0.11	Concrete Floor
C-10	Core-10	Core	0.033	Concrete Floor
C-11	Core-11	Core	<0.033	Concrete Floor
C-12	Core-12	Core	1.80	Concrete Floor
C-13	Core-13	Core	0.047	Concrete Floor
C-14	Core-14	Core	2.00	Concrete Floor
C-15	Core-15	Core	<0.033	Concrete Floor
C-16	Core-16	Core	<0.033	Concrete Floor
C-17	Core-17	Core	0.05	Concrete Floor
C-18	Core-18	Core	0.068	Concrete Floor
C-19	Core-19	Core	0.135	Concrete Floor
C-20	Core-20	Core	0.048	Concrete Floor
C-21	Core-21	Core	<0.033	Concrete Floor
C-22	Core-22	Core	0.067	Concrete Floor
C-23	Core-23	Core	<0.033	Concrete Floor
C-24	Core-24	Core	<0.033	Concrete Floor
C-25	Core-25	Core	<0.033	Concrete Floor
C-26	Core-26	Core	2.66	Concrete Floor
C-27	Core-27	Core	0.082	Concrete Floor
C-28	Core-28	Core	30.00	Concrete Floor
C-29	Core-29	Core	0.649	Concrete Floor
C-30	Core-30	Core	0.044	Concrete Floor
B-1	Core-B1	Core	0.24	Concrete Floor
B-2	Core-B2	Core	0.105	Concrete Floor

TABLE 1

Geomatrix

SUMMARY OF AVAILABLE PCB SAMPLE RESULTS - ABOVEGROUND MATERIALS

Pechiney Cast Plate, Inc. Facility
Vernon, California

Location ID on Figure	Sample No. in Chain of Custody	Type of Sample	PCBs (mg/kg)	Material
RECENT INVESTIGATION				
SAMPLES COLLECTED BY GEOMATRIX				
# 2	02-CS-0.3	Core - Top	7.2	Concrete Floor
	02-CS-0.3B	Core - Bottom	0.15	Concrete Floor
# 5	05-CS-0.3	Core - Top	<2.0	Concrete Floor
# 10	10-CS-0.3	Core - Top	32	Concrete Floor
	10-CS-0.3B	Core - Bottom	0.18	Concrete Floor
# 15	15A-CS-0.3	Core - Top	1.1	Concrete Floor
# 16	16-CS-0.3	Core - Top	11	Concrete Floor
# 17	17-CS-0.3	Core - Top	2.2	Concrete Floor
	17-CS-0.3B	Core - Bottom	0.10	Concrete Floor
# 18	18-CS-0.3	Core - Top	<0.20	Concrete Floor
	18-CS-0.3B	Core - Bottom	0.61	Concrete Floor
# 19	19-CS-0.3	Core - Top	1.8	Concrete Floor
	19-CS-0.3B	Core - Bottom	0.83	Concrete Floor
# 21	21-CS-0.3	Core - Top	7.2	Concrete Floor
# 26	26-CS-0.3	Core - Top	1.3	Concrete Floor
# 27	27-CS-0.3	Core - Top	<0.20	Concrete Floor
# 35	35-CS-0.3	Core - Top	<0.20	Concrete Floor
	35-CS-0.3B	Core - Bottom	<0.10	Concrete Floor
# 36	36-CS-0.3	Core - Top	<0.20	Concrete Floor
# 41	41-CS-0.3	Core - Top	3,300	Concrete Floor
	41-CS-0.3B	Core - Bottom	120	Concrete Floor
# 48	48-CS-0.3	Core - Top	0.10	Concrete Floor
# 73	73-CS-0.3	Core - Top	0.23	Concrete Floor
	73-CS-0.3B	Core - Bottom	0.24	Concrete Floor
# 74	74-CS-0.3	Core - Top	5.6	Concrete Floor
	74-CS-0.3B	Core - Bottom	0.17	Concrete Floor
SAMPLES COLLECTED BY AURORA				
BK001	BK001	Bulk	14.5	Corrugated wall panel
BK002	BK002	Bulk	0.181	Wood flooring
BK003	BK003	Bulk	0.522	Wood flooring
BK004	BK004	Bulk	1.48	Wood flooring
BK005	BK005	Bulk	12.1 - Aroclor 1248	Textured paint
			10.6 - Aroclor 1254	
41911	41911	Bulk	10,700	Wall panel, unwashed
41912	41912	Bulk	16,500	Wall panel, washed
41913	41913	Bulk	17,900	Wall panel, unwashed
41914	41914	Bulk	15,600	Wall panel, washed
41915	41915	Bulk	54	Wall panel, unwashed
41916	41916	Bulk	44	Wall panel, washed
41935	41935	Bulk	13,400	Wall panel, unwashed
41936	41936	Bulk	15,200	Wall panel, washed

TABLE 1

Geomatrix

SUMMARY OF AVAILABLE PCB SAMPLE RESULTS - ABOVEGROUND MATERIALS

Pechiney Cast Plate, Inc. Facility
Vernon, California

Location ID on Figure	Sample No. in Chain of Custody	Type of Sample	PCBs (mg/kg)		Material
WIPE SAMPLES COLLECTED BY AURORA			PCBs ($\mu g/ft^2$)	PCBs ($\mu g/100\ cm^2$)	
WS001	WS001	Wipe	8.91	0.96	Wood floor
WS002	WS002	Wipe	<1.5	<0.16	Wood floor
WS003	WS003	Wipe	178.07	19.17	Lower wall truss
WS004	WS004	Wipe	27.90	3.00	Concrete floor
WS005	WS005	Wipe	295.18	31.77	Electric panel
WS006	WS006	Wipe	360.00	38.75	Wall truss (5 ft high)
WS007	WS007	Wipe	17.30	1.86	Concrete floor
WS008	WS008	Wipe	27.30	2.94	Concrete floor
WS009	WS009	Wipe	392.37	42.24	Upper I-beam flange
WS010	WS010	Wipe	2.43	0.26	Concrete EQ pad
WS011	WS011	Wipe	21.20	2.28	Parts crib floor
WS012	WS012	Wipe	44.40	4.78	Concrete floor
WS013	WS013	Wipe	73.20	7.88	Concrete floor
WS014	WS014	Wipe	385.17	41.46	Upper I-beam flange
WS015	WS015	Wipe	36.60	3.94	Concrete floor
WS016	WS016	Wipe	10.10	1.09	Concrete floor
WS017	WS017	Wipe	10.90	1.17	Concrete floor
WS018	WS018	Wipe	5.97	0.64	Concrete floor
WS019	WS019	Wipe	12.38	1.33	Column footing
WS020	WS020	Wipe	<1.5	<0.16	Concrete floor
WS021	WS021	Wipe	5.93	0.64	Lower wall truss
WS022	WS022	Wipe	4.57	0.49	Electric transformer
WS023	WS023	Wipe	3.00	0.32	Blue bench cabinet
WS024	WS024	Wipe	3.90	0.42	Concrete floor
WS025	WS025	Wipe	14.10	1.52	Concrete floor
WS026	WS026	Wipe	87.20	9.39	Concrete floor

Notes:

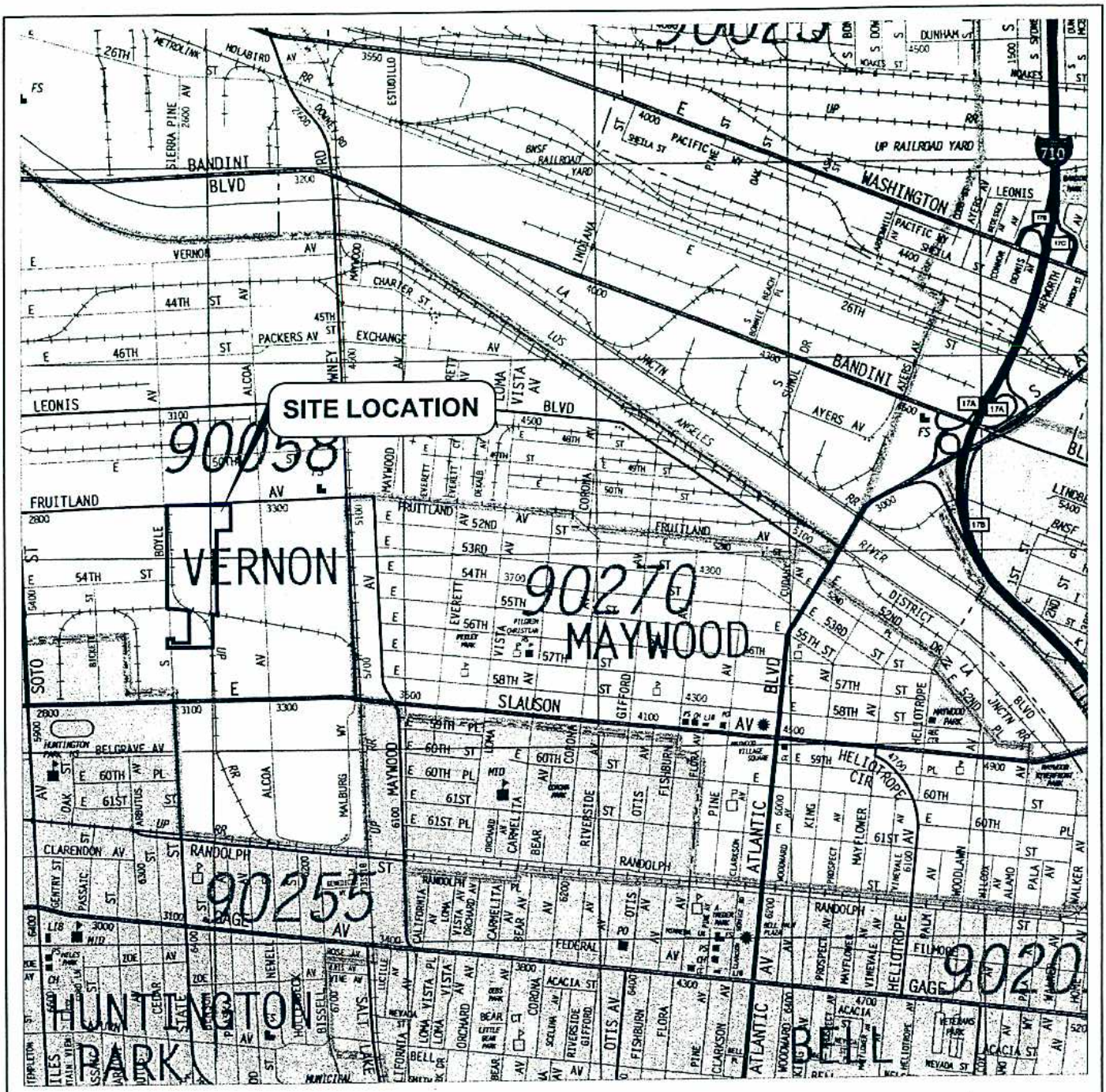
1. All PCBs concentrations are total PCBs concentrations unless noted otherwise
   mg/kg - milligrams per kilogram
   µg/100 cm2 - micrograms per squared centimeter
2. Core - Top = Upper 3.0 inch of concrete slab
3. Core - Bottom = Bottom 3.0 inch of the concrete slab

Geraghty and Miller, Inc. (GM), 1990, Final Report, Phase II Environmental Assessment for Alcoa – Vernon Plant, Vernon, California, September.

McCulley, Frick & Gilman (MFG), 1998, Limited Phase II Environmental Investigation, Alcoa Cast Plate, 5151/5401 Alcoa Avenue, Vernon, California, September 15.

Geomatrix, 2006, Phase II Environmental Site Assessment Report, Pechiney Cast Plate Facility, Vernon, California, March.

FIGURES



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GEOMATRIX

SITE LOCATION MAP

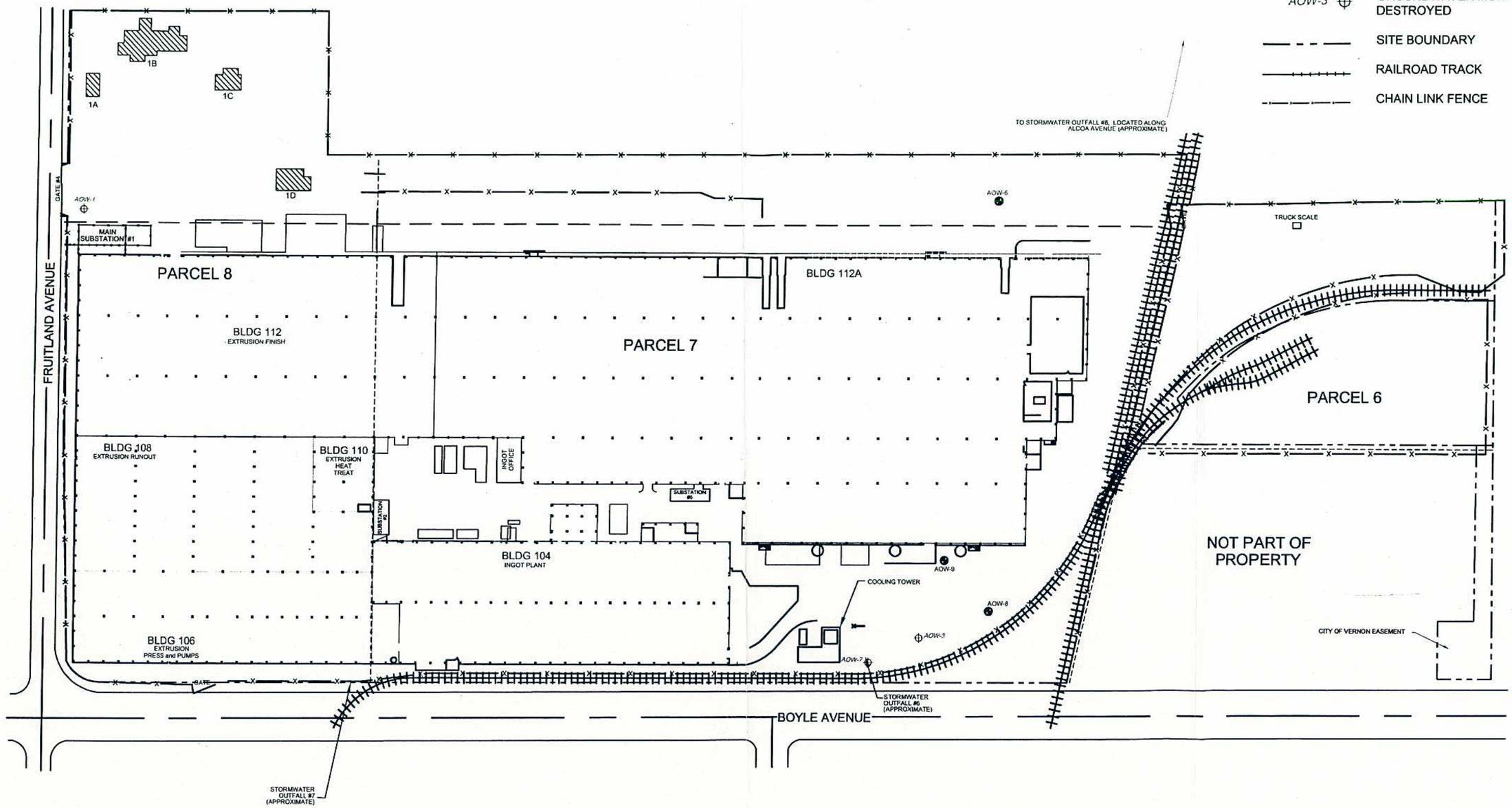
PECHINEY CAST PLATE
Vernon Facility, 3200 Fruitland Avenue
Vernon, California

Figure By	Project No.
jrw	10627
	Figure 1
Date 8/31/05	

Filepath: Y:\10627.000.0\acad\PecHineyPlateLocationMap.dwg
Plot Time: Aug 31, 2005 - 3:56pm, Plotted By: pherring

EXPLANATION

- AOW-9 — GROUNDWATER MONITORING WELL
- AOW-3 — GROUNDWATER MONITORING WELL DESTROYED
- SITE BOUNDARY
- RAILROAD TRACK
- CHAIN LINK FENCE



BASEMAP MODIFIED FROM PECHINEY CAST PLATE, INC. SITE PLAN DATED 08 JAN 02, GERAGHTY & MILLER, INC. "GROUNDWATER ELEVATION AND VOLATILE ORGANIC COMPOUND CONCENTRATIONS DECEMBER 8, 1994" FIGURE DATED 2-2-95, ALUMINUM COMPANY OF AMERICA "WORKS GENERAL-MAP" FIGURE DATED 10-10-84, AND LOS ANGELES COUNTY ASSESSOR'S OFFICE PARCEL MAP 6310 / SHEET 8 DATED 11-5-58.

NOTE:

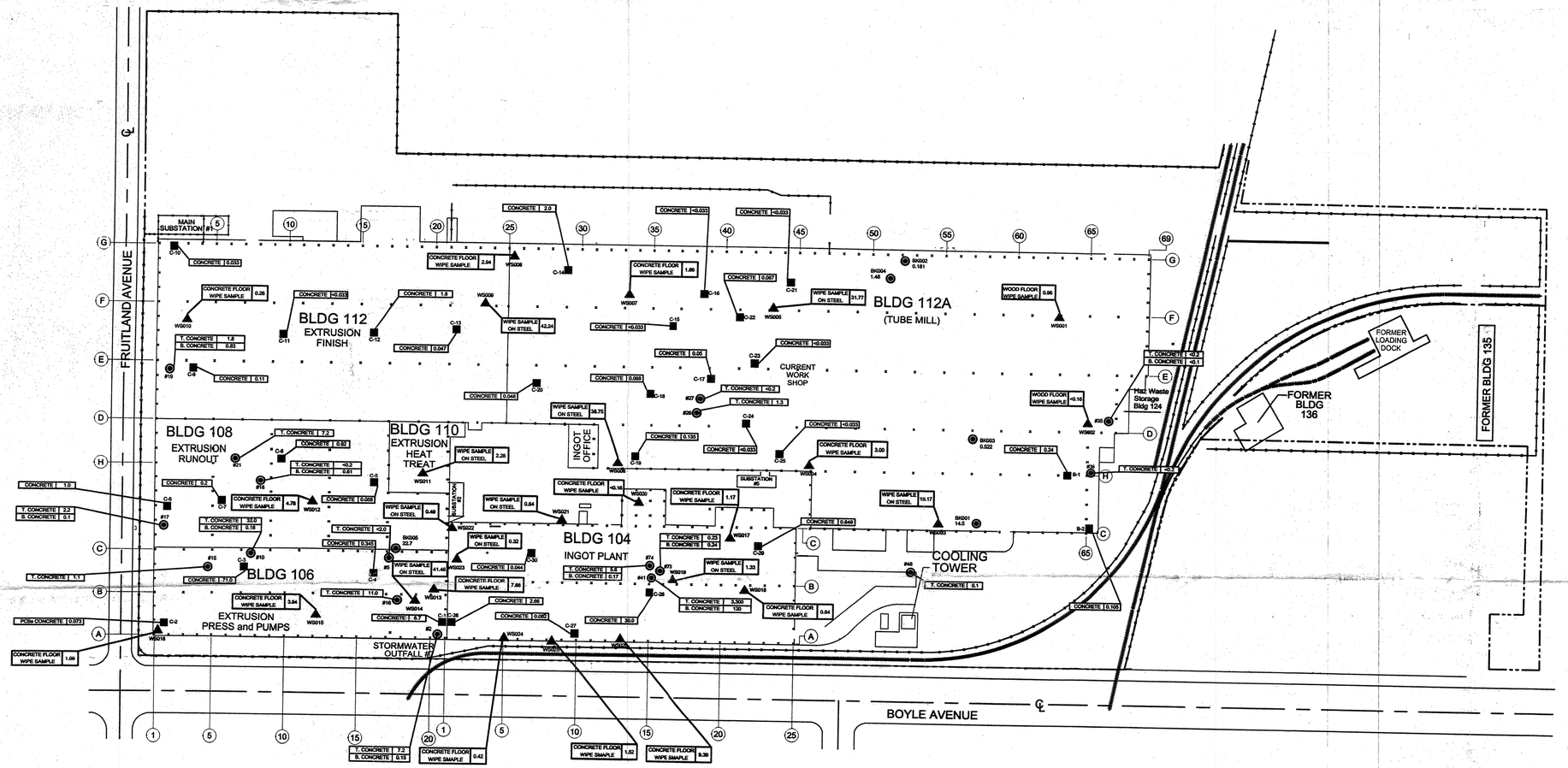
SITE BOUNDARY AND GROUNDWATER MONITORING WELL LOCATIONS ARE APPROXIMATE.

