

Pacific Gas and Electric Company

Humboldt Bay Power Plant

TOM A. MOULIA

Plant Manager

1000 King Salmon Avenue

Eureka, CA 95503

707/444-0700

October 22, 1996

PML-96-081



Dave McMurtry
International Technologies Corporation
4585 Pacheco Blvd.
Martinez, California 94553

Docket No. 50-133, OL-DPR-7
Humboldt Bay Power Plant, Unit 3
Clarification of August 23, 1996 letter to Greg Yuhas of Benicia, California

Dave

I wish to apologize for not providing the IT Corporation with a copy of our August 23, 1996 correspondence with Greg Yuhas. This was an unfortunate and unintentional oversight.

The letter of August 23, 1996 was written in response to a request made by Mr. Greg Yuhas of Benicia, California. In this request, Mr. Yuhas stated that he was reviewing the "Closure Plan" for the IT Benicia waste disposal facility and requested information on shipments made from Humboldt Bay Power Plant to that facility. Mr. Yuhas is a former Regional Inspector for the Nuclear Regulatory Commission and had inspection responsibility for Humboldt Bay Power Plant's Radiation Protection program on various occasions.

I would like to clarify and correct certain points that we made in the August 23rd letter to Mr. Yuhas and describe the assumptions made by PG&E. First, and perhaps most important, the wastes shipped to your facilities was not considered mixed (radioactive and hazardous) waste. With prior approval of the Nuclear Regulatory Commission and the California State Department of Health Services, these materials were shipped to you solely as hazardous wastes. Please refer to enclosure 1, which is an evaluation of the approval process for the shipments made to your facility between 1984 and 1987.

Our letter to Mr. Yuhas also described all the shipments made from Humboldt Bay Power Plant to your facilities. In that letter, the 1983 shipment to the IT Martinez Treatment Facility was identified, by us as containing "trace amounts" of nuclear power plant radioactivity. This was not the case. The pond sludge shipped in August of 1983 was found to have only naturally occurring radioactivity. Also in the letter to Mr. Yuhas, most Humboldt wastes were stated to have been shipped to the Martinez facility for treatment and subsequent transfer to the Benicia facility for disposal. This was an assumption on our part of how the waste was handled by IT Corporation. Some of the shipments were made from Humboldt Bay Power Plant directly to Benicia, (the 1984 shipment of the plant's oily water separator sludge, and a 1986 shipment of

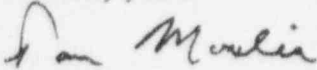
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boiler flyash). Other shipments were made to Martinez (waste treatment pond and oily water separator sludge in 1983, 1986 and 1987). Please refer to enclosure 2 which annotates, in the August 23rd letter, those areas of concern.

I hope that this letter helps to clarify our previous correspondence with Mr. Yuhas. I also hope that it provides you with a better explanation of the shipping process and the shipments made to your facilities.

Sincerely yours



TOM A. MOULIA

Enclosures

cc: NRC Document Control Desk
Richard Dudley NRC
Vincent Everett NRC
Greg Yuhas
Steve Shu DHS
Wei-Wei Chui DTSC

ENCLOSURE 1

**DESCRIPTION OF WASTE SHIPMENTS TO
IT CORPORATION'S TREATMENT AND DISPOSAL FACILITIES**

During the period of 1984 through 1987, four waste shipments were made from Humboldt Bay Power Plant in Eureka, California to the International Technology (IT) Corporation Class I waste disposal facility in Benicia and treatment facility in Martinez, California. These shipments consisted of sludge from the fossil power plant waste water surface impoundments, sludge from the plant oily water separator system and flyash from the fossil boiler 'firebox'. These wastes are classified as hazardous in the State of California due to the concentration of metals and/or used oil. These wastes were also very slightly contaminated with radionuclides as a result of past operation of the nuclear powered portion of the plant.

All of these shipments were made in accordance with the Federal, State of California and disposal site criteria for hazardous wastes.

These materials were not required to be described as 'radioactive' for transportation because they were well below the level that the USDOT defines as 'radioactive'. Disposal of these waste materials as a radioactive waste was not required due to the very low levels of radioactivity present in the wastes. Extensive sampling, analysis and assessment was performed to verify the lack of radiological hazard posed by these wastes. The Nuclear Regulatory Commission (NRC) and California State Department of Health Services (DHS) approvals recognized that the wastes were no longer regulated as "radioactive waste" subject to the provisions of 10 CFR part 20 and part 61, and were subsequently received by the IT Corporation sites, to be handled and disposed of only as hazardous waste.

The decision to send these wastes to a IT Corporation Class 1 hazardous waste site was based on a comprehensive assessment of the relative hazards of the concentrations of the chemical constituents, primarily metals, as compared to the extremely low concentrations of radioactive nuclides in the waste. Approvals by the NRC and the State of California for disposal of the waste at the Class 1 site were based on the lack of radiological hazard posed by the waste and on the disposal site characteristics. The disposal site characteristics and the administrative controls for the protection of the health and safety of the workers, the public and the environment from the chemical content of the waste were considered more than adequate for protection from the waste's radioactive content.

The approvals for release from regulatory control of the very small amount of radioactivity in the waste sent to the IT Corporation disposal facilities confirm that the radioactivity represents such an insignificant potential hazard (risk) that specific controls for its radioactive content were and are not required of the next recipient of the waste. Although the original licensee is still bound by applicable requirements of the regulations and specific license(s) for the handling of radioactive materials on its site, the only obligation of the receiving party is to handle the materials as described in the application for disposal (i.e. as hazardous waste).