Approximate Scale in Feet
0 70 140
0 21 42
Approximate Scale in Meters

SITE PLAN
PECHINEY CAST PLATE FACILITY
3200 Fruitland Avenue
Vernon, California

By: SBN	Date: 9/21/06	Project No. 10627
Geomatrix		Figure 2

Plot Date: 08/22/06 - 3:23pm, Plotted by: snewkirk
Drawing Path: Y:\10627.000\acad\, Drawing Name: site plan_v7.dwg



EXPLANATION

- #1 — CONCRETE CORE SAMPLES (GEOMATRIX, 2005-06)
- BK001 — CONCRETE CORE SAMPLES (AURORA, 2005)
- C-30 — CONCRETE CORE SAMPLES (MFG, 1998)
- CONCRETE CORE SAMPLES (GM, 1990)
- WS021 — WIPE SAMPLES (AURORA, 2005)
- SITE BOUNDARY
- RAILROAD TRACK
- CHAIN LINK FENCE
- BUILDING WALL AND COLUMNS
- BURIED RAIL LINE
- APPROXIMATE LOCATION OF WATER AND FIRE MAINS
- PCBs — TOTAL POLYCHLORINATED BIPHENYLS
- BLDG — BUILDING
- <2.0 — SAMPLE RESULT IS LESS THAN THE REPORTING LIMIT SHOWN
- T. CONCRETE — TOP OF CONCRETE SAMPLE
- B. CONCRETE — BOTTOM OF CONCRETE SAMPLE
- UW — UNWASHED WALL PANEL
- W — WASHED WALL PANEL

NOTES:

1. ALL LOCATIONS ARE APPROXIMATE.
2. ALL SAMPLES ARE BULK SAMPLES, UNLESS NOTED OTHERWISE
3. SAMPLES ANALYZED USING EPA METHOD 8082.
4. BULK SAMPLE RESULTS REPORTED IN MILLIGRAMS PER KILOGRAM (mg/kg).
5. WIPE SAMPLE RESULTS REPORTED IN MICROGRAMS PER SQUARE FOOT. THOSE WERE DIVIDED BY 9.29 TO CONVERT TO MICROGRAMS PER 100 SQUARE CENTIMETERS (µg/100 cm²) WHICH ARE SHOWN ON THIS DRAWING

N

Approximate Scale in Feet
0 50 100

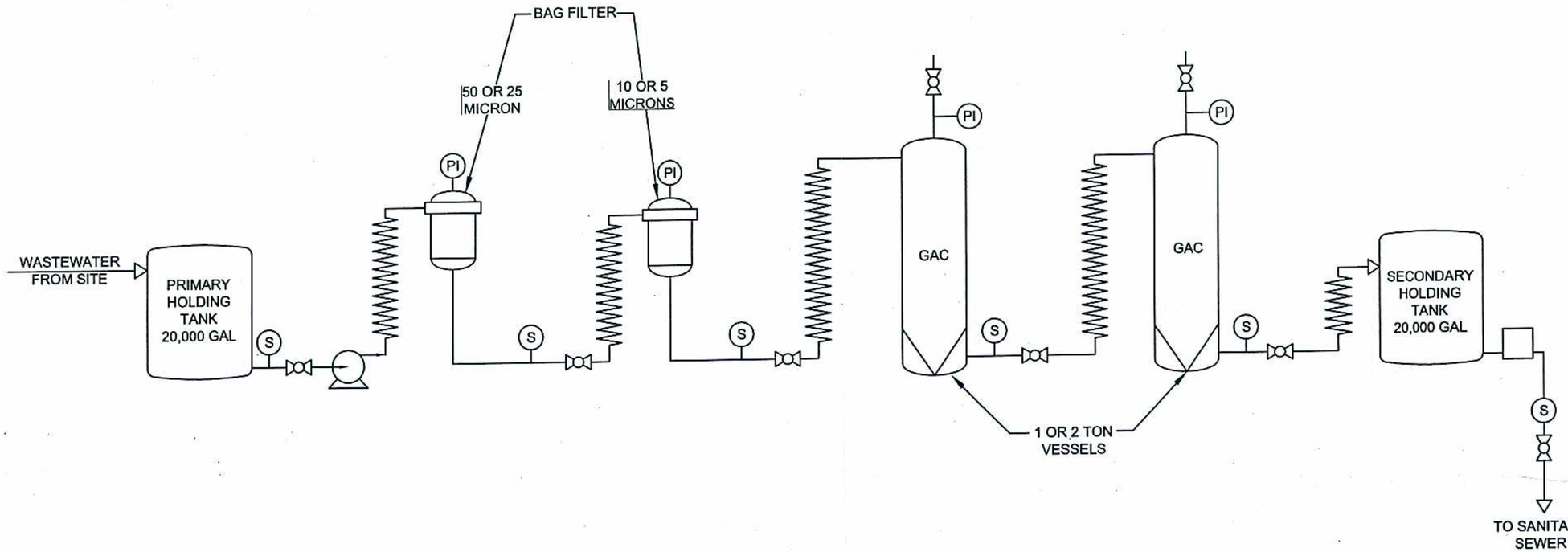
Approximate Scale in Meters
0 15 30

BASEMAP MODIFIED FROM PECHINEY CAST PLAGE, INC. SITE PLAN DATED JANUARY 8, 2002, GERAGHTY & MILLER, INC. "GROUNDWATER ELEVATION AND VOLATILE ORGANIC COMPOUND CONCENTRATIONS DECEMBER 8, 1994" FIGURE DATED FEBRUARY 2, 1995, ALUMINUM COMPANY OF AMERICA "WORKS GENERAL-MPA" FIGURE DATED OCTOBER 10, 1984, AND LOS ANGELES COUNTY ASSESSOR'S OFFICE PARCEL MAP 6310 / SHEET 8 DATED NOVEMBER 5, 1958.

AVAILABLE ANALYTICAL DATA TOTAL POLYCHLORINATED BIPHENYLS IN BUILDING MATERIALS PECHINEY CAST PLATE FACILITY 3200 Fruitland Avenue Vernon, California

By: SBN	Date: 9/21/06	Project No. 10627.001
Geomatrix		Figure 3

Plot Date: 09/26/06 - 11:04am, Plotted By: sbenitez
Drawing: R:\10627.001\Fixed_Drawings\Misc PCB_Compounds_v2.dwg



Explanation

- Ball valve
- (S) Sample port
- (PI) Pressure Gauge
- 0.5 to 1 HP pump - 50 GPM min.
- Flow meter / totalizer
- GAC — Granular activated carbon
- Flexible hose

Notes:

1. System shall be capable to operate up to 50 PSI and 50 GPM flow.
2. Flexible hoses (2 to 4 inches) shall be used with quick connect, except where PVC hard pipe is more feasible

NOT TO SCALE

WASTEWATER PRE-TREATMENT SYSTEM
PECHINEY CAST PLATE FACILITY
3200 Fruitland Avenue
Vernon, California

By: SBN	Date: 06/05/06	Project No. 10627
Geomatrix		Figure 4

Plot Date: 06/05/06 - 9:58am, Plotted by: snewkirk
Drawing Path: Y:\10627.001.01acad\, Drawing Name: TYPICAL_WASTEWATER_PRETREATMENT.dwg