Pacific Gas and Electric Company
Humboldt Bay Power Plant
TOM A. MOULLIA
Plant Manager

1000 King Salmon Avenue
Eureka, CA 95503
707/444-0700

August 23, 1996

ENCLOSURE 2

PML-96-072

PG&E Letter No. PML-96-081

PG&E Letter No. PML-96-083



Mr. Greg Yuhas
790 West J Street
Benicia, CA 94510

Dear Mr. Yuhas:

On August 14, 1996 you requested from PG&E information on hazardous wastes generated at the Humboldt Bay Power Plant and subsequently disposed at the I.T. Benicia site. The information was requested to facilitate your review of the Closure Plan for that site. As requested, PG&E is supplying the enclosed information on hazardous waste disposed at the site. The wastes were contaminated with reactor fission products at a very low activity (gamma emitter activity was less than 10 picoCurie per gram (pCi/gm)). Prior to disposal, PG&E provided analytical and isotopic information on the waste to federal and state agencies, and received approvals for disposal of the wastes at the Class 1 disposal site. Approvals were granted by either the Nuclear Regulatory Commission or the California Department of Health Services based on the understanding that the environmental and human health hazards of the wastes due to the presence of heavy metals, exceeded the hazards due to very low-level radioactivity, and that a Class 1 hazardous waste site was appropriate for disposal.

The waste types, quantities, and other information are provided below:

1. Wastewater treatment pond sludge

This was an aqueous waste containing inorganic material comprised of iron oxides, salts, with some relatively insoluble heavy metals (oxides and salts), flyash generated from combustion of fuel oil, and miscellaneous wind-borne and water-borne materials (soils, etc.). The waste was generated by settling of solids from the following wastewaters: fossil-fueled boiler blowdown containing sulfates, phosphates, and trace amounts of iron and copper oxides; (2) evaporator blowdown containing hardness (scaling) deposits; and, (3) boiler fireside washes containing flyash with sulfur compounds and relatively insoluble heavy metal oxides and salts, including copper, lead, nickel, and vanadium. Heavy metal concentrations ranged in the tens to thousands of parts per million in the solid fraction of the waste.

Chemical analyses have shown that it is not a RCRA Waste, but is a California State hazardous waste due to either the total and/or extractable (California CAM W.E.T. method) metal concentrations of several heavy metals in excess of California State regulatory limits. No halogenated organics were present in the waste stream sources based on knowledge of the processes generating the waste.

ENCLOSURE 2

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Principal isotopes in the sludge were Cobalt 60 (Co60) at approximately 1.0 pCi/gm and Cesium 137 (Cs137) at approximately 6.0 pCi/gm. Other isotopes are expected to have been present at lesser activities.

Disposal Dates:

There were no reactor fission products in this waste shipment ↗

1983 Approximately 30,600 gallons of aqueous sludge shipped to the I.T. Martinez site for de-watering by evaporation, prior to disposal at the Benicia site.

1986 Approximately 17,100 gallons of aqueous sludge shipped to the I.T. Martinez site for de-watering by evaporation, ~~prior to disposal at the Benicia site.~~ *disposal at Benicia is being verified by the IT Corporation*

2. Boiler flyash, fireclay, and firebrick

This inorganic material was comprised of ash deposits from the combustion of fuel oil, firebrick insulation and granular fireclay insulation. The material contained sulfur compounds, and relatively insoluble heavy metal oxides and salts, including copper, lead, nickel, and vanadium. The waste was a California State hazardous waste due to either the total and/or extractable metal concentrations of several heavy metals in excess of California State regulatory limits.

Principal isotopes in the sludge were Co60 at approximately 0.5 pCi/gm and Cs137 at approximately 0.4 pCi/gm. Other isotopes are expected to have been present at lesser activities.

Disposal Dates:

1986 Approximately 25 cubic yards of solids were shipped directly to the I.T. Benicia site for disposal.

3. Oil-water separator system sludge

The sludge was a mixture of inorganic and organic material comprised of soil, inorganic oxides, heavy fuel oil and lube oil residues, and miscellaneous detritus. The organics present were residuals from heavy fuel oil and lube oil and did not contain volatile and semi-volatile constituents or halogenated organics.

Chemical analyses have shown it is not a RCRA Waste, but is a California State hazardous waste due to either the total and/or extractable metal concentrations of several heavy metals in excess of California State regulatory limits. No halogenated organics were present in the waste stream sources based on knowledge of the processes generating the waste.

Principal isotopes in the sludge were Co60 at approximately 8.0 pCi/gm and Cs137 at approximately 4.5 pCi/gm. Other isotopes are expected to have been present at lesser activities.

ENCLOSURE 2
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Disposal Dates:

1984 Approximately 20,400 gallons of aqueous sludge shipped to the ~~I.T. Martinez site for de-watering by evaporation, prior to disposal at the Benicia site.~~

1987 Approximately 5,300 gallons of aqueous sludge shipped to the I.T. Martinez site for de-watering by evaporation, ~~prior to disposal at the Benicia site.~~ *location of waste at Martinez is presently being verified by IT Corporation.*

Should you have any questions concerning this information, please contact me at (707) 444-0700.

Sincerely,


TOM A. MOULIA

cc: Vincent Everett
